ISSN 1349-0389

DRI調査研究レポート 2020—01
DRI Technical Report Series【vol.46】

2020 世界災害語り継ぎフォーラム
— 災害の記憶をつなぐ —

2020 International Forum on Telling Live Lessons from Disasters

阪神・淡路大震災記念 人と防災未来センター
The Great Hanshin-Awaji Earthquake Memorial
Disaster Reduction and Human Renovation Institution (DRI)

巻頭言

本報告書は、2020 年 1 月に開催された「2020 世界災害語り継ぎフォーラム」の全記録です。まず、その由来について紹介し、ついでこのフォーラムの今日的意義について述べ、この活動を将来、どのように展開していくのかについて私案を紹介したいと考えています。

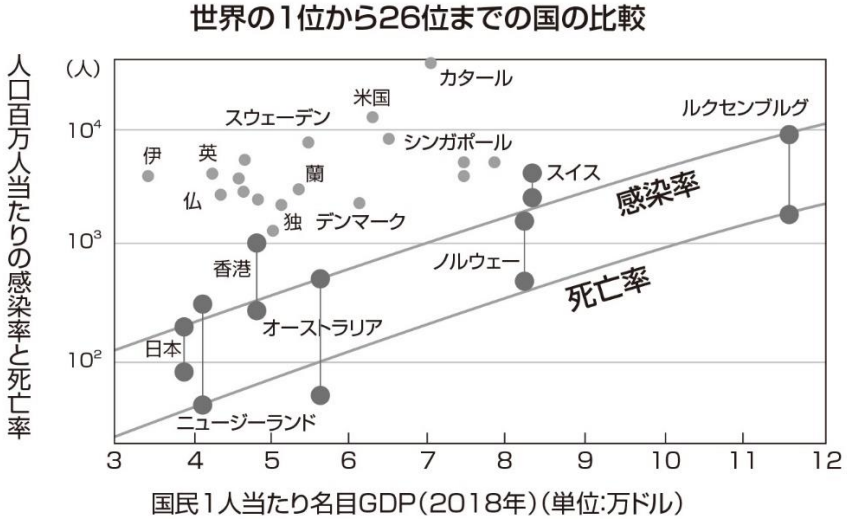
1995 年阪神・淡路大震災を私たちは経験しました。未曽有の人的および社会経済被害を受けましたが、被災社会は国内外から温かいご支援をいただき、そのお陰で復旧・復興することができました。このご支援に応えるべく、21 世紀と世界に向かって震災の教訓を発信し続けることを約束しました。まず震災の翌年からメモリアル・カンファレンス・イン神戸を立ち上げ、10 年ごとに会議の名称を変えながらも、この震災に関係した多くの人びとと未災の若者の協力によって震災の教訓を『伝える、活かす、備える』努力を現在まで継続して参りました。一方、兵庫県と日本政府の協力によって 2002 年 4 月に阪神・淡路大震災記念 人と防災未来センターが創設され、世界初の 6 つの機能を持つミュージアムとして活動して参りました。そして、このミュージアムのある HAT 神戸に立地する 20 余りの国際防災、環境、保健機関などが結集して「国際防災・人道支援協議会（DRA）」を立ち上げ活動して参りました。

2005 年神戸において第 2 回国連防災世界会議が開催されることになり、2004 年 1 月に国連防災・人道支援フォーラム 2004 は「大災害を語り継ぐ」をテーマとして開催いたしました。そして、議長サマリーとして 2005 年の世界会議においてこのテーマを DRA との連携によって開催することを提案しました。この世界会議の成果は兵庫行動枠組（HFA）として国内外に発信され、「大災害を語り継ぐ」ことの大切さも認められて含まれることになりました。これを受けて 2006 年に世界災害語り継ぎネットワーク（International Network of Telling Live Lessons from Disasters：略称 Tell-Net）を設立し、国際フォーラム開催の準備を始めました。2010 年 3 月にはその第 1 回の世界語り継ぎフォーラムを開催し、第 2 回を阪神・淡路大震災 25 周年に当たる 2020 年 1 月に開催いたしました。これら 2 回の国際フォーラムを経験してわかったことは、フォーラム自体は大成功でしたが 10 年に一度の開催では単なるイベントになり、それがきっかけとなって語り継ぐ内容が災害文化としてそれぞれの国や地域で定着するかどうかが問題となってきました。また、この活動の中心となるのは各国の災害ミュージアムですが、その内容が展示中心で災害の教訓を『伝える、活かす、備える』という体制にはなっていないものが大半であることもわかって参りました。

このような時代背景の中で、災害情報はますます『正確、迅速、詳細』になる一方、避難指示や勧告に従わない住民が極めて多く、その典型例が 2011 年東日本大震災でした。犠牲になった住民は、大津波警報の発令下にもかかわらずおよそ 30%が津波避難しなかったために 2 万人を超える犠牲者が発生しました。また、近年、地球温暖化の進行によって豪雨災害が毎年のように発生するようになり、高齢者を中心に人的被害が拡大し、たとえば 2018 年西日本豪雨では 250 名、2018 年東日本台風では 100 名を超える犠牲者を数えるようになりました。その最大の原因は対象地域の住民が避難指示や勧告に従わず 1%も避難しないということが常態化しているという事実です。これは緊急地震速報のような防災ツールやハザードマップの普及のような災害情報などが、科学的な精緻化を目指す災害文明は日進月歩であるのに対し、住民の行動が伴わない、すなわち避難するということが日常の習慣となっていないことに原因があると考えられています。すなわち、避難するという災害文化が住民の中に育まれていないのです。

とくに 2020 年には新型コロナウイルスによるパンデミックが発生し、11 月 10 日には世界の感染者数が 5 千万人を超え、ますます猛威を振るい収束する見込みが全く立っていない状態です。この感染症拡大を阻止する目的で実施してきた研究によって新たな事実も出てまいりました。図は、横軸にわが国より一人当たりの GDP が多い 25 か国とイタリアの値をとり、縦軸に人口百万人当たりの感染率との

関係を示したものです。これから、わが国よりも経済的に豊かな国の感染率はいずれもわが国より大きく、GDP が増えるにつれて感染率が高くなる傾向が見出されます。死亡率についても同様のことが指摘できます。この結果は、経済的に豊かな国になることが必ずしも豊かな国にはなっていないということを示唆しています。すなわち、近代文明の発達が豊かさに単純に寄与していない実態が浮かび上がったとも言えるでしょう。



これらの結果を参照すれば、災害による被害抑止や軽減のためには、災害文明だけでは不十分で災害文化を豊かにしなければならないということがわかります。災害文化は洗練された日常の習慣とも言い換えることができるでしょう。それを身につけるための基本となるのが防災教育ではないでしょうか。私の 45 年にわたる防災研究の結果、防災教育を通してこの災害文化を育てることがとても大切であることがわかりました。そして、私たちが進めてきた世界災害語り継ぎの活動を具体化し、恒常化して継続することが必要であると考えています。具体的には、語り継ぎの内容を絵本にして乳幼児から高齢者まで、世界中の人たちが絵本を通して災害文化にいそしんでいただくことが重要と考えています。

2020 年 12 月

阪神・淡路大震災記念 人と防災未来センター
センター長　河田惠昭

Preface

This report is the record of the 2020 International Forum on Telling Live Lessons from Disasters (2020 TeLL-Net Forum), held in January 2020. I would like to firstly mention its history, then its significance of today, and my personal view of how this initiative should develop in the future.

In 1995, we experienced the Great Hanshin-Awaji Earthquake. While it caused unprecedented human and socioeconomic damage, with warm support from inside and outside of Japan, the affected areas were able to recover and revive. Thankful for such kind support, we have committed ourselves to continue to inform to world and into the 21st century the lessons of the Earthquake. First, we started the “Memorial Conference in Kobe” in the year following the Earthquake. Though changing

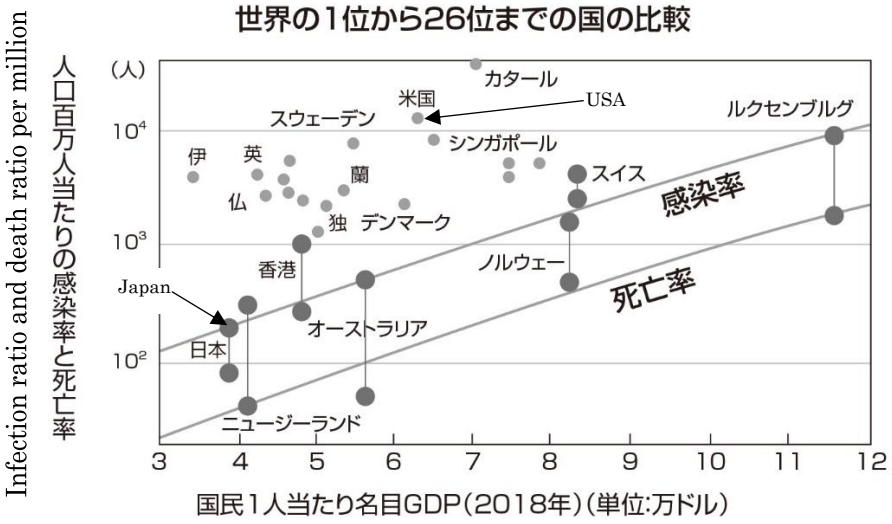
the name of the Conference every 10 years, we have continued until today our efforts of "passing on and making effective use of the lessons of the Earthquake to prepare for the future", with the cooperation of a variety of people who were engaged in activities related to this earthquake in various ways as well as the younger generation who have yet to experience disasters. In April 2002, through the cooperation of Hyogo Prefecture and the Japanese Government, The Great Hanshin-Awaji Earthquake Memorial－Disaster Reduction and Human Renovation Institution (DRI) was founded. It has been operating as a museum with 6 different functions, which is the first of this kind in the world. Furthermore, the Disaster Reduction Alliance (DRA) was set up as a partnership of over 20 organizations which are located in HAT Kobe where DRI is also located, and it has engaged in activities related to international disaster risk reduction, environment management and public health.

In January 2004, the DRA Forum 2004 was convened and it discussed the "Transfer of Live Lessons of Catastrophic Disasters" as a pre-event of the Second UN World Conference on Disaster Reduction in 2005, Kobe. The Chairman's Summary of the 2004 Forum proposed that the same issue be further discussed in the 2005 UN conference as well in partnership with DRA. The outcome of the 2005 UN Conference was launched worldwide as the Hyogo Framework for Action (HFA), in which the importance of the "Transfer of Live Lessons of Catastrophic Disasters" was recognized and mentioned. Subsequently, in March 2006, International Network of Telling Live Lessons from Disasters (TeLL-Net) was founded and the preparation for an International Forum on Telling Live Lessons from Disasters commenced. In March 2010, the first forum was convened, and the second forum in January 2020 was held in commemoration of the 25th anniversary of the Great Hanshin-Awaji Earthquake. Through those two international forums, it was recognized that while the forums were greatly successful, if it is only once in 10 years, it cannot be more than a mere event, not enough to make the stories that are told assimilated in countries and areas as the culture of disaster. It was also made clear that, while the museums of disasters in countries are expected to play a pivotal role in such activities, the contents of such museums are mostly only exhibitions, but not necessarily for passing on and making effective use of lessons of disasters and to prepare for the future.

Against such a background, while the disaster information becomes increasingly "accurate, quick and detailed", there are still a great many people who do not follow the instructions/ recommendations for evacuation. A typical case of such dilemma was observed after the Great East Japan Earthquake and the following tsunami in 2011. Thirty percent of the residents of the affected areas did not evacuate despite the warning of the coming tsunami of a massive scale. This was the main cause of the loss of more than 20,000 lives at that time. Similarly, as exceptionally heavy rains tend to occur recently almost every year because of the progress of global warming, damages have also been growing, particularly among the elderly. For example, a toll of 250 deaths was counted in the West Japan heavy rain in 2008, and 100 deaths in the East Japan typhoon in the same year. The greatest reason for such damages is the fact that in the areas where evacuation instructions/ recommendations are issued, usually even less than one percent of the residents evacuate. This indicates that, while various scientific sophistication is advancing day by day, such as emergency earthquake alerts, hazard maps and many other tools and information i.e. "disaster civilization", such advancements are not accompanied by actual actions by ordinary people, and that the actual conduct of evacuation has not become a daily habit. In other words, things like "disaster culture" have not been developed well enough among ordinary people.

In 2020 in particular, the COVID-19 pandemic has broken out, affecting more than 50 million

people as of 10 November 2020. The pandemic is becoming even more severe, and there is still no sign of the end in sight. On the other hand, research aiming at preventing the spread of this infectious disease have been newly revealing various facts. In the chart below, the horizontal axis indicates GDP per capita of Italy and other countries with greater value than Japan; and the vertical axis indicates the ratios of infections and deaths per million population. The chart indicates that the infection ratio of the countries with greater GDP per capita than Japan is also worse than that of Japan and that the tendency is that the greater the GDP per capita is, the greater the infection ratio is. The same applies to the death ratio. This analysis indicates that economically prosperous countries are not necessarily happy countries. In other words, it is being revealed that the advancement of the modern civilization does not necessarily simply contribute to happiness.



GDP per capita (10,000 USD, nominal, 2018)

Based on this, in order to ensure deterrence/reduction of damage, “disaster civilization” is not enough but “disaster culture” also needs to be enriched and strengthened. “Disaster culture” can also be referred to as sophisticated daily habits. I believe that disaster risk reduction education is the base for one to be equipped with such habits. As a result of my 45-year research work on disaster risk reduction, I am convinced that it is greatly important to develop “disaster culture” through disaster risk reduction education. Consequently, it is in this context that I believe that we need to give actual motion to the worldwide disaster story-telling activities that we have been initiating, and make it constant and continue. More precisely, I believe that it is greatly important to transcribe the contents of disaster storytelling into picture books; and help everyone in the world from babies to the elderly be familiarized with “disaster culture”.

December 2020

Yoshiaki Kawata
Executive Director
The Great Hanshin-Awaji Earthquake Memorial－
Disaster Reduction and Human Renovation Institution (DRI)



2020 世界災害語り継ぎフォーラム

The International Forum on
Telling Live Lessons from Disasters
https://tell-net.jp/forum2020/jp/

ー災害の記憶をつなぐー
ーTelling Live Lessons from Disastersー

2020 年 1 月 24 日～26 日、神戸 / 24-26 January 2020, Kobe

2020 世界災害語り継ぎフォーラム実行委員会
Implementing Committee of 2020 International Forum on Telling Live Lessons from Disasters

目次

はじめに/ Foreword

１．2020 世界災害語り継ぎフォーラムの開催 / 2020 International Forum on Telling Live Lessons from Disasters 1

(1) 目的 / Objectives 1

(2) 参加者 / Participants 1

(3) テーマ / Theme 1

２．公開シンポジウム / Public Symposium 3

(1) 開会・趣旨説明 / Opening Remarks 3

(2) 第 I 部 震災からの文化を語り継ぐ / Part I Telling Live Lessons and Culture 7

(3) 第 II 部 未来に向けて: パネル討論 / Part II Panel Discussion: Heading Towards Future 10

３．分科会 / Breakout Sessions 21

A：語り継ぎとミュージアムの役割 / Role of Museums in Telling Live Lessons 21

B：語り継ぎとツーリズム / Disaster Tourism: A Tool for Telling Live Lessons 27

C：語り継ぎとローカルコミュニティ / Telling Live Lessons and Local Community 33

D：ジオパークと語り継ぎ / Geopark and Telling Live Lessons 40

E：災害遺構と記憶の継承 / Disaster Remains and Passing-on of Memories 45

F：語り継ぎと交流 / International Cooperation: Keeping Memories Alive 52

４．ポスターセッション / Poster Session 57

(1) フラッシュトーク / Flash Talks 58

(2) 交流 / Exchange 73

５．全体会議 / Plenary Session 77

(1) 基調トーク / Tone-setting Talks 77

(2) 全体会議 / Plenary Session 83

(3) 閉会 / Closing Remarks 99

６．実施体制 / Support Setting 104

おわりに / Afterword

発表者略歴、アブストラクト、発表資料 / Participants' profiles, abstracts, presentations

はじめに

災害は多くの命を一瞬にして奪い、地域社会や日々の暮らしを凄まじい力で破壊してしまう。一方、平穏な毎日を大切に生きることの大切さや自然と共に生きていく事の意味など、平常時には思うことの少ない重要な事に気付くきっかけにもなる。災害の体験の記憶を伝える人たちの心の動きは受け手の心にも強く共鳴し、防災の知識を実際の行動に移すための強力な動機となったり、被災地の復興や災害に強い地域づくりの原動力になったりする。言葉だけでなく、写真や映像、遺留品などの事物、楽曲や絵画、記念碑などによる語り継ぎも大きな力を発揮する。私たちは阪神・淡路大震災を始めとする多くの災害の体験を経てこのことを痛切に実感した。

世界各地で多くの人々が災害の体験や教訓を他の地域や将来の世代に語り継ぐ努力を続けてきた。私たちは、このような人々や組織の交流や学び合いを支援し、声を合わせて語り継ぎの大切さを訴え、災害に強い社会の形成に資することを目的として、2006 年に世界災害語り継ぎネットワーク（International Network of Telling Live Lessons from Disasters：TeLL-Net）を設立した。2010 年には日本国内外 22 か所の被災地から約 150 名の参加を得て初めての世界災害語り継ぎフォーラムを神戸で開催した。2015 年 3 月には第 3 回国連世界防災会議があり「仙台防災枠組 2015-2030」が採択された。「伝統的・在来・地域固有の知識や慣習が災害リスク評価にかかる科学的知識を補完するために活用されるべき」などの記述も盛り込まれた。持続可能な開発目標（SDGs）への対応や ESG 投資の促進される中、企業経営においても過去の災害を踏まえた対応が求められるようにもなっている。

他方、私たちの思いとは裏腹に、2011 年には東日本大震災とそれに伴う大津波が発生し、死者・行方不明者 18 千人を超える近代以降の日本では稀に見る大災害となった。2013 年には猛烈な勢力となった台風ヨランダがフィリピンを直撃し、死者・行方不明者 8 千人の被害をもたらすこととなった。2015 年にはネパールを大地震が襲い、死者 85 千人を超える災害となった。2016 年以降も引き続き日本全国及び世界各地で水害や地震、火山噴火、津波などの災害が発生し多くの人々の命が奪われている。

災害体験の記憶の風化に耐えながらこれを語り継ぎ将来の防災に活かしていく事は容易でない。私たちは、阪神・淡路大震災 25 周年となる 2020 年 1 月、「災害の記憶をつなぐ」のテーマの下、災害の語り継ぎを継続し深めていく思いを新たにすべく、「2020 世界災害語り継ぎフォーラム」を開催した。24 日の公開シンポジウムでは阪神・淡路地域の一般市民を中心に約 300 人の参加があった。25 日の分科会と 26 日のポスターセッションでは、世界各地で災害体験の語り継ぎに取り組む人々、ミュージアム関係者、研究者、行政、ボランティア、NPO、専門家、企業関係者など、国内では阪神・淡路地域、東北、熊本、広島、新潟など全国各地から 37 人、海外ではアセアン 8 カ国、ニュージーランド、中国、台湾、インド、パキスタン、スリランカ、ネパール、イラン、トルコ、伊、英、米の 20 カ国・地域から 34 人のスピーカーが参加し、その他の講師や傍聴者も加わり大変充実した討議が行われた。

本書は本フォーラムへの貴重な報告や討議内容の全てを余さず収録するものである。現時点で世界各地において行われている様々な語り継ぎ活動の便覧ともいえるものであり、今後のさらなる発展のための一里塚でもあると考えている。各方面で広く参照され活用されることを願っている。

2020 年 12 月

2020 世界災害語り継ぎフォーラム実行委員長
世界災害語り継ぎネットワーク（テルネット）代表
人と防災未来センター上級研究員
小林郁雄

Foreword

Disasters claim many lives instantly and devastate the daily life of communities. Harsh experience in disasters leads us to revalue the importance of daily life and the significance of living together with nature, which we do not consider much during ordinary times. The emotions of storytellers resonate with those of listers strongly. It motivates us to apply the knowledge of disaster risk reduction into actual actions. It can be our engine to rebuild disaster-hit areas back better with more resilience. Aside from oral storytelling, photographs, audiovisual materials, remaining items, music, and pictures, monuments also talk eloquently. We have painfully realized this through the experiences of the 1995 Great Hanshin-Awaji Earthquake and many other disasters elsewhere.

Many people in disaster-hit areas of different parts of the world have been making efforts to preserve and pass on the lived experiences and lessons from disasters to other areas and generations i.e. telling live lessons from disasters. Aiming to network individuals and institutions in such activities, we have launched the International Network of Telling Live Lessons from Disaster (TeLL-Net) in 2006, to support those in exchanging and cross-learning across boundaries, appealing in one voice for the importance of such conducts of telling live lessons, and contributing to the creation of disaster-resilient societies. In 2010, we successfully organized the 2010 International Forum on Telling Live Lessons from Disaster with 150 participants from 22 disaster-hit areas of different parts of the world. In 2015, the United Nations World Conference on Disaster Risk Reduction was convened and the Sendai Framework for Disaster Risk Reduction 2015-2030 was adopted. The Framework includes some important points such as “to ensure the use of traditional, indigenous, and local knowledge and practices, as appropriate, to complement scientific knowledge in disaster risk assessment". Against the background of the growing demand for achieving SDGs and promoting ESG investment, enterprises are also increasingly required to act with due consideration of the lessons from past disasters.

Despite our hope, however, the Great East Japan Earthquake hit Japan in 2011, claiming over 18 thousand lives. A disaster of this scale has hardly been seen since the modern history of Japan. In 2013, the super typhoon Yolanda with extraordinarily devastating force hit the Philippines, claiming approximately 8,000 lives. In 2015, a massive earthquake hit Nepal, causing a death toll larger than 8,500. The world continues to suffer from floods, earthquakes, volcanic eruptions, and tsunamis with the loss of many lives.

It is not an easy task to make memories of disaster experiences inherited for a long time while addressing the challenges of fading of such memories. In January 2020, in commemoration of the 25th anniversary of the Great Hanshin-Awaji Earthquake, we decided to hold the 2020 International Forum on Telling Live Lessons from Disasters under the overarching theme "Passing on disaster memories" to refresh our determination to continue such activities. On 24 January 2020, 300 persons, mainly ordinary citizens living in the Hanshin-Awaji area, participated in the public symposium. On 25 and 26 January, individuals, representatives of museums, researchers, government officials, volunteers, non-profit organizations, and private companies, who are engaged in various activities of telling live lessons, participated in the breakout sessions and the poster session and conducted greatly fruitful discussion and deliberation. 37 participants are from all over Japan such as the Hanshin-Awaji area, Tohoku, Kumamoto, Hiroshima, and Niigata; and 34 participants are from 20 overseas countries / areas, namely Vietnam, Philippines, Thailand, Laos, Cambodia, Myanmar, Malaysia, Indonesia, New Zealand, China, Taiwan, India, Pakistan, Sri Lanka, Nepal, Iran, Turkey,

Italy, USA, and the UK, along with many guest speakers and observers.

This book puts together all the valuable reports to the Forum and discussions exhaustively i.e. a comprehensive compendium of various kinds of activities of preserving and passing down disaster memories being conducted in different parts of the world today. I believe that this is an important milestone for further promoting such activities and wish that it be of useful reference in various directions.

December 2020

Ikuo Kobayashi
Chairman, Implementing Committee of 2020 TeLL-Net Forum
Representative, International Network of Telling Live Lessons (TeLL-Net)
Senior Researcher, Disaster Reduction and Human Renovation Institution (DRI)

１． 2020 世界災害語り継ぎフォーラムの開催

2020 International Forum on Telling Live Lessons from Disasters

(1) 目的 / Objectives

- 阪神・淡路大震災 25 周年となる 2020 年 1 月、神戸の地で、世界各地で実際の災害体験の語り継ぎに取り組む人々や組織が一堂に会して交流・連携を深め、新たな取り組みや知見、動向について共に学び、声と力を合わせて語り継ぎの大切さを訴え、災害体験の風化と闘いながら語り継ぎを継続し深めていく思いを新たにし、災害に強い社会の形成に資する。また、そのような目的を実現するための自律的なメカニズムである TeLL-Net の活性化を図る。さらに、議論の成果を日本語・英語で出版し、世界各地の語り継ぎの活動に資する。

- In January 2020, in commemoration of the 25th anniversary of the Great Hanshin-Awaji Earthquake, individuals and institutions who are engaged in telling live lessons from disasters in various parts of the world congregated in Kobe, deepen exchange and partnership, cross-learn new initiatives and trends, appeal in one voice for the importance of telling live lessons, and refresh determination to continue activities while addressing the challenge of the fading of disaster memories, with a view to contributing to the creation of disaster-resilient societies. Through this process, we also aim at re-strengthening TeLL-Net, i.e. a standing mechanism to support such actions. Moreover, the outcome of the discussion in this forum will be published in both Japanese and English as a reference for activities of telling live lessons all over the world.

(2) 参加者 / Participants

- 世界各地で災害体験の語り継ぎに取り組む人々、災害体験の語り継ぎに取り組むミュージアム関係者、災害の語り継ぎを研究テーマにしている研究者、行政関係者、ボランティア、NPO 関係者、語り継ぎに関心を持つ専門家、企業などの参加を見込み、公開シンポジウムでは一般市民を含めて約 300 人の参加、分科会などで 21 カ国・地域から合計 71 人の参加があった。(※本フォーラムで「語り継ぎ」とは、人が言葉で直接語る「語り継ぎ」だけでなく、写真や映像、手記、壊れた時計などの事物、音楽や絵画などのアート、記念碑や公園などにより間接的に語り継がれるものを広く含む。)

- Individuals, museums, researchers, government officials, and volunteers who are engaged in telling live lessons, and professionals and private companies who support such activities were expected to participate. The public symposium was attended by approximately 300 participants, mainly ordinary citizens; and the breakout sessions and the poster session by 71 participants from 21 countries / areas. (NB: "Telling Live Lessons" in this Forum refers not only to oral storytelling but also to other indirect ways such as photographs, audiovisual materials, writings, artifacts such as broken watches, artistic works such as music, and paintings, monuments, memorial parks, etc.)

(3) テーマ / Theme

○ 全体テーマ / **Overarching theme**

- 災害の記憶をつなぐ：阪神・淡路地域では震災から 25 年を経て災害を直接体験した方々が次第に減っていく中、今後もこれまでと同様の語り継ぎを続けていけるかどうかの正念場に差し掛かっている。これはどこの被災地でも対処しなければならない共通課題である。他方、世界各地には数世紀にわたって災害体験が語り継ぎながら地域づくりを行なっている事例も少なくない。被災地同士が交流を深めてともに災害体験の風化と闘っていく必要がある。

- Passing on disaster memories: While the number of those who personally experienced the Great Hanshin-Awaji Earthquake is decreasing 25 years after the disaster, the area is facing a critical point as to whether the activities of telling live lessons can continue in the same way as they have been. On the other hand, there are some areas where memories of disaster experiences have been inherited well over centuries. Disaster-hit areas may deepen exchange and jointly address the challenge of fading of disaster memories.

○ <u>サブテーマ</u> **/ Sub-theme**

- 語り継ぎのパワー：実際に起きた事柄に基づいて当事者が心から発する言葉、被災者にまつわる事物や資料が訴える力は大変強い。被災地の人々が抱いた強い恐れや不安、深い悲しみや悔しさ、あるいはつらい状況でこそ一層心に沁みた助け合いの気持ちなどが語り継ぎの受け手にも「わが事」として伝わってくる。語り継ぎが持つこの大きなパワーを被災者の心の復興に繋げ、ひいては被災地全体の復興に繋げていくにはどうしたら良いか。

- The strong power of telling live lessons: The words that a person puts forward based on what actually happened to him/her carry very strong power for outreach. So do items remaining and materials related to disaster victims. Recipients of such messages understand with strong empathy the fear, anxiety, sorrow, and regret that victims had to undergo, or gratitude for communal warmth that was felt more profoundly than at ordinary times amid very severe situations. How can we make better use of such emotional power and help victims restore hearts and minds, and eventually turn it into the power of revitalization of communities and reconstruction of devastated areas?

- 語り継ぎの条件：全ての災害の被災地で語り継ぎが活発に行なわれているわけではない。大多数の被災者にとっては災害時のつらい体験はできるだけ思い出したくないのは自然なことである。語り継ぎが人々や社会にとって大変大切なものであるとしても、他から押し付けられるべきものではない。自発的な語り継ぎの動きの芽をどのように育てていったら良いか。被災地同士の交流は語り継ぎの始まりや継続にどのように資するか。

- Conditions of telling live lessons: Conducting the telling of live lessons does not necessarily emerge spontaneously. Many disaster survivors naturally do not wish to recall painful experiences. Even though live lessons from disasters are greatly valuable to society, disaster survivors cannot be forced to do it. How can we foster the sprouting of spontaneous conducting of telling live lessons? How can international cooperation among disaster-hit areas contribute to the promotion and continuation of telling live lessons?

- 語り継ぎの方法：災害の語り継ぎの方法は多様である。写真や映像、遺留品などの事物（artifacts)、音楽や絵画、記念碑などによるものも多い。災害を直接体験していない人々を媒介とする間接的な語り継ぎもある。地域の年中行事などによって災害体験を息長く語り継いでいる事例もある。災害から時が経つにつれて語り継ぎの方法を変えていく必要もあるだろう。

人々のコミュニケーションのあり方を劇的に変えている ICT はどう役立つか。

- Methodologies of telling live lessons: Methodologies of telling live lessons are greatly diversified. Direct oral storytelling, photographs, audiovisual materials, left-behind items, music and pictures, and monuments are all effective media for telling live lessons. Even those with no personal experience can sometimes communicate very effectively on behalf of actual victims. Some disaster-hit areas succeed in passing on disaster experiences and lessons over generations through seasonal events in local communities. The way of telling live lessons may have to change as time passes. How can the ICT that drastically transforms ways of communication impact the way of telling live lessons?

- ミュージアムの役割：実体験に基づく語り継ぎのパワーは大きいがそれは本来的に主観的かつ断片的である。行政側の記録など語られにくいものもある。被災地が直面した災害の過程を遺漏なく後世に伝えていくには、災害の実体験が持つパワーを大切にしながらそれらを周到かつバランス良く総合化していく必要もある。この点でミュージアムには大きな役割がある。組織の力で風化を食い止める役割も大きい。災害の語り継ぎに関するミュージアムの役割を考える。

- Role of museums: While the impact of telling live lessons is very strong, each way these activities are conducted is fundamentally subjective and fragmented. Certain entities such as public authorities tend not to disclose unpleasant lessons. While valuing the impact of each specific experience, various kinds of information need to be organized carefully to ensure that the complex process of the disaster from response through reconstruction is understood comprehensively. This is where museums with good curating capacity may play an important role. They may also be able to exercise institutional capacity to lessen the risk of the fading of disaster memories. How can museums contribute to telling live lessons in their unique ways?

２． 公開シンポジウム / Public Symposium

- 2020 年 1 月 24 日 13 時～17 時に兵庫県公館で大牟田智佐子氏（毎日放送報道局クロスメディア部 部次長）の総合司会の下約 300 人の参加を得て、公開シンポジウムが開催された。

- The public symposium was held from 13:00 to 17:00, 24 January 2020 in the Hyogo Prefecture Hyogo House with 300 attendees, moderated by Chisako Omuta, News Division Deputy Manager, Mainichi Broadcasting System Inc., as the master of ceremonies.

(1) 開会・趣旨説明 / Opening Remarks

○ **小林郁雄 2020 世界災害語り継ぎフォーラム 実行委員長 / Ikuo Kobayashi, Chairman, Implementing Committee, 2020 International Forum on Telling Live Lessons from Disasters**

- 世界各地で地震噴火、洪水火災が、地球温暖化の影響も受け、多発激甚化している。日本でも 1995 年の阪神・淡路大震災以降、中越、東日本、熊本など各地で地震活動期に入り、台風水害の被害も激しくなっている。それにも関わらず、震災 25 周年を迎えた神戸では震災を知らない世代がすでに過半を占め、過去の災害体験、復興経験は次第に忘れられようとしている。そし

てまた、すぐにやってくる災害に「想定外の」と臍をかむことになる。

- 世界各国、全国各地で、災害体験の語り継ぎに取り組む人々や組織が、今回神戸の地で一堂に会し、交流・連携を深め、新たな取り組みや知見、動向について学び合い、力を合わせて語り継ぎの大切さを訴えることが、このフォーラムの目的である。2005 年の震災 10 周年の神戸での国連世界防災会議を期に設立された「テルネット」は、緩やかであるが世界の語り継ぎネットワークとして発展し、2010 年に同様の世界災害語り継ぎフォーラムを開催し、今回 10 年ぶりの世界フォーラムとなる。



- 本日 1 月 24 日は県公館での公開フォーラムとして、前半は堀内正美氏の基調講演と竹下景子氏との対談、若いブルームワークスの石田裕之氏と KAZZ 氏の歌、東北の加川広重氏の絵及び神戸の島田誠氏との対談である。後半は河田惠昭人と防災未来センター長を座長とし、世界各地からのパネリストによるパネル討論を行う。別企画ではあるが、その後、竹下景子氏等による「朗読と音楽の夕べ」も行われる。1 月 25 日は元町商店街にあるこうべまちづくり会館の 2 階と 3 階でそれぞれ 3 セッション合計 6 つの分科会で、様々なテーマでの語り継ぎを討論する。1 月 26 日は人と防災未来センターの東館でポスターセッションと全体会議を行う。

- 災害体験は風化する。それに対処しながら語り継ぎを継続し、深めていくことで、思いを新たにし、災害に強い社会の形成に向け、努力していきたいと思う。様々な人々の賛同、協力を得て、一緒に進めていきたいと希望している。「地震にも　負けない　強い心を持って／亡くなった方々のぶんも／毎日を　大切に　生きてゆこう」（「しあわせ運べるように」）。

- Earthquakes, volcano eruptions, floods and fires continue to be occurring in many parts of the world, coupled with effects of global warming. In Japan, after the Great Hanshin-Awaji Earthquake in 1995, activate earthquakes have struck other parts of Japan such as Chuetsu, Tohoku and Kumamoto. Damages caused by typhoons and floods have also become more severe. On the other hand, in Kobe where the 25th anniversary of the 1995 earthquake is commemorated, the generation who did not experience the earthquake amounts over 50 % and the experience of the past disaster and subsequent reconstruction period is being faded. And, we may end up again regretting bitterly the lack of preparedness for the next disaster which may come soon as something beyond imagination.

- The purpose of this Forum is for individuals and institutions who are engaged in telling live lessons from disasters in various parts of the world to congregate in Kobe, deepen exchange and partnership, cross-learn new initiatives and trends, and appeal in one voice for the importance of telling live lessons. TeLL-Net, the establishment of which was prompted during the United Nations World Conference on Disaster Risk Reduction which was held in Kobe in 2005 in commemoration of the 10th anniversary of the 1995 Great Hanshin-Awaji Earthquake, has evolved loosely but as a global network of telling live lesson. We held the 2010 International Forum on Telling Live Lessons from Disasters, similar to this Forum.

- Today, on 24 January, a public symposium is held. In the first half, Mr. Masami Horiuchi

gives a keynote talk and hold a dialogue with Ms. Keiko Takeshita; Bloom Works, a singer-song duo of Mr. Hiroyuki Ishida and KAZZ performs; and Mr. Hiroshige Kagawa from Tohoku presents his paintings and has a dialogue with Mr. Makoto Shimada. In the second half, Mr. Yoshiaki Kawata, Executive Director, Disaster Reduction and Human Renovation Institution (DRI) chairs a panel discussion with panelists from different parts of the world. Separately after this Forum, "Evening of Recitation and Music" is held in which Ms. Keiko Takeshita performs recitation along with the music.

- Memories of experiences in disasters fade. I wish to refresh my determination to pass down disaster memories by continuing and deepening them while addressing the fading and make effort towards creating a disaster-resilient society. I hope to proceed together with support from and cooperation with various people. As "Bring happiness to the world" sings, "with a strong spirit, stronger than earthquakes, I will live each precious day, even days of those who perished."

○ **井戸敏三 兵庫県知事、2020 世界災害語り継ぎフォーラム支援委員長 / Toshizo Ido, Governor of Hyogo Prefecture, Chairman of the Supporting Committee of 2020 International Forum on Telling Live Lessons from Disaster**



- １週間前の１月 17 日、阪神・淡路大震災の発生から 25 年の節目を迎えた。被災地の経験と教訓を活かした取組みを国内外に発信していくこと、それこそが被災地の使命と強く認識し、私たちは四半世紀にわたり、世界の防災・減災対策の進展に貢献してきた。一方で、震災から 25 年が経ち、激震地の兵庫でも、震災後に生まれた若い世代が人口の 1/4 を占め、県庁でも震災後の入庁職員が約半数を占めるなど、震災未経験世代が社会の中核を担いつつある。安全安心な社会づくりを一層進める上で、やはり彼らに経験と教訓を「伝える」ことが不可欠である。また、世界各地の大規模災害の経験がない人々に対しても同様に伝えなければならない。

- これまで、兵庫県では、震災の記録を数多く残してきた。震災１ヶ月の記録、１年の記録や「阪神・淡路震災復興計画」をはじめ諸計画の実績評価。また、2009 年には、過去の膨大な資料や知見を凝縮した『伝える』という冊子を、2016 年にはその改訂版を発行し、私たちの経験と教訓を発信している。また、2002 年には、阪神・淡路大震災の経験と教訓の発信拠点として、「人と防災未来センター」を開館した。単なる博物館ではなく、研究調査機能といざというときのアドバイザー機能を持っている。今では国内外から毎年 50 万人もの方々が訪れ、阪神・淡路大震災のみならず、南海トラフ巨大地震や首都直下型地震、スーパー台風など、国難となり得る災害についても学び、備える力を養う「災害ミュージアム＆インスティチュート」として発展し続けている。館内には、映像やジオラマなど、様々な展示・体験設備があるが、なかでも私たちが大切にしているのは、実際に阪神・淡路大震災を体験した「語り部」による生の声での語り継ぎである。しかしながら、25 年という歳月を経て、語り部の高齢化も進み、いかにそれを維持するのかという課題も生じてきた。

- 昨年５月、私はスイスのジュネーブで国連防災機関が主催する「第６回防災・グローバル・プラットフォーム会合」並びに世界銀行が主催する「第４回世界復興会議」に招かれ、震災から

の創造的復興の過程で得た経験やそれを風化させない取組みについて述べてきた。その際に立ち寄ったのが、「国際赤十字・赤新月博物館」である。そこでは、災害や紛争の被災者がバーチャルで登場し、多言語で体験談を行う展示がある。当然ながら生身の人間には劣るが、かなりリアルで、何より多言語で語りかけ、半永久的に使用できるというメリットは大きいと感じた。人と防災未来センターにおいても、映像による被災体験の紹介はあるが、英語字幕だけであることから、同博物館を参考に、多言語化などを進めることとした。これは語り部の高齢化問題の解決策の一つになりうると考えている。

- 本日は「災害の記憶をつなぐ」をメインテーマに、「語り継ぎのパワー」「語り継ぎの条件」「語り継ぎの方法」「ミュージアムの役割」などについて議論を交わし、いかに過去の災害の風化を防ぎ、未来へ繋ぐのかについて考えていただく。災害を風化させず語り継ぐということは容易ではない。参加者各位が知恵を出し合い、知識を共有し、この３日間で培われた人と人との繋がりがより大きなネットワークとなって、安全安心な社会の実現に活かされることを願い、被災地・兵庫の代表としての挨拶とさせていただきたい。最後に短歌を披露する。「語り継ぐ　大震災から 25 年　未来に備え、今から一歩を。」

- 17 January, a week ago, was the 25th anniversary of the Great Hanshin-Awaji Earthquake. Keeping in mind that it is indeed our very role as the victim of the disaster to continue to inform in and out of Japan of the numerous initiatives based on the experiences and lessons of disaster-affected areas, we have been contributing to the progress of disaster protection and reduction measures of the world over a quarter-century. On the other hand, as 25 years have passed since the earthquake, even in Hyogo which was hit the hardest, the younger generation who were born after the earthquake is more than 1/4 of the population; half of the officials of the Hyogo Prefectural Government are the ones who joined the office after the earthquake; thus those who did not experience the earthquake are now bearing the core responsibility of the society. Therefore, in pursuing the creation of a safe and secure society, it is indispensable to pass down the experiences and lessons to such a younger generation; and the same to the people in the rest of the world who have not experienced large-scale disasters.

- In Hyogo Prefecture, we have so far been preserving a large volume of records of the earthquake such as the record of the first month after the onset of the earthquake, the same of the first year, and the evaluation of the achievements of various plans such as "Hanshin-Awaji Earthquake Reconstruction Plan". In 2009, we published a booklet called "To tell" in which an enormous amount of records, documents, information, and knowledge of the past are condensed; and in 2016 an updated one was also published. In 2002, Disaster Reduction and Human Renovation Institution (DRI) was inaugurated as the hub of information dissemination of the experiences and lessons of the Great Hanshin-Awaji Earthquake. This is not a mere museum but it also carries a research function which can also work as an advisory function in case of an emergency. It receives 500,000 visitors every year. It continues to be evolving as a "Disaster Museum and Institute" where people can learn not only about the Great Hanshin-Awaji Earthquake but also future possible mega national crises such as Nankai Trough Giant Earthquake, Tokyo Metropolitan Earthquake, and Super Typhoon. While the facility exhibits various items including audio-visual materials, georama, and experiencing items, the live oral storytelling by the storytellers who experienced the Great Hanshin-Awaji Earthquake is the one to which we place the most

importance in particular. However, 25 years after the disaster, challenges are surfacing as to how the aging of the storytellers should be addressed and the current service can be retained.

- In May 2019, I was invited to the Sixth Global Platform Disaster Risk Reduction organized by United Nations Office for Disaster Risk Reduction in Geneva, Switzerland, and the Fourth World Reconstruction Conference organized by the World Bank, and delivered a statement on the experiences that we gained through the process of the creative reconstruction and the initiatives to protect those from fading. I also took such opportunities to visit the International Red Cross and Red Crescent Museum in Geneva, where the victims of disasters and conflicts appear virtually and speak about their experiences in multiple languages. Though different from the stories of living persons, I found that the virtual storytellers are quite realistic; and that such tools are greatly advantageous in terms of multilingual communication and semi-permanent sustainability. DRI also offers an audiovisual presentation of storytelling, but with subtitling in English only. Inspired by the above-mentioned Museum, I have decided to upgrade the current DRI facility to multilingual. I believe this is one of the ways to address the challenge of the aging of storytellers.

- Today, with "Passing-on disaster memories" as the overarching theme, the participants are invited to discuss "Strong power of telling live lessons", "Conditions of telling live lessons", "Methodologies of telling live lessons" and "Role of museums" and deepen deliberation on how to prevent the fading of memories of past disasters and link those to the future. It is not an easy task. I conclude my statement as the representative of Hyogo i.e. the disaster victim area by requesting that all the participants share wisdom and knowledge and that the bonds of the participants to be developed over the next 3 days further evolve into a large network, and wishing that such network will contribute to the realization of a safe and secure society. Finally, here is a Haiku that I have just created: "Storytelling, 25 years since the great earthquake, in preparation for the future, one step ahead now".

(2) 第Ⅰ部 震災からの文化を語り継ぐ（13 時 15 分～15 時 15 分）**/ Part I Telling Live Lessons and Culture** (13:15 – 15:15)

○ **基調講演と対談 / Keynote Talk and Dialogue**

- 堀内正美氏（俳優、神戸市在住、震災から 25 年にわたって語り継ぎ活動の支援などを展開）が、自身の活動を振り返り、これまでに出会ってきた会場内の様々な人たちとの関わりを紹介しながら、被災地での語り継ぎの大切さや継続することの難しさ、今後の展望などについて語り、災害体験の風化との闘いに即した問題提起を行なった。その後竹下景子氏（俳優、震災から毎年神戸で市民から応募のあった手記などを朗読）も加わり、同氏の経験（震災から毎年神戸で市民から応募のあった手記などの朗読を行うことで、震災の記憶を語り継いで復興を支援する活動を展開）も踏まえて、語り継ぎの大切さなどをめぐって対談を進め、「365 日、毎日災害のことを考えるのは難しいが、阪神・淡路大震災の 1.17 など年に 1 日だけでも「記憶のスイッチ」を入れる日ができたら良いのではないか」と締め括った。

- Mr. Masami Horiuchi (actor, resident in Kobe, supporting various activities of telling live lessons for 25 years) reflected upon his activities in the past, spoke about various exchanges

and collaborations with those whom he encountered and who were present in the symposium venue, spoke of the importance of telling live lessons and the challenges in continuing such activities, discussed the perspective to the future and raised points on addressing the challenge of fading of memories of disaster experiences. Mr. Horiuchi was then joined by Ms. Keiko Takeshita (actress), who referred to her activities i.e. annually performing public recitation of essays and notes of disaster victims of the Great Hanshin-Awaji Earthquake, passing on the memories of the earthquake and supporting reconstruction through such recitation. They deepened their discussion and Mr. Horiuchi concluded this session by stating that while it is difficult to think about disasters on each of 365 days, it would be good to activate a "switch of memories" even just once a year on some occasions such as 17 January i.e. the day of the Great Hanshin-Awaji Earthquake.



○ <u>音楽と絵画を通じた語り継ぎ</u> **/ Passing on memories of disaster through music and painting**

- 芸術は災害の記憶を人々の心に直接訴える上で大きな力を発揮する。この観点から音楽や絵画を例に芸術が持つ語り継ぎの力を考えるため、Bloom Works（石田裕之氏と KAZZ 氏の神戸在住のシンガーソングライターデュオ、防災士として防災啓発活動を行なうほか、学校や地域で音楽を交えた防災講演を多数実施）が「音楽を通じて思いを記憶とともに伝えたい」と述べ、

演奏を行った。また、加川広重氏（画家、東日本大震災の記憶を絵画で伝える活動を展開）の作品を映写し、加川氏と島田誠氏（阪神・淡路大震災直後に「非常時こそ心を癒す芸術が必要」として「神戸文化復興基金」を設立）が対談を行い、「東日本大震災を題材とした巨大絵画は人を集める力がある。今後も随所で展覧会を開き視覚的な語り継ぎを続けていく」と締め括った。

- Art can be very powerful in outreaching the message of disaster-victims directly to the heart of the receivers with strong empathy. With this in mind, in order "Bloom Works" (a singer-songwriter duo of Mr. Hiroyuki Ishida and KAZZ from Kobe, engaged in various activities of awareness-raising on disaster risk reduction, gives many lectures on disaster risk reduction coupled with a music performance in schools and communities) played some songs and stated that they would like to convey their message with memories via music. Mr. Hiroshige Kagawa (a painter who expresses and passes on the memories of the Great East Japan Earthquake via gigantic paintings) and Mr. Makoto Shimada (who established the Kobe Cultural Reconstruction Fund with stressing that the art is needed particularly at critical times) discussed the power of paintings while projecting Mr. Kagawa's works and stated that the gigantic paintings on the Great East Japan Earthquake can exercise very strong power to attract people and that Mr. Kagawa would like to continue his activities by holding exhibitions in various places.



(3) 第 II 部 未来に向けて：パネル討論（15 時 30 分～17 時） / **Part II Panel Discussion: Heading Towards Future** (1530 – 1700)

- 河田惠昭人と防災未来センター長を座長として、世界各地の語り継ぎの事例の報告を得て、これを世代や地域を越えて継続させていくあり方などについての討議を行なった。

- パネリスト
  河田惠昭 人と防災未来センター センター長（座長）
  深澤良信 世界災害語り継ぎネットワーク事務局長
  シティ・マグフィラ アチェ晃月学校協会
  坂口奈央 東北大学大学院文学研究科
  イブラヒム・コモオ 世界ジオパークネットワーク副会長
  西野恭子 独立行政法人国際協力機構関西センター（JICA 関西）所長

- The panel, chaired by Prof. Yoshiaki Kawata, Executive Director of Disaster Reduction and Human Renovation Institution (DRI), received reports on various cases of telling live lessons in the world and discussed ways of continuing the passing-on of disaster experiences across areas and generations.

- Panelists:
  - Yoshiaki Kawata (Chair): Executive Director, Disaster Reduction and Human Renovation Institution (DRI)
  - Yoshinobu Fukasawa, Secretary, International Network of Telling Live Lessons from Disasters (TeLL-Net)
  - Shiti Maghfira: Kougetsu School Association, Aceh, Indonesia
  - Nao Sakaguchi: Tohoku University Graduate School Faculty of Arts and Letters
  - Ibrahim Komoo: Vice President, Global Geoparks Network
  - Yasuko Nishino: Director, General JICA Kansai Center, Japan International Cooperation Agency



○ 語り継ぎの継続 / **Continuation of Telling Live Lessons**

- 河田惠昭：震災から 25 年が経ち、これから語り継ぎはいっそう難しくなっていく。災害の語り継ぎを継続するにはどうすればいいか。人と防災未来センターの語り部の皆さんも 25 歳歳を取り、鬼籍に入られる方もいらっしゃる。パネリストからはいろいろな形の語り継ぎの活動を紹介いただき、それを継続するにはどうすれば良いか、示唆があれば紹介していただきたい。

- Yoshiaki Kawata: Twenty-five years have passed since the Great Hanshin-Awaji Earthquake; and it will become more difficult to conduct Telling Live Lessons i.e. to preserve the memories of live experiences of the earthquake and to pass such memories on to other people and areas. How can we continue it? The storytelling volunteers in DRI have also aged by 25 years. Some have even passed away. I would like to request that the panelists kindly share their respective efforts of telling live lessons and give advice as to how we can continue such activities.

- 深澤良信：2002 年から 05 年まで人と防災未来センターで勤務した。そこでは、震災直後に広く市民から収集した震災に関する 16 万点の一次資料が保管されていて、そのうち 800 点が展示されている。そのような一次資料は、被災者や支援者の当時の心情を大変雄弁に伝えてくれる。例えば、2 本の空のペットボトルが展示されていて「被災当日、水が足りないと聞いた友人が遠くからペットボトルを届けてくれた、その時のありがたさが忘れられない」とのメモが添えられている。それを見ると、大変な状況の中でこそ感じた感謝の気持ちを感じることができる。2005 年に人防を離れたが、国内外の有志でテルネットというネットワークをつくり、災害の語り継ぎの大切さを内外に訴える活動を続けてきた。本日は創設メンバーの一人であるバングラデシュの友人から「語り継ぎは地域コミュニティの防災力を高める最良の方策で、世界に広めるべき」とのメッセージもあった。

- Yoshinobu Fukasawa: I had a lucky opportunity to serve as Deputy Executive Director of DRI from 2002 to 2005. In DRI, over 160,000 firsthand materials regarding the 1995 earthquake are preserved, which were collected from a wide variety of sources including many ordinary citizens from immediately after the earthquake through the long process of reconstruction. Such firsthand materials often tell about the feelings and sentiments of the victims and helpers very eloquently. For example, one of the exhibited items is a pair of two empty plastic bottles, which is accompanied by a short memo, which explains that "On the day of the earthquake, a friend of mine came to know that there was a serious shortage of water, and he took the trouble of bringing 2 cases of water bottles by a motorbike all the way from his place. How can I forget about my big thankfulness to him?" Thanks to the empty plastic bottles which are actually a piece of garbage, we can well recognize the profound gratefulness that someone felt even amid the very harsh situation. I left DRI for another assignment in 2005, but I decided to set up a group of people called TeLL-Net to appeal for the importance of telling live lessons to in and out of my country. In fact, today, one of the fellow founding members of TeLL-Net was supposed to be here; however, unexpectedly, he had to cancel his attendance at the last minute and I am replacing him. He sent a message that "Passing of the live lessons is the best way to empower communities. It needs to be consolidated, strengthened, and scaled up to all over the world. Raise voice to the level that it is heard at global levels."





- シティ・マグフィラ：2004 年 12 月にインド洋大津波がアチェ州を襲い、20 万人以上の方が亡くなった。しかし、同じアチェ州にあるシムル島で命を落としたのは 7 人のみだった。シムル島は 1907 年に津波の被害に遭ったのであるが、その時のことをずっと「津波の歌」を通じて語り継いできたのである。アチェで津波の後に生まれたり津波の時に 1 歳か 2 歳であったりした子供たちは津波のことを直接知っているわけではない。このような子供たちにも私たちの経験を語り継いでいかなければならない。子供たちは感性が豊かで純粋な心を持っている。彼らには教室での授業などより音楽などのアートを通して訴える方が効果的である。子供たちが興味を持つようなカラフルな紙芝居なども使われている。映画や劇も用いられている。これを見て子供たちは「これは私の住んでいるところだ、おばあちゃんが言っていたことだ」ということで知識を得ることができる。我々が経験したことを彼らに経験させてはいけない。

- Shiti Maghfira: Tsunami hit Aceh region on December 26, 2004. More than 200,000 people died. But, on Simeulue island which is located near offshore of Aceh, only 7 people passed away. In 1907, this island was washed away by another tsunami. Since that time, people have been sharing the tsunami story through "tsunami song" ("nandong smong" in Simeulue language). The children who were born after the tsunami or were 1 year or 2 years old at that time do not know the tsunami. We need to share our experiences with children. Children have a kind heart. We can reach their heart through art such as song, picture book, movie, storytelling, etc. The tsunami song is played in various events. Children in Simeulue island learn about tsunami by the song. Picture-story show (storytelling with pictures) with colorful paintings and interesting story can be another good media. Movies can also be effective. When children watch a movie, they would say "oh this is my area; this is what my grandmother was saying." Theater play can be another way. Children can play a drama and experience by themselves how the tsunami happened. Telling live lessons from disaster in such ways is better for children to learn about the disaster than just sitting in the class and listening to their teacher's explanation. Do not let them experience what we have been through.





- 坂口奈央：東日本大震災の時には地元の民放テレビ局に勤めていたが、取材して伝えるだけでよいのかと考え、研究者の道に舵を切った。大槌町で岩手県の震災記録誌「いきるあかし」（2019年7月発刊）を手掛けた。町民100人以上の声を載せた。大槌高校の高校生が、震災時の立役者であり葛藤していた大人たちの聞き取りをするというものである。震災時に8歳から9歳であった大槌高校の1年生から2年生（ヒアリング時）13人に参加してもらった。大槌高校では従来から生徒が自主的に復興途上の町の定点観測を行うなど意識が高かったが、この年代の子供たちから急にそれが薄くなるようであり、地元の高校生にこそ語り継いでいく責務があると考えた。東北大学の学生にも手伝ってもらった。このことも第三者への伝承として大きな意味を持った。3 日間続けるうちに高校生の目付きが日に日に変わっていった。大人たちにとっては、これまでを振り返り地域に対する思いを再確認する場にもなった。「いきるあかし」は町民が生きてきた証、これからを生きる証であるという点にこだわった。昨年7月以降、町民が何冊も買うだけでなく、外からも多くの問い合わせがある。「記憶は年月が経てば同じままではないが、人とのつながりや経験によって新たに記憶は育まれていく」と実感した。また、青少年期に大きな社会変動を体験してきた震災時の６０代が地域を立て直す上でのキーパーソンとなっていることを考えると、震災時の１０代、２０代がこれからの語り継ぎのキーパーソンになるのではないかと考えている。彼らは進学で外に出て行っても、戻ってきて地元に貢献したいと考える傾向が出ている。どういう体験をしてきたか、世代に注目して語り継ぎについての対策を考える必要があるのではないか。

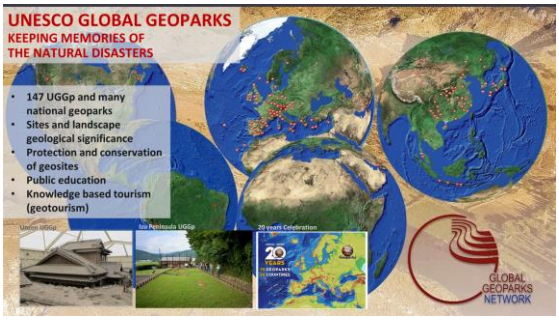
- Nao Sakaguchi: When the Great East Japan Earthquake occurred, I was working as a journalist in one of the local TV stations. At some point, I questioned to myself if it is enough to gather and report information only; and decided to shift my career towards researcher. Based in Otsuchi town, I assisted compilation of the official record of Iwate Prefecture “Proof of living” (“Ikiru Akashi” in Japanese) (July 2019). Messages of over 100 citizens were collected and recorded. The students of the Otsuchi Highschool were mobilized to give interviews to the adults who were struggling as the core workforce of reconstruction. Participants were 13 students who were in the first and the second grade at the time of the interview, who were 8 to 9 years old at the time of the earthquake. I observed then that there was a significant difference been the students whom I worked with and elder ones in terms of interest in the earthquake and motivation for being engaged in subsequent reconstruction. The younger students were much less interested and less motivated as opposed to the elder ones who had been for example voluntarily engaged in fixed-point observation on the progress of the reconstruction of the town. I thought that such a steep drop of interest should be prevented; and the local high school students, in particular, should be engaged in preservation and passing-on of experiences of disaster. I was helped by the students of

Tohoku University as well. This also meant much in terms of storytelling to those who are the third party i.e., the university students who did not experience the earthquake. The interview continued for 3 days; and. I noticed that the high school students became proactive more and more over the 3 days. The interviews were also a good opportunity for the adults to reflect upon their times up to then and reaffirm their commitment to where they belong. I placed importance on the idea that "Proof of living" is the proof of the lives that the Otsuchi people have lived and the proof of what they will live. Since it was published in July 2019, not only the Otsuchi citizen have been buying multiple copies, but also many have been contacted for information from out of town. It is my conviction that memories do not remain the same over time, but are fostered by experiences and connections with people. Moreover, considering that those who were in the 60s at the time of the earthquake, who underwent a drastic socio-economic change during their younger days of 1960s and 70s, were the core key persons in rebuilding the area, the generations of teenagers and in 20s at the time of the earthquake may become the key persons in passing on the memories of the earthquake. Such people may go out for higher education, but the tendency is emerging that many of them want to come back to their hometown and make a contribution. I suggest that measures for continuation of storytelling be considered with due attention to what kind of experience people had and which generation they belong to.

- イブラヒム・コモオ：私の専門は地質工学である。1995 年にマレーシア環境・開発研究所の所長に就任した時、地質学的な資源を破壊することなく活用することを考え、ジオパークに関わり始めることとなった。ジオパークの取り組みは 2000 年に欧州で始まり、2004 年にそのネットワークが形成され始めて、グローバルな取り組みとなった。ジオパークは物語のある自然の場所とでもいうべきものであるが、そのような方向で広く活用されてきたとは言い難い。現在 147 のグローバル・ジオパークと数百の国内ジオパークがある。日本では 9 のグローバル・ジオパークと 35 の国内ジオパークがある。ジオパークが扱うのは地質学的に重要な場所と風景（site and landscape）及びその保護や保全である。そのような場所には語り継がれるべき物語、特に災害にまつわるものが数多くある。子どもたちや近隣コミュニティの人たちを対象とした市民教育や観光客向けのジオツアーなどにも力を入れている。物語を語り継ぐ上ではコミュニティが重要な役割を果たす。ジオパークにはたいてい博物館や情報センターがあり、訪問者はそこで災害にまつわる物語などを知ることが出来る。有史以前では単なる地質現象に過ぎないものであったが人間が関われば災害である。日本のグローバル・ジオパークの３分の２は火山関連である。専門家のみを対象としているジオパークは評価されない。地質現象と地域コミュニティとの関わり合いや地域の文化との関連などが重要であると思っている。

- Ibrahim Komoo: I am a professor of engineering geology. In 1995, I was asked to lead the Institute for Environment and Development of Malaysia, and I had to rethink about my work and started thinking about using geological resources without destruction. This is the beginning of my involvement in geological heritage, later geopark. Geopark started in Europe in 2000; and globally, in 2004 whereby some geoparks from Europe and some from China were creating a network. Geopark is actually a natural place for storytelling. But it has not been used much in that direction. Currently, we have 147 UNESCO global geoparks all over the world. In Japan, there are 9 UNESCO global geoparks and over 35 national geoparks. Geopark is about a site or landscape of international geological significance. Geopark is about the protection and conservation of the site. Many geo-sites have a story to

tell. The most interesting story to tell is about a disaster, a geological event, and geological processes. Maybe before human-beings, it was just a geological event, but now it has become a geological disaster. Within the geopark set-up, an emphasis is given to public education, particularly to school children. Geopark is also about knowledge-based tourism. This is where communities are involved. Communities create tourism products and this product is used for geo-tourism. Many geo-sites are related to disasters. In Japan, I would say two-thirds of UNESCO global geoparks are about volcanism. Usually, geopark has a museum and information center. And, there are many information panels. These panels tell stories. If the panels are only for scientists, those are not valued much. Information panels are not just about figures but also about the connectivity of the hazard, geological event to the community. And, many geoparks have art and cultural activities. We have a lot of art, culture, culinary and craft to tell stories about the place, particularly about a disaster. Finally, geopark provides many publications not only for scientific purposes but also for children and tourists and for the people to learn geoparks.





- 西野恭子：当センターは自治体、研究機関、NGO 等と連携して途上国の防災分野の人材育成を行っている。これまでに 121 か国から、3,000 人以上の研修員を受入れてきた。研修員は人と防災未来センターで阪神・淡路大震災について学び、語り部ボランティアの話にも触れる。震災を経験した市民と交流し、当時の記憶を留めることの重要性も学ぶ。東日本大震災の被災地も訪問する。気仙沼市の震災遺構・伝承館では中学生が語り継ぎを担っている事例なども学ぶ。多くの研修員が「災害の体験を資料や映像で知ることは出来るが生の声を聞くことには大きな意義がある」と実感している。トルコ・マルマラ地震（1999 年）の被災地では、人と防災未来センターをモデルとした施設が整備され防災教育が強化された。また、草の根技術協力事業でも語り継ぎを支援している。ネパールでは神戸の NGO が学校での防災教育を支援している。フィリピンでは兵庫県教育委員会などが学校と地域の連携を重視した防災教育を支援している。インドネシアでは神戸の NPO がコミュニティラジオを核とした地域防災力向上に取り組んでいる。青年海外協力隊事業でも同様である。例えばトンガでは稲むらの火の逸話を現地の状況に即して作り替えて語り継ぎを支援している。世界津波の日に開催される高校生サミットにも協力している。当センターは今後も日本の災害経験を伝えることを通じて途上国の防災能力向上に協力していく。それが阪神・淡路大震災の記憶の風化の防止にも繋がるものと考えている。

- Yasuko Nishino: JICA Kansai Center conducts human resources development programs particularly for government officials of developing countries in partnership with Japan's local governments, research institutions, NGOs, etc. Up until now, the Center has provided training to more than 3,000 trainees from 121 countries. The trainees learn about the Great Hanshin-Awaji Earthquake and listen to the storytelling volunteers in DRI; meet with

ordinary citizens who underwent the earthquake and learn about the importance of preserving memories at the time of the disaster, and visit the affected area of the Great East Japan Earthquake as well. They visit the Ruins of the Great East Japan Earthquake Kesennuma City Memorial Museum where junior high school students are engaged in storytelling. Many participants of such training programs are convinced that, while one can learn about disaster experiences through documents and audio-visual materials, it is also greatly significant to listen to live voices. In the affected area of the 1999 Marmara Earthquake in Turkey, a facility similar to DRI as a model has been set up and DRR education has been strengthened. JICA Partnership Program also supports storytelling activities. In Nepal, an NGO based in Kobe is assisting with DRR education in schools. In the Philippines, the Hyogo Prefecture Board of Education helps DRR education in partnership with local communities. In Indonesia, an NPO in Kobe cooperates on strengthening the DRR capacity of local communities through community radio as the core tool. JICA's Volunteer Program also offers similar services. In Tonga, for example, a JICA volunteer is assisting the local communities in passing on the stories of the past disasters by transforming the episode of "Fire of Rice Sheaves" in Japan per the local context. JICA also provides support to the High School Students Summit on World Tsunami Awareness Day. JICA Kansai Center is committed to continuing cooperation in strengthening the DRR capacity of developing countries through Japan's experience of disasters. I believe that this eventually contributes to preventing the fading of the memories of the Great Hanshin-Awaji Earthquake.



被災者の話に耳を傾ける研修員（人と防災未来センター）



防災教育プログラムに取り組む小学生（ネパール）

○ <u>災害を語り継ぐ絵本の刊行</u> **/ Publication of picture book of storytelling**

- 河田惠昭：いろいろな取り組みの紹介があった。それをどう継続させるか。私は 40 歳の時に今後日本では大規模な都市災害が起こるだろうと考え、都市災害をテーマに研究に注力してきた。1995 年には図らずも阪神・淡路大震災が起きた。2010 年には「津波災害」を出版し、三陸沿岸を津波が襲ったら 1 万人亡くなると書いたところ、3 か月後に東日本大震災が起きた。小学生に対する防災教育にも注力している。濱口梧陵が津波の後私財を投じて村の復興に尽力した史実を 2010 年以来小学 5 年生の教科書に載せている。2016 年には濱口梧陵国際賞も創設された。災害の語り継ぎを継続させるには防災教育のターゲットを幼児教育に広げることが効果的と考える。語り継ぐべきことの文章を公募し、優秀作品を絵本にして幼稚園などで使ってもらうのはどうか。こうすればそれで学んだ子供たちが大人になっても忘れないだろう。5 年に 1 回は世界災害語り継ぎフォーラムを開催して知見や教訓を共有する。実行体制としては、人と防

災未来センターが中心となって全国の大学やメディアに加わってもらう。応募作品の審査や成果の活用の観点から、幼稚園や保育所の全国組織にも入ってもらう。絵本の絵はプロに依頼するのか公募にするのか今後検討する。多言語に翻訳してインターネットを通じて世界で使ってもらう。財源は、メモリアルカンファレンス in 神戸などの実績を踏まえて、各方面の支援を仰ぐ。このような企画についてどう思うか。

- Yoshiaki Kawata: Various kinds of storytelling initiatives have been shared. How can we make sure that those continue? When I was 40 years old, I became convinced that Japan would suffer from large scale urban disasters, and I decided to focus my research on the urban disaster. In 1995, the Great Hanshin-Awaji Earthquake occurred. In 2010, I published a book "Tsunami Disaster", in which I wrote that 10,000 lives would be lost if a tsunami attacked the coast of Sanriku. Three months later, the Great East Japan Earthquake attached there. I am also engaged in the education of elementary school children on disaster risk reduction. I wrote about the historical story that Goryo Hamaguchi, the leader of one of the villages of the Wakayama area in the 1980s, devoted his personal assets, and led the reconstruction of the village after the tsunami that hit the village in 1854. This story has then been one of the contents of a textbook for the fifth-grade pupils (10-11 years old). I 2016, the Hamaguchi Award was founded. I believe that it would be further effective to expand the target of DRR education to even younger children to ensure the continuation of the efforts of storytelling on disasters. How about calling for storytelling texts from the public, selecting some good works, and creating a picture book based on the selected works? I believe that by doing this, the children who read such picture books would not forget that they learn. Every 5 years, the International Forum on Telling Live Lessons can be held to share wisdom, knowledge, and lessons. DRI can be the core of managing the initiative. Universities and the media can be requested to join this. With a view to the evaluation of submitted works and utilization of the products, some national associations of kinder-gardens and nursery-schools can also be asked to participate. We will consider whether the pictures of the books should be created by professionals or the pictures should be collected from the public. The product may be translated into multiple languages and it can be distributed and utilized globally through the internet. I have a good prospect that funds can be mobilized from different sources, following the successful results of the Memorial Conference in Kobe. With this respect, I would like to seek feedback and advice from the panelists.

災害語り継ぎフォーラムの将来計画（案）
Future Plan of Forum on Telling Live Lessons from Disasters

1	語り継ぎ文の募集	Recruitment of telling live disaster lessons
2	応募作品の審査	Examination of application works
3	発表会	Exhibition
4	優秀作品の絵本化	Making picture and illustration of excellent works
5	多言語翻訳	Multi-lingual translation
6	絵本作成、pdf製作	Making picture books and pdf
	世界発信	The world sending
7	販売、幼児教育の教材	Selling and teaching at kindergarten
8	世界アーカイブ化	Making global archive

- 西野恭子：絵本の企画は面白そうだ。JICA も子供たちを対象とした事業を多く実施している。これは子供たちの教育だけでなく、子どもたちを通じて周りのコミュニティにも届けるという効果がある。こういう企画が具体化したら、いろいろな国で防災教育の協力に従事している JICA 海外協力隊も活用できて、より効果的な協力ができる。世界に約 100 カ所の事務所があるので、そこを通じて現地に拡げることも出来るのではないかと思う。

- Yasuko Nishino: The idea of picture books is interesting. JICA is also engaged in many programs that target children. This is not only about the education of young children, but it is also about reaching out to neighboring communities as well through children. If this kind of initiative is materialized, picture books can be made use of well by JICA volunteers who are engaged in international cooperation on DRR education in various countries, which contributes to more effective cooperation. The books can also be disseminated globally through JICA offices which are located in approximately 100 locations around the world.

- イブラヒム・コモオ：日本は防災を可視化する点においてトップだと思う。日本には災害の記憶を残そうとする場所が大変多い。絵本のアイデアはいい提案だ。ユネスコ・グローバル・ジオパークの協力が得られると思う。そこには防災に関する委員会があって日本の渡辺真人氏が委員長だ。41 の国に 147 のグローバル・ジオパークがある。これを通じて絵本を展開できるのではないか。そのような協力が実現するよう願う。

- Ibrahim Komoo: I have visited many places in the world. I consider Japan is the best in terms of the visibility of disaster risk reduction. Japan has many sites that keep memories of disasters. The visitors are very keen to learn. The idea of a picture book is a very good suggestion. This can collaborate with UNESCO's global geo-park. UNESCO global geo-park has a committee on disaster risk reduction, which is headed by Dr. Mahito Watanabe from Japan. UNESCO global geo-park has 149 global geo-parks in 41 countries. We can easily have many countries supporting this picture book initiative globally. I hope that the collaboration is discussed and realized.

- 坂口奈央：審査は中高生がやったら良いのではないかと思う。審査をすることで何かと興味を持つだろうし、調べ物をしたりして、将来を左右することになるかもしれない。何かしら体験をした青少年期の体験は将来を左右する。審査をする人が大人である必要はなく、中高生なら刺激的な感性でモノを見抜くのではないか。そこから新たな気づきがあるかもしれない。審査体制という点で挑戦的にやってみてはどうかと思った。

- Nao Sakaguchi: I propose that the selection of successful works be done by the students of junior high schools and high schools. Through such engagement, the students can be somehow sensitized on the issues of disaster risk reduction; and thus, they may begin to think about their future more clearly. I learned that whatever is experienced during the period of youth influences one's future significantly. The reviewers do not necessarily have to be adults. The youth are very sensitive and they may well be able to perceive things more sharply. Such engagement may lead the youth to realize something further. It may be an idea to make the set-up of reviewers somewhat aggressive.

- シティ・マグフィラ：東日本大震災や阪神・淡路大震災、インド洋大津波など、災害ではそこで起きた実話が数多く残される。そのような実話は絵画や文章で記録されるだけでなく、実際

に津波を経験した人々の言葉での語りによっても伝えられていく。絵本でも多くの災害時の貴重な経験を伝える事ができる。写真を添えることもできる。子供たちはいろどり豊かな絵が好きであり、災害体験を伝える絵本も深く理解できる。映画や写真などと同様に、絵本は災害の体験談をアーカイブに収録するのに適している。いろいろな媒体でアーカイブできるが、子供たちにとっては絵本が一番わかりやすい。

- Shiti Maghfira: There remain many stories about disasters such as the Tohoku earthquake, Kobe earthquake, and also Aceh tsunami. Those stories are not only pictures or writings, but also oral stories like small talks or narration of the people who experienced the tsunami. A picture book can tell many stories of valuable experiences of disasters. We can also put some photos which are connected with the stories. Telling a story by pictures can make children understand it well. Children can get a good understanding of colorful pictures. Picture books are suited for archiving disaster stories, similar to movies and photos. We can share natural disaster stories with many kinds of archive media. And for children, the picture books are the best way.

- 深澤良信：日本でまず始めることになるだろうが、将来は日本以外からも応募してもらえるようになったら良い。あるいは、他の国でも同じようなことが始まったら良いのではないか。国際的な取り組みとしていくことを見据えたものとすべきと思う。また、テルネットの今後については、本日のフォーラムのようなものもぜひ各国で開催して頂きたい。テルネットがそのような方向で発展することと、絵本の企画のグローバルな展開とは軌を一にするものだと思う。

- Yoshinobu Fukasawa: I understand that the picture book initiative begins in Japan; but I suggest that in the future, applications can be collected from other countries as well. The same initiative may begin also in other countries. The initiative should begin as something which will easily evolve as an international one. As for the future of TeLL-Net, I hope that forums similar to today's forum will be held in many other countries. I believe that the direction in which TeLL-Net evolves in such a way is much in the same line with the direction in which the picture book initiative develops globally.

○ **結語 / Conclusion**

- 河田惠昭：ここまでやってきたテルネットを続けなければいけない。絵本の企画も、来年 1 月 17 日を目途に準備の中間報告、2023 年に着手、2025 年に次の世界災害語り継ぎフォーラムを開催してそこで絵本の成果を発表することとしたい。明日以降の議論でも語り継ぎを将来にどうつなげるかを念頭に議論して頂きたい。絵本だけを目的にしているのではなく、それはきっかけと考えている。語り継ぎは文化の力を借りないとうまくいかない。情報さえ流布したら良いのではなく、文化にしないといけない。文化にするには文字や音楽、絵画などいろいろな方法があり、その可能性を追求しながら継続していく必要がある。会場の皆さんもぜひご協力頂きたい。このような場が広がらないとうまく伝わらない。風化が進むのは当たり前であり、これに抗うことはできないが、新たな教訓を自分で自分のものにするための努力はしなければならない。それに向けてテルネットの努力がつながって行けば嬉しいと思う。短い時間であったからこそ本日はあえて具体的な提案を行った。必ずうまくいくと信じている。人と防災未来センター長の立場だけでなく一個人としても取り組むつもりである。

- Yoshiaki Kawata: We have continued TeLL-Net up to now, and this must continue. To promote the momentum, I plan to present a progress report hopefully on 17 January 2021; commence the implementation of the initiative in 2023, and hold the next round of TeLL-Net Forum in 2025 whereby the first picture book will be launched. I trust that the discussion of this forum will flow with consideration in mind as to how one can link the storytelling to the future. The picture book is not a goal but an opportunity for progress. Without culture, we cannot pass on the memories of disasters. Dissemination of information only is not enough; it must become the culture. With this respect, various media like literature, music, and paintings help. We must continue storytelling by exploring the possibility of such media. I request for strong support of today's audience in this hall. Without such support, the movement cannot expand. Fading of disaster memories cannot be avoided. One cannot resist the fading, but should still make an effort to learn new lessons and make those as your memories. TeLL-Net is hoping to help such efforts. Given the time shortage, my proposal of today was intentionally concrete. I am convinced that we will succeed. Not only as Executive Director of DRI but also as an individual, I am committed.



会場の兵庫県公館 / Hyogo Prefecture Hyogo House as the venue

３． 分科会 ／ Breakout Session



- 2020 年 1 月 25 日 9 時 45 分から 18 時まで、こうべまちづくり会館において、永松伸吾 統括座長、関西大学社会安全学部教授の統括の下、以下の 6 分科会が日英同時通訳で開催された。各分科会では、座長、共同座長及び招聘パネリスト 3 人前後を中心に、他の分科会のパネリストやポスターセッション（下記）の参加者など合計約 40 人の参加を得て、次に示すそれぞれのテーマについて専門的な見地から討議を行なった。

- On 25 January 2020, from 09:45 to 18:00, in Kobe Machizukuri Center, under the overall coordination by Mr. Shingo Nagamatsu, General Managing Chair, Professor, Faculty of Social Safety Science, Kansai University, the Breakout Sessions listed below were held. In each session, the Session Chair and Co-Chair facilitated professional discussion on the following subjects respectively along with some 3 panelists invited from different countries / areas. The sessions were also joined by some 40 experts / professionals (panelists of other sessions, participants of the Poster Session (see below), other guest participants and observers, who were invited to actively contribute to the discussions from the floor.

○ 分科会Ａ：語り継ぎとミュージアムの役割 （9 時 45 分～12 時、2 階ホール）/ **Session A: Role of Museums in Telling Live Lessons** (9:45 – 12:00, 2nd-floor hall)

- 問題意識：災害に関連するミュージアムは世界中に存在する。災害に特化したミュージアムもあれば、常設展示や期間限定の企画展示という形でミュージアムの一部になっているもの、あるいはフィールドミュージアムと言えるようなものまであり多様である。このセッションでは、国内外の「語り継ぎ」活動を展開しているミュージアムの代表者を招き、「語り継ぎ」がそれらのミュージアムや地域社会の中で果たしてきた役割、共通点、相違点、課題などを明らかにしつつ、課題を乗り越えるためのソリューションを共有し、よりよい「語り継ぎ」とミュージアムとの持続可能な運営の関係性を考えていく。

- パネリスト：
  小野裕一 東北大学災害科学国際研究所 教授（座長）
  マーレーン ムリー 太平洋津波ミュージアム 代表（共同座長）
  坂本誠人 人と防災未来センター 副センター長
  佐藤公（ひろし） 磐梯山噴火記念館 館長
  ポルンタム タムウィモル 文化省美術局上席景観設計専門官
  ラチャニーコルン トンティップ タイ 国際津波ミュージアム館長、NPO 法人 教育文化機構

- Angle of discussion: Museums related to disasters exist all over the world. There are various kinds of museums, such as those specializing in disasters, those that are part of the museum in the form of permanent exhibitions or temporary planned exhibitions, or those that can be called field museums. This session invites representatives of museums that are developing "narration" activities both in Japan and abroad, clarifies the roles, similarities, differences,

and challenges that "narration" has played in these museums and neighboring communities, shares solutions to overcome these challenges, and considers the relationship between better "narration" and sustainable operation of the museums.

- Panelists:
  - Yuichi Ono (Session Chair): Professor, International Research Institute of Disaster Science, Tohoku University
  - Marlene Murray (Session Co-chair): Director, Pacific Tsunami Museum
  - Makoto Sakamoto: Deputy Executive Disaster, Disaster Reduction and Human Renovation Institution (DRI)
  - Hiroshi Sato: Director, Museum of the Mount Bandai Eruption
  - Porntham Thamwimol: Senior Professional Landscape Architect, Fine Arts Department, Ministry of Culture
  - Ratchaneekorn Thongthip: Director, International Tsunami Museum, Institute for Education and Culture, NPO





- 小野裕一：世界各地の災害関連ミュージアムの代表者が語り継ぎとミュージアムの役割についての現状、課題を共有し、持続可能な語り継ぎとミュージアムのあり方について議論し、課題についてのソリューションを探りつつ、両者の関係性を考えていきたい。

- Yuichi Ono: The panelists i.e. the representatives of disaster-related museums from around the world are requested to share the current situations and issues regarding storytelling and the role of museums, discuss sustainablestorytelling and the role of museums, explore solutions to these issues, and consider the relationship between the two.

- マーレーン ムリー：太平洋津波博物館が津波の記憶をどのように残しているか

  太平洋の中心にあるハワイは特に地震や津波の被害に遭いやすい。過去にあったことのストーリーと大切な教訓を共有することが極めて重要である。教育を推進し人々の意識を高め、将来の悲劇を防止することが太平洋津波ミュージアムの使命である。当館は 1994 年に設立され、現在はヒロの中心地にあって以前は銀行であった建物に所在している。5 千点以上の津波の画像や 500 点以上の津波についての聞き取りの記録、多くの展示物や過去の記録を保有している。強力なインパクトを持つ画像、視る者の心を突き動かす映像、ヒロの歴史と津波がヒロの発展を形作ってきた経緯、2004 年のインド洋津波、2011 年東北大震災物語、津波の科学、安全についての展示などが当館の特徴である。また、館内全域で数えきれないほどの津波のストーリーを知ることができる。そのうちの幾つかは過去の津波での素晴らしい救出活動であったり、悲

劇的な喪失を伝えるものであったりである。来館者は小学校から大学生まであらゆる年代の人々である。津波の専門家や緊急事態に備える実務者、津波の生存者によるセミナー、学校での出前授業を提供するとともに、地元の防災フェアや様々な海のイベントにも参加している。1960 年の津波から 60 年という長い時間が経ち、人々の津波の記憶が風化し、津波からは安全なのだという間違った安心感が広がっている。これは人々が瀕するリスクを高めることに繋がる。太平洋津波ミュージアムは、人々の意識を高め津波の教育を推進することで、コミュニティに極めて重要なサービスを提供している。

- Marlene Murray: How the Pacific Tsunami Museum Keeps Tsunami Memories Alive

Located in the middle of the Pacific Ocean, Hawaii is especially vulnerable to earthquakes and tsunamis. It is critical to share the stories of what happened in the past and the important lessons learned. The mission of the museum is to promote education and awareness to prevent future tragedies. The museum was established in 1994 and is currently housed in a donated former bank building in Downtown Hilo. It has a collection of over 5,000 tsunami images and over 500 tsunami interviews, as well as many artifacts and historical records. The exhibits feature powerful images and compelling videos and include the history of Hilo and how tsunamis shaped its development, the 2004 Indian Ocean Tsunami, the 2011 Great Eastern Japan Earthquake and Tsunami, the Science of Tsunamis, and a Safety Exhibit. Throughout the museum, there are countless tsunami stories, some of them are amazing rescues, while others tell the stories of tragic loss. The museum hosts groups of all ages, ranging from elementary schools through the university level. The museum also presents lectures by tsunami experts, emergency preparedness personnel, and survivors. The museum also makes presentations at schools, participating in disaster preparedness fairs, and ocean events. As 60 years have passed since the last major tsunami, people's memories of tsunami disasters have faded, and a false sense of security exists where people believe that they are safe from tsunamis. This raises the risk people are exposed to. The Pacific Tsunami Museum provides a critical service to the community by raising public awareness and promoting tsunami education.

- 坂本誠人：人と防災未来センターについて

人と防災未来センターは、東館、西館の２つの建物があり、西館は建物自体がメモリアルモニュメントになっている。ミッションは、阪神・淡路大震災の教訓を語り継いで、今後の災害にそなえることで、1.17 シアターで地震の再現映像、被災したまちのジオラマ、復興のドラマ映像、震災の資料展示（止まった時計、焼けた商店街の看板、被災者の手記、など)、語り部ボランティアが体験を語る場所、耐震の重要性について模型を見ながら学ぶコーナーもある。東館では、東日本大震災の復興の過程の映像、阪神と東日本の比較、風水害や津波の展示をしている。津波から逃げることの大切さを体験するコーナーなどがある。来館者は、県外からが 8 割で海外からも多い。運営では、案内、語り部、通訳などのボランティアの協力が大きい。語り部が少しずつ高齢化している。資料収集は、多くが市民県民から寄せられたもの。若手研究者の育成、全国の自治体の職員に向けた災害対応研修、災害対応の現地調査支援にも取り組んでいる。

- Masato Sakamoto: On Disaster Reduction and Human Renovation Institution

Disaster Reduction and Human Renovation Institution (DRI) consists of two buildings, the east building, and the west building, and the west building itself is a memorial monument. The mission is to convey the lessons of the Great Hanshin-Awaji Earthquake and prepare

for future disasters. In the 1.17 theater, there is a reproduction of the earthquake, a diorama of the devastated city, a drama of the reconstruction, an exhibition of materials about the earthquake (stopped clocks, burnt shopping street signs, notes of the victims, etc.), a place where storytellers talk about their experiences, and a corner where they can learn the importance of earthquake resistance while watching a model. In the east building, you can see images of the reconstruction process of the Great East Japan Earthquake and Tsunami, a comparison of Hanshin and East Japan, and exhibits of wind, flood, and tsunami. There is a corner where you can experience the importance of escaping from a tsunami. 80% of visitors come from outside the prefecture, and there are also many from overseas. Volunteers, including guides, storytellers, and interpreters, play a major role in the management of the facility. The storytellers are getting older little by little. Many of the documents collected were from citizens. It is also engaged in training young researchers, disaster response training for employees of local governments throughout the country, and support for on-site disaster response surveys.

- 佐藤公：梯山の噴火と語り継ぎ

  磐梯山のそばにある美しい桧原（ひばら）湖も猪苗代湖も噴火による「岩なだれ」でできている。日本で最後の岩なだれが 132 年前の磐梯山なので直接経験した人はすでに現存しないし、噴火は突然起きるので、災害の教訓を語り継ぐことは難しかった。噴火当時住んでいた 477 人の多くは今でも岩なだれの現場の地下 100 メートルで眠っており、語り継ぐために毎年慰霊祭をしている。もともとは 1988 年に、噴火 100 年を記念して叔父が博物館をつくり、私が館長に推薦された経緯がある。アウトリーチの活動、様々な災害資料を探すこと、災害ジオツアーなどしている。特に地元の中学校で防災の授業を 20 年間やっていて、教材を工夫して毎年更新している。2002 年からフィールド授業も理科の教員に依頼されて、それが好評でジオパーク構想へと発展していった。地域の人も、定期的に行うアウトリーチの活動を見ていて、これは地元の人が中心となって語りついていかなければいけないという思いを持ち始めて協力してくれるようになった。博物館は、専門家と市民をつなぐ役割も持っている。

- Hiroshi Sato:　Bandai volcano eruption and passing down

  The beautiful Lake Hibara and Lake Inawashiro near Mt. Bandai were both formed by an eruption of "rock avalanche". The last avalanche in Japan occurred on Mt. Bandai 132 years ago, so those who experienced it firsthand no longer exist, and eruptions occurred suddenly, so it was difficult to pass down the lessons of disasters. The 477 people who lived there at the time of the eruption are still buried 100 meters underground at the site of the avalanche, and a memorial service is held every year to pass on their stories. I was recommended as director of the museum after my uncle built it in 1988 to commemorate the 100th anniversary of the eruption of the volcano. We are engaged in outreach activities, looking for various disaster materials, and disaster geo-tours. In particular, disaster prevention classes have been held for 20 years at local junior high schools, and teaching materials are updated every year. In 2002, I was asked to teach field classes by a science teacher, which was well received and developed into the Geopark concept. People in the community were also watching the outreach activities regularly, and they began to cooperate with me because they felt that the local people had to take the lead in communicating with the public. Museums also serve as a bridge between experts and citizens.

- ポルンタム タムウィモル：タイ国パンガ県タクアパ郡バンナムケム村にあるバンナムケム記念碑・ミュージアム

  今年末に政府はバンナムケム記念碑とミュージアムを開設する予定である。私自身も被災者で、地元の人たちの意見を聞いてフィードバックしながら、村に合うデザインを設計した。この漁村は、2004 年 12 月 26 日のインド洋大津波で被災し、船や遺物が 1 キロくらい内陸まで打ち上げられた。その漁船 2 隻を建設予定地まで移動させ、保存して屋外ミュージアムのメインにしようとしている。海が見える展望タワーは、村のシンボルとしてデザインされ、タイルの銘板には亡くなった 2000 人の名前を入れ、慰霊碑もあってセレモニーなどができる。円形のテラスもある。屋内は、会議室で来館者への説明、ミーティングなども行い、語り継ぎのビデオも用意する予定。村の文化観光振興の役割も果たしていて、近くには商業センターを建設して、村の人々の雇用と復興の役にも立てる計画である。ミュージアムはコミュニティとの関係を重視し、被災体験を聞き語る場を提供し、復興の支援もする予定である。次の世代に対しても、地区を守る教育を行い、とるべき行動も発信したい。

- Porntham Thamwimol：　Ban Namkem Memorial and Museum at Ban Nam Khem Village, Takua Pa District, Phang Nga Province, Thailand

  Ban Namkem Memorial and Museum will be established by the government at the end of this year. I was a victim myself, and I listened to the opinions of the locals and used them as feedback to design a design suitable for the village. The fishing village was hit by the Indian Ocean Tsunami on December 26, 2004, and ships and artifacts were washed up about a kilometer inland. The two fishing boats will be moved to the planned construction site to be preserved and used as the main outdoor museum. The observatory tower with a view of the sea is designed as a symbol of the village, with the names of 2,000 dead people inscribed on the tiles, a memorial monument, and ceremonies. There is also a circular terrace. Indoor meetings will be held in the conference room, where explanations will be given to visitors and meetings will be held. It also plans to build a commercial center nearby to help the village's people find jobs and rebuild. The museum will place importance on the relationship with the community, provide a place to hear about the disaster experience, and support the reconstruction. I want to educate the next generation to protect their communities and communicate what they should do.

- ラチャニーコーン ソンティップ：タイ国際津波ミュージアム（タイ・カオラック）

  タイ国際津波ミュージアムは NPO として運営している。そこでの子どものための取り組みについて報告する。インド洋大津波が襲来した際に、津波が来るまでに 1 時間ほどあったにもかかわらず、知識がなくて犠牲になった人がたくさんいた。その反省から、知識と意識を高めて現地の子どもたちを助けることがミュージアムの目的で、市民や来館者からの寄付で運営している。ミュージアムは 14 年間、休む事なく毎日開けてきた。入場料は徴収していないが、子どもたちのためになるなら、それがわれわれの報酬である。大学の学生たちによる講義、アニメ、ビデオ、津波のストーリー、生存者、警戒システムの展示もある。観光者たちがどこに避難したらよいかを知るためにもまず、来館してほしい。ミュージアムでは、料理クラス、アートクラス、タイの音楽、踊り、津波教育のクラスなど子どもたちのサポートも行っている。2019 年にジオパークツアーや語り継ぎの活動も行った。国内外とのネットワークは重視しており、特に日本を含む海外からの支援は必要で、是非、来ていただいてサポートしていただきたい。

- Ratchaneekorn Thongthip:　International Tsunami Museum, Khaolak, Thailand

  Thai International Tsunami Museum is operated as an NPO. When the Indian Ocean Tsunami struck, many people were killed because of a lack of knowledge, even though it took about an hour before the tsunami came. Reflecting on this, the purpose of the museum is to help local children by raising their knowledge and awareness, and it is operated with donations from citizens and visitors. The museum has been open every day for 14 years. They do not charge admission, but if it is good for the kids, it is our reward. There also are lectures by university students, animations, videos, tsunami stories, survivors, and an exhibition of warning systems. They want visitors to come first to know where to evacuate. The museum also supports children with cooking classes, art classes, Thai music, dancing, and tsunami education classes. In 2019, I also organized a Geopark tour and performed storytelling. Moreover, I place importance on the network between Japan and other countries, and the support from Japan and other countries is particularly necessary.

- まとめ：パネル討議では、博物館という「場」があることが、語り継ぎの活動を継続的に行う上で重要な役割を果たすことが確認された。災害の記憶の継承では、被災体験を直接被災者から聞くほどインパクトのある方法はないであろうが、直接経験した人の数は年々減る一方なので、そこをどうするかが課題である。様々な取り組みが行われているが、単に画像や映像などを電子的にアーカイブするだけでなく、これらを絵本、音楽、踊り、映画、儀式などの形にすること、つまり被災経験を文化という形に昇華して残す作業こそ、恒久的に継承することにつながるということが共有された。とりわけ、福島でのアウトリーチの活動、すなわち地元の人たちも記憶していない過去の災害について次世代を担う子供たちと地元の人たちがともに語り、想い起こそうとする作業こそが、時代を超えて災害の記憶を継承することにつながるかもしれないという知見を得た。

- Summary: It was confirmed that the presence of the museum plays an important role in continuing the activities of storytelling. In passing on the memory of a disaster, there may be no other effective way than to listen to the people who have directly experienced the disaster. However, the number of people who have directly experienced disasters decreases year by year. This is the problem that needs to be addressed. While various efforts are being made, it was shared that not only the electronic archiving of images and audio-visual materials, but also the creation of picture books, music, dances, movies, and ceremonies, in other words, the sublimation of the disaster experience into a form of culture and the preservation of it will lead to permanent succession. In particular, it was learned that outreach activities in Fukushima, in which children who will lead the next generation and the local people talk together about past disasters that even the local people do not remember, may lead to passing down memories of disasters from generation to generation.



○ **分科会Ｂ：語り継ぎとツーリズム**（9 時 45 分～12 時、3 階多目的室）/ **Session B: Disaster Tourism: a Tool for Telling Live Lessons** (9:45 – 12:00, 3rd-floor multi-purpose room)

- 問題意識：災害の語り継ぎはツーリズムと結びつくことで持続可能性を高めると当時に、災害や復興の経験、記憶はツーリズムの重要な資源となり、地域経済の復興にも資する。台湾やインドネシアでは、生態系保全やアートなどとも関連したツーリズムを展開している。地域アイデンティティに根差した地域資源の多様な学びや地域住民との交流などをコンテンツとする着地型観光において、語り継ぎは、①災害後と災害前をつなぐ、②地域住民と来訪者をつなぐ、③被災地と未災地をつなぐという 3 つの「つなぐ」に必要不可欠な技術である。「学び」や「交流」の場として、近年高まりつつある災害とツーリズムの関係性について話し合う。

- パネリスト：
  田中尚人 熊本大学熊本創生推進機構 准教授（座長）
  イカプトラ ガジャマダ大学 教授（共同座長）
  草野悟 三陸鉄道株式会社 総合企画アドバイザー
  山崎麻里子 一般財団法人 3.11 伝承ロード推進機構
  松本和夫 熊本県知事公室

- Angle of discussion: Tourism helps the community sustain the memories of disaster and pass on live lessons. Vice versa, the memories, and experiences of disaster and reconstruction thereafter constitute an important part of local resources for tourism that contribute to the development of local economies. In Taiwan and Indonesia, such tourism is even associated with ecological conservation and arts. In a particular type of tourism characteristic with locally organized programs which leverage indigenous resources and contacts with residents, telling live lessons plays a pivotal role in linking pre- and post-devastation, residents and visitors, and areas with disaster experiences and those without. This session aims at examining the significance of tourism as a forum for learning from and connecting with areas hit by disasters.

- Panelists:
  - Naoto Tanaka (Session Chair): Associate Professor, Kumamoto Innovative Development

Organization, Kumamoto University
- Ikaputra (Session Co-chair): Professor, University of Gadjah Mada
- Satoru Kusano:　Adviser, Sanriku Railway
- Mariko Yamazaki: 3.11 Densho Road Promotion Organization
- Kazuo Matsumoto: Governor's Office, Kumamoto Prefecture





- 田中尚人：本セッションは、自然災害の被害を受けた被災地の災害復興だけではなく、これからの地域づくりやツーリズムに関するものである。本セッションのテーマは、次の 3 つをつなぐことである。1. 災害前と災害後をつなぐ、日常と非日常をつなぐ。どうしても災害が起こってしまうと、私たちは災害後のことばかりを考えてしまう。大切なのは私たちの日常を思い出すことである。2. 地域住民と来訪者をつなぐ。ツーリズムはしばしば訪問者の利点に焦点が当てられがちであるが、地元の方と被災地を訪れる訪問者がお互いに何かしらプラスがあることが重要である。3. 被災地と未災地をつなぐ。阪神・淡路大震災から 25 年、阪神・淡路大震災を知らない世代の子どもたちが語り継いでいる。何年経っても風化に悩まされている私たちが、阪神・淡路大震災や中越大震災などを経験した「被災地」から「未災地」へとつなぐことが重要である。事例として、インドネシア、東日本大震災、中越大震災、熊本地震を取り上げる。

- Naoto Tanaka: This session will discuss not only the disasters and the rebuilding of the stricken area from natural disasters but also community development and tourism in the future. The theme of this session is the following three “links”. (1) Linking between pre and post devastation, or between ordinary life and unordinary life. After the disaster, we are apt to think about recovery from disaster and our life in the future. We need to remember the ordinary life before the disaster. (2) Linking between residents and visitors. In tourism, we tend to focus on the advantage of visitors. Both residents and visitors must benefit from tourism. (3) Linking between areas with disaster experiences and those without. 25 years have passed since the Great Hanshin-Awaji Earthquake. Today, the children who did not experience the earthquake tell live lessons from it. While we have always been facing the challenge of fading, it is important to link from the areas with disaster experiences such as the Great Hanshin-Awaji Earthquake and the Chuetsu earthquake to those without such experiences. As a case study, Indonesia, the Great East Japan Earthquake, the Chuetsu earthquake, the Kumamoto earthquakes will be discussed.

- イカプトラ：「災害後のツーリズム：行く先の「ダーク」の記憶–2010 年メラピ山噴火のケース」

  インドネシア・ジャワ島中部のメラピ山噴火の被災地の語り継ぎの取り組みについて報告する。「3 つの A」を提案する。1 つ目の A は Attraction（魅力）、2 つ目は Access（手段）、3 つ目は

Amenity（本当にあるべきものは何か）である。ムラピ山噴火の被災地周辺は山あいのため村への公共交通機関はない。Attraction（魅力）があるが Accessibility（アクセスのしやすさ）が十分でない。Amenity（あるべきもの）として博物館が震災からしばらくしてやっとできた。噴火直後は、「こんなことがあった」という事実のみが伝えられていた。のちに経済、文化、社会的条件が向上し、噴火によって既に村がなくなった場所で、住民が村へ来る人たちに対して村のストーリー（歴史や教訓）を語ることができるようになった。災害情報を展示することも可能となった。同様のやり方が他のコミュニティにおいて活用できないかと考えている。

- Ikaputra: Tourism Post Disaster: Remembering "The Dark" of Destination－The Case of Mount. Merapi Eruption 2010

  I report on the initiative of telling live lessons in the area devastated by the eruption of Mt. Merapi in Indonesia. Let me first introduce the following theoretical framework of "triple-A" in dark tourism. The first A is Attraction; the second A is Access; the third A is Amenity. Amenity is related to a question of what should be there. In the mountainous area which was attacked by the eruption of Mt. Merapi, there is no public transportation system (Accessibility). Although there are a lot of attractive resources (Attraction), accessibility is lacking. A few years after the disaster, a museum about the disaster was built (Amenity). Just after the disaster, the residents would talk only about what had happened. Later, as the social, cultural, and economic conditions improved, the residents could begin talking about their stories, such as the experiences and lessons from the disaster to visitors in the place where their former village was located but swept away because of the eruption. It became possible to display various information about the disaster as well. We are now discussing how a similar initiative can be applied in other communities.

- 草野悟：「つなぐ」が地方の衰退を止める

  三陸鉄道のスローガンは「笑顔をつなぐ・・ずっと」である。36 年前の開業時は 265 万人の乗降客がいたが、震災後の 2011 年には 6 万人、現在は 60 万人である。2019 年に旧 JR 山田線の移管で南北リアス線の間が結ばれ、163 キロの一貫鉄道となり約 100 万人を目標にしている。東日本大震災では三鉄も甚大な被害を受け 108 億円の復興費用を要した。2020 年 3 月、JR からの移管を受け営業距離は 163 キロ、第三セクター鉄道としては全国で一番長い鉄道となった。2019 年には創業から 35 年で通産合計の乗客 5,000 万人を達成した。しかし、その後台風 10 号（2016 年）、台風 19 号（2019 年）と相次ぐ自然災害で再び大きな被害を受けた。たとえ鉄道が守られても、出資者である市町村に災害が起これば三鉄もダメージを受ける。地域と三鉄は運命共同体である。2015 年の試算では鉄道の乗車運賃の 20 倍以上が地元で使われるなど、驚くほどの経済効果がある事が分かった。この経済波及効果は地元でも評価している。会社の経営方針は、「現場、現実、現状の重視」「東日本大震災の経験と教訓の語り継ぎ」「地域の活力向上に取り組む」「三陸の認知度向上に寄与する」である。社員が自ら被災地を案内し、教訓や経験を話す。「フロントライン研修」は、お客様の要望に応じた視察研修であり社員がガイドを務める。運転手も語り部となって案内する。「震災学習列車」では、三陸鉄道社員または沿線住民が車内で震災の状況を案内する。地域のグルメを紹介する冊子を発行したり、地域が元気になる企画を次々と発信したりするなどのパブリシティー戦略も積極的に展開している。復興のためには外から人を呼び込むのが重要である。風評被害など負の部分も伝えなければならない。三鉄沿線には 13 市町村がある。これらの市町村が連携してこそ、震災ツーリズムが成立する。

- Satoru Kusano:　Economic Ripple Effect on the Area by Sanriku Railway

  The slogan of Sanriku Railway is “Connecting smiles…always”. When it was founded 36 years ago, the number of passengers was 2.65 million annually. But, after the disaster, it decreased to 60,000 in 2011, and today 600,000 per year. In 2019, the former JR Yamada line was transferred to our company, and the separated lines prior to the transfer got connected all the way through. We now target 1 million passengers per year. We also suffered much due to the earthquake and tsunami. Our operating railway kilometer is 163 kilometers, which is the longest in Japan as a joint public-private company. In 2019, we commemorated our 32nd anniversary with the total of 50 million passengers altogether. However, we again suffered a lot from Typhoon No.10 in 2016 and Typhoon No.19 in 2019. Even if the company does not suffer from disasters, if the municipalities i.e. our stakeholders get damaged, the company suffers anyway. Sanriku Railway and the area in which the company operates are part of a common destiny. In 2015, according to an economic analysis, our company brings immeasurable profit to the area in such a way that a passenger pays 20 times as the price of the ticket. This is appreciated by the local economic community. Our management policy is “To place importance on the site, the reality and the situation”, “To pass on the experiences and lessons of the Great East Japan Earthquake and Tsunami”, “To contribute to strengthening the liveliness of the local socio-economy” and “To contribute to augmenting the publicity of Sanriku area”. We encourage our employees to guide visitors to disaster sites and share his / her experiences and lessons. Even our train drivers are mobilized. We call such initiative “Front Line Study”. We also organize “Earthquake and Tsunami Study Train” whereby our employees and the local people along the railway are mobilized and they explain to train passengers about the disasters and reconstruction in the train cars. As a part of our publicity strategy, we publish booklets to highlight local restaurants, launch attractive initiatives one after another to make the local communities happier and livelier, etc. In promoting the reconstruction, it is greatly effective to bring in many people from outside. We need to inform the negative points as well. There are 13 municipalities along the railway line. “Earthquake tourism” cannot work unless those municipalities collaborate.

- 山崎麻里子：３つの「つなぐ」について

  一昨年までは中越地震の伝承施設である「中越メモリアル回廊」で勤務していた。中越メモリアル回廊は 4 つの施設と 3 つの公園から構成されている。これを全部まわる事で中越の全体像を理解するというコンセプトである。2015 年に熊本地震も起きた。回廊整備という共通点を通して中越と熊本の学び合いもできた。現在は仙台市にある「3.11 伝承ロード推進機構」で勤務している。東日本大震災の被災地には多くの震災遺構のほか、明治三陸大津波、昭和三陸大津波の石碑などがある。東日本大震災の伝承施設も数多く整備された。体験や教訓を語り継ぐ市民活動も行われている。しかし、横のつながりが今まで薄かった。東北一丸となって震災伝承を進めていくため「震災伝承ネットワーク協議会」が設立された。協議会では 3 つの取り組みが掲げられた。(1) 震災伝承ネットワークとしての伝承ロード形成、(2) 防災プログラムの基盤形成と開発、(3) 復興に向けた地方創生と地元の支援である。そのような中で「3.11 伝承ロード推進機構」も設立された。公益事業や収益事業を行い、寄付や賛助会員の様々なサポートも得て、震災伝承施設を中心とした活動を支援し、多くの人に来てもらって地域振興を支援する事を目的としている。現在、震災遺構、施設、石碑など 192 件が登録されており、今後 200 件以上の登録を目指している。法人は 2019 年 8 月に設立したばかりで、現在、沿岸域に多く立地している伝承施設

のマップの作成・配布、現地視察のサポート、防災シンポジウムのお手伝いなどをしている。①震災の記録と記憶を次の世代へつなぐ、②ニーズとシーズを把握して地域と来訪者をつなぎ地域活性化に生かす、③各地に点在する震災伝承施設をつなぎ東北一丸となり震災伝承に取り組むという、3 点を大切にしている。来訪者が震災の教訓を学び、自分事として受け入れる事が、命を救うことに繋がると考えている。

- Mariko Yamazaki:　Three “Connectings”

  Until 2 years ago, I had worked in the Chuetsu Memorial Corridor which serves as a facility of storytelling on the Chuetsu Earthquake. The Corridor consists of 4 facilities and 3 parks, the concept of which is to provide an overview of the Chuetsu area and the earthquake through having visitors visit all those 7 sites. When the Kumamoto Earthquake occurred in 2015, the Chuetsu area and the Kumamoto area had the Corridor initiative in common and we could cross-learn from each other then. Presently, I work in 3.11 Densho (i.e. storytelling) Road Promotion Organization in Sendai City. In the areas affected by the Great East Japan Earthquake (2011), there are not only many disaster-remains, but also stone monuments of the Meiji Sanriku Great Earthquake and Tsunami (1896) and the Showa Sanriku Great Earthquake and Tsunami (1933). Many facilities for storytelling about the 2011 earthquake have also been developed. Many civil society groups also undertake the activities of passing on their experiences and lessons. However, horizontal collaboration has been lacking across such initiatives. In order to ensure the promotion of storytelling activities in a united way, the Earthquake Storytelling Network Promotion Committee has been set up with the Ministry of Land, Infrastructure and Transport as the secretariat along with all the prefectures and the Sendai City as the members, and the following policy has been identified: (1) administration of “3.11 storytelling road” as a network; (2) creation and development of the base of disaster risk reduction programs; and (3) revitalization of the local economy towards reconstruction. It is in this context that 3.11 Densho (i.e. storytelling) Road Promotion Organization has been founded. We aim at supporting primarily various storytelling facilities and promoting the local economy through conducting various non-profit and profitable initiatives as well as receiving support from various stake-holders and supporters. Currently, as many as 192 disaster remains, facilities, stone monuments, etc. are enrolled in the network; and over 200 facilities are being targeted soon. The organization has just been founded since August 2019. Presently, it is engaged in creating and distributing the storytelling facility map, supporting site visits, assisting various disaster risk reduction symposia, etc. Our motto is “lessons save lives”.

- 松本和夫：熊本県における平成 28 年熊本地震の記憶を後世につなぐ取組み

  熊本県では 2016 年 4 月の熊本地震の記憶を後世に伝えながら地域の活性化にも資する様々な取り組みを展開している。一つは、ツーリズムにもつながる「熊本震災ミュージアム構想」である。中越メモリアル回廊などを参考に、震災遺構や活断層などを回る回廊型のフィールドミュージアムを目指している。震災遺構の中核は、南阿蘇村で被害を受けた東海大学の阿蘇キャンパスの校舎である。建物の下に断層が走っており、一体的な保存・活用を計画している。大学敷地内に体験展示施設を整備し 2022 年春にオープン予定である。語り継ぎ活動も重視し、小中学生、行政職員、医者など 135 名に語り部となってもらっている。これは映像としても記録して県庁内のテレビで放映することとしている。もう一つの取り組みである「デジタルアーカイブ」にも収

録する。被災地をバスで回るモニターツアーも行っている。震災遺構だけでなく観光色も絡めて前向きな形で被災地阿蘇を見せることで参加者に好評を得ている。これまでに 370 名参加した。修学旅行の落ち込みも大きい。これを呼び戻すため、熊本県及び県内市町の連携の下、阿蘇火山博物館や断層を巡り語り部の体験談を聴く教育プログラムを開発している。拠点整備も重要であり、被災した熊本城などの再建に力を入れている。今後、震災ミュージアム内の災害遺構や施設を回廊型ミュージアムとしてめぐる旅行商品を民間企業とも連携して開発していきたい。

- Kazuo Matsumoto:　Conveying the memories of the 2016 Kumamoto Earthquake to future generations

  The Kumamoto earthquake generated shaking of the seismic intensity of 7 on the Japanese scale twice in 28 hours in April 2016. Following the earthquake, Kumamoto Prefecture is engaged in various initiatives of passing down the memories of the Kumamoto Earthquake to the next generations and simultaneously contributing to the revitalization of the local communities. The leading one is the Kumamoto Earthquake Museum Initiative i.e. "corridor-style" field museum in which one may travel along a route that allows one to see reminders of the earthquake and visit centers where you can learn about the earthquakes. The core of the reminders is the school buildings of the Aso campus of Tokai University which were damaged in Minami-Aso Village. There is a fault line underneath the school building. We plan to preserve those buildings and the fault line in an integrated way. A facility for experiencing and exhibition is planned to be developed in the university compound. It is planned to begin operation in the spring of 2020. We place importance on storytelling activities with the cooperation of 135 storytellers such as children, officials of prefecture and municipalities, doctors. Their storytelling is recorded audio-visually; and can be seen on video monitors. Such audio-visual records will also be archived in another important initiative i.e. Digital Archive. Moreover, a study tour by bus i.e. monitor tour is being organized to visit various sites which were damaged by the earthquake. The tour is designed to help visitors visit not only the earthquake reminders but also some touristic sites; and thus, it enjoys a good reputation by providing an overview of the earthquake-affected area positively. The tour has so far served 370 visitors. The number of school excursions visiting the Aso area has also dropped drastically. To have the visitors back, the Prefecture has been developing an educational program in collaboration with the municipalities within the Prefecture, whereby Aso Volcano Museum and fault lines are visited and storytellers are listened to. Reconstruction of some core facilities such as the damaged Kumamoto castle is greatly important. The Prefecture plans to develop some commercial tourism products in collaboration with public companies that guide disaster remains and related facilities as the corridor-type museum.

- まとめ：地域の人には当たり前のように思えることであっても、来訪者は感動することがある。それを見て、地域の人は、自分の住んでいるところは良いところだと再確認する。よく地域の方は「ここには何もない」というが、多様な価値観があるということを知って欲しい。地元のステークホルダー、社会的資本、ネットワークをつなぐと、その地を来訪者が訪れる目的が変わったり、魅力が増したりすることがあり、新しい魅力が作り出されることもある。地域の人が大事で、地元の人をつなぐ人、つながれる人も大事である。地域資源や地元の人々とのつながりをアーカイビングすることにより、被災地が日常へと復興していく過程で、次の世代へ被災経験を語り継ぎながら魅力あるツーリズムにつなげていくことが大切である。

- Summary: Visitors are sometimes moved by something that the locals think is nothing special. When the locals see this, then they revalue that their hometown is indeed a nice place to live. While the locals often say that there is nothing attractive in this area, they may be reminded of a wide diversity in terms of a sense of value. By linking the local stakeholders, social capital, and networks, the meaning of visiting a place may change and different attractiveness may emerge. Local residents are important; and those who link the residents and those who are linked are also important. By archiving the linkages of local resources and residents, it is important to pass down the memories of the experience of disasters to the next generations and link them to the attractive tourism through the process of revitalization from disaster-hit areas to ordinary daily community life.



○ **分科会Ｃ：語り継ぎとローカルコミュニティ**（13 時～15 時 15 分、2 階ホール）/ **Session C: Telling Live Lessons and Local Community** (13:00 – 15:15, 2nd floor hall)

- 問題意識：ローカルコミュニティは、災害の語り継ぎを生みだし、支え、つなぐ役割を担う。語り継ぎをめぐる活動は、それを核とした新たなネットワークをもたらし、地域振興、まちづくり、地域防災、教育へと活動の幅を広げる。コミュニティにおいて語り継ぎがどのように生み出されたのか、コミュニティはどのように語り継ぎを支えているのか、そして、語り継ぎはコミュニティに何をもたらしたのかなど、災害が起こってからの経過年数が 5 年、15 年、95 年というように異なる状況にあるコミュニティの経験を共有するとともにその特徴を比較し検討する。

- パネリスト：
  阪本真由美 兵庫県立大学大学院減災復興政策研究科 准教授（座長）
  ギュルム タヌルジャン ボスフォラス大学 准教授（共同座長）
  ファウスティト A. オーレ 東ビサヤ国立大学 教授
  松井敬代 豊岡まちなみ連盟事務局 次長
  松井憲 復興交流館モンドラゴン 事務局長
  山住勝利 ふたば学舎震災学習ラボ 室長
  チョン カイ リン 北マレーシア大学 UUM ビジネス校技術管理及びロジスティック学科災害管理機構 研究員

- Angle of discussion: Local community is the main resource for producing, supporting, and connecting the activities of preserving, and passing on the live lessons from disaster experience over generations. Such activities generate a new network, and it expands its activities to community revitalization, city planning, community disaster management, and education. This session discusses how the community creates the activities of telling live lessons, how the community supports such activities, and what was the effect brought to the community, through sharing and comparing some cases with different lengths of time elapsed: 5 years, 15 years, and 95 years. (Session Chair: Ms. Mayumi Sakamoto, Associate Professor, Graduate School of Disaster Resilience and Governance, University of Hyogo)

- Panelist:
  - Mayumi Sakamoto (Session Chair): Associate Professor, Graduate School of Disaster Resilience and Governance, University of Hyogo
  - Gülüm Tanircan (Session Co-chair): Associate Professor, Bogazici University
  - Faustito A. Aure: Professor, Eastern Visayas State University
  - Takayo Matsui: Director, Toyooka Association for Historical Townscape Conservation
  - Ken Matsui: Director, Reconstruction and Interaction House Mondragon
  - Katsutoshi Yamazumi: Chief, Earthquake Disaster Experience Learning Lab., Futaba Gakusha
  - Chong Khai Lin: Research Fellow, Disaster Management Institute, School of Technology Management & Logistics, UUM College of Business, Universiti Utara Malaysia





- 阪本真由美：ローカルコミュニティは、災害の語り継ぎを生みだし、支え、つなぐ役割を担う。語り継ぎをめぐる活動は、それを核とした新たなネットワークをもたらし、地域振興、まちづくり、地域防災、教育へと活動の幅を広げる。本分科会では、コミュニティにおいて語り継ぎがどのように生み出されたのか、コミュニティはどのように語り継ぎを支えているのか、そして、語り継ぎはコミュニティに何をもたらしたのかについて以下の三点を論点に議論する。第一に、災害が起こってからの経過年数と語りつぎの相違に着目する。災害から 95 年を経た語り継ぎの状況（北但大震災）、25 年（阪神・淡路大震災）、21 年（トルコ・マルマラ地震）、5 年（2013 年フィリピン・台風ハイアン、2014 年広島豪雨災害、2014 年マレーシア豪雨）というように異なる経過年数にあるコミュニティの経験を比較し検討することにより経過年数を踏まえた特性を把握する。第二に、語り継ぎと地域の相互作用、語り継ぎは地域にどのような効果をもたらすのかを考える。第三に、語り継ぎが、地域の復興・防災にどう貢献するのかである。

- Mayumi Sakamoto: A local community plays important roles in creating, supporting, and connecting disaster storytelling. The activities of preserving and transferring disaster

memories create new networks and bring opportunities to develop disaster-resilient communities. In this session, we discuss disaster storytelling and community from the following points. First, we focus on how the transition of time affects disaster storytelling. We compare the characteristics of disaster storytelling in different times since disasters occurred: 95 years (1925 Great Hokutan Earthquake, Japan), 25 years (1995 Great Hanshin-Awaji Earthquake, Japan), 21 years (1999 Marmara Earthquake, Turkey), and 5 years (2013 Super Typhoon Haiyan (local name Yolanda), Philippines; 2014 Hiroshima landslide, Japan; 2014 Malaysia Flood, Malaysia). Second, the interaction between the storytelling and the local community, and the effect of storytelling on the community. Third, how storytelling contributes to regional reconstruction and disaster prevention.

- ギュルム タヌルジャン：地震に強い地域社会に向けて：日本の協力を得たトルコでの普及活動

  トルコにおける災害語り継ぎ活動と防災教育プログラムの状況について紹介する。トルコでは 1999 年のマルマラ地震までは防災教育プログラムは公式には学校の教育現場では導入されてこなかった。同地震での体験が転換点になった。震災後、ボアズィチ大学カンディリ地震観測所内に、コミュニティを対象とした最初の防災教育施設として「地震教育パーク」が開設された。現在ではトルコでも日本政府の協力を得て地震・津波についての防災教育プログラムが始まっている。地域コミュニティでの冊子の配布、子供たちを対象としたアニメや漫画などの視聴覚教材の活用、メディア向けのセミナー、世界津波の日のプレス発表などが行われている。

- Gulum Tanircan: Towards Earthquake Resilient Communities: Dissemination Activities in Turkey in Cooperation with Japan

  I report on disaster storytelling activities and disaster education programs developed in Turkey. Disaster education program was not formally integrated into school education until the 1999 Marmara Earthquakes. The experience of the disaster became a turning point. After the earthquake, the Earthquake Education Park was opened in Kandilli Observatory and Earthquake Research Institute, Boğaziçi University, Turkey, as the first disaster education facility for the community. Now in Turkey, new disaster education programs on earthquakes and tsunamis have been started in collaboration with the Japanese government. Dissemination of booklets in local communities, application of audio-visual training materials for children such as anime and comics, media seminars discussing the role of media, press meeting for Tsunami Awareness Day, etc. are being initiated.

- ファウスティト オーレ：台風ヨランダに打たれた地域からの反響

  2013 年にフィリピンを襲った台風ハイアンの被災者 6 名の語りとそこから得られる教訓を紹介する。6 人の被災地も職業も異なるが、どの言葉も強い力を持つ：「台風の被害者となっても人間性を失ってはいけない」「希望を持って生き延びて、経験を語り継いで学んでもらおう」「古老の知恵と助言に耳を傾けよう」「台風が近づいているなら直ちに避難する」「被災地には生き延びるための多くの物資がある」「一つの扉が閉まればもう一つの希望の扉が開く」「災害を生き延びた者には世界にその経験を語り継ぐ道義的な責務がある」。地域の防災を進める上では専門家だけでなく草の根レベルの住民参加も促進されるべきである。私たちが語り継ぐことをしなければ、悲惨な出来事が無かったことになってしまう、それでは私たちは永遠に学ぶことはできない。求めがあれば私たちは何処へでも出かけて語り継ぐ。

- Faustito Aure: Echoes from the Beaten Pathways of Haiyan (Yolanda)

  I will be highlighting the stories of 6 survivors of Super Typhoon Yolanda which heavily destructed Tacloban City, Province of Leyte, the Philippines in 2013. They represent different places and sectors of the community, but each one has its own powerful messages. They talk about stories of survivors, recovery, and hope, which should bring fresh insights, learning, and education. The excerpts of the stories are: do not lose your humanity despite being a typhoon victim; let hope prevail and share your story so others may know and learn; listen to the wisdom and advice from old people; we need to evacuate immediately if there is an incoming typhoon; resourcefulness during calamities for survival; if one door closes, one window of opportunity opens; to be a survivor is to have a moral responsibility to tell the world. With regard to disaster risk reduction for city plans, grass-roots participation should be encouraged. If we do not talk about the calamity, it is as if it did not happen, we will never learn. As long as people are willing to listen, we will go and share our stories.

- 松井敬代：北但大震災（北但馬地震）から復興した豊岡と城崎

  1925 年北但馬大震災で被災したコミュニティにおける語りつぎについての事例を紹介する。被災地豊岡と城崎では、個々人の語りのみならず、モニュメント、写真、お千渡参り（周年行事）、消火訓練を通した語り継ぎが行なわれている。豊岡市では、災害復興まちづくりを通して、街の中に防火帯として機能する建物を配置するという取り組みが行われた。豊岡が行政主体の復興まちづくりを実施したのに対し、城崎では、住民主体（旅館を中心）としたまちづくりが行われた。災害に強い街にするために、防火帯として鉄筋コンクリート造の建物を配置する、大渓川の河川改修をし、玄武岩を再利用して護岸整備するなど、まちなみを通して被災経験を伝えている。また、学校教育も重視されており、その内容は、震災直後は供養が中心であったものの、途中で防災・避難訓練に変わるというような変化がみられる。

- Takayo Matsui: Toyooka and Kinosaki; towns that have recovered from Hokutan earthquake

  I trace the 95-year storytelling history of Kinosaki Town and Toyooka Town (now Toyooka City), Hyogo Prefecture, Japan. Both cities were heavily damaged by the tremor and fire occurred after the 1925 Great Hokutan Earthquake. It is interesting to see the two towns adopted different disaster recovery policies. Toyooka Town adopted a policy to reconstruct buildings with reinforced concrete to make buildings fire-resilient following the national and prefectural government guidance. In Kinosaki Town, a town well-known for its spa-resort, the residents adopted a policy to rebuild traditional wooden construction buildings to preserve their historical townscape, at the same time, making the entire city disaster-resilient by widening the river or building reinforced concrete buildings as a fire-wall. Kinosaki Town still maintains its recovery and historical townscape until now which attracts tourists. Every year on the day of the earthquake (May 23rd), in Kinosaki Town several events to commemorate and remember the earthquake take place. Schools offer special disaster education programs about the 1925 earthquake. The local fire station and the community fire brigades conduct a joint fire drill, and at the time of the earthquake occurrence, they offer up prayers for the victims with the sound of a siren at the memorial tower. In the "Tai" community, the residents continue to go up to the shrine of "*Ujigami* (Local Deity)" and do "*Osendo-Mairi* (One thousand times' worship)" in which they give

prayers for not starting fires.

- 松井憲：2014 年 8 月 20 日－ドラゴンが棲む山

  2014 年の広島豪雨災害から 5 年が経過した広島市安佐南区梅林小学校区での取り組みについて報告する。小学校区で 69 名死亡というように犠牲者が多かった。広島県と広島市は、災害から 3 年間は追悼式を実施したものの、4 年目からは地域が実施している。被災から 1 年 10 ヶ月たった段階で、住民が「復興まちづくり協議会」を設置し、市はそれをサポートしている。復興交流館モンドラゴンはこれに 2 ヶ月先立つ 2016 年 4 月にオープンした。地域住民を主体とした復興まちづくりの活動である。子どもは学校を中心に関係性が構築されるが、高齢者はそうはならない。年金暮らしの高齢者でもブラっと来て話をしたり人と会ったりして元気になれるような場となったら良いのではないかと思い、広島のソウルフードであるお好み焼きを安く提供することとした。家が倒壊して土地を離れ、避難した人もいる。砂防堰堤や道路の建設に伴う立ち退きにより、住民の 1/3 が地域を離れた。被災者の心の復興、情報共有、コミュニティ再生のために復興交流拠点施設が重要だった。地域の人の復興を支える施設としてスタートしたものの、蓋を開けると外部からの視察が多く、14,488 名が訪問している。現在は復興まちづくりの一環としてミュージアム設置を市に提案し、2022 年の開館をめざしている。

- Ken Matsui: August 20, 2014－The Mountain Where Dragons Live

  I would like to report on the activities in Bairin School District, Asa Minami Ward, Hiroshima City, which suffered from the 2014 Hiroshima Landslide Disaster. 69 people died there. Five years have passed since the disaster. Hiroshima Prefectural and Municipal government organized a commemoration ceremony three years after the disaster, but on the fourth-year commemoration day, the ceremony was handed over to the local community. After one year and ten months of the disaster, community people organized a “Recovery Town Planning Committee” supported by the municipal government. Two months before this, “Reconstruction and Interaction House Mondragon” was opened by community residents in April 2016. One-third of residents left the area because they had to provide their lands for public works such as road construction or erosion control dam construction in the recovery process. Children may have opportunities to restore human relations through school activities, however, it is difficult for elderly persons to adopt new circumstances. Hoping to make the facility a venue where elderly persons pop in and meet friends and become happier, we decided to provide some light meal at a cheap price that even a pensioner can afford easily i.e. a local soul food of Hiroshima. “Mondragon” was started to support the psychological recovery of community residents by sharing information and moment. However, little by little it became known as a facility for tourists who want to learn about the landslide disaster. Up to now, 14,488 people have visited Mondragon. This provided an idea to establish a disaster museum as a part of recovery town planning. Now, community people are planning to open a new landslide disaster museum in 2022.

- 山住勝利：震災体験学習で目覚めるローカルコミュニティの記憶

  阪神・淡路大震災の被災地長田区のふたば学舎を中心とした取り組みを紹介する。ふたば学舎は、2008 年に閉校となった二葉小学校が、地域住民による校舎存続の要望を受け 2010 年に再生されたコミュニティ施設である。管理・運営は NPO 法人ふたばが担っている。震災時に二葉

小学校近隣で数多くの建物の倒壊と大規模な火災が発生し、小学校には 1,000 人を超える被災者が避難した。ふたば学舎の震災体験学習は、阪神・淡路大震災にまつわるローカルコミュニティの記憶に基づく。体験学習の対象は、阪神・淡路大震災以降に生まれた若い人であり、震災時に避難所となった旧二葉小学校内の講堂や教室を会場として、ダンボールを使った避難所体験や語り部体験談などが行なわれている。ローカルコミュニティが有する震災の多様な記憶を震災体験学習の実施時に呼び起し、震災を知らない若い参加者に伝え体感されている。

- Katsutoshi Yamazumi: Reviving the Memories of the Local Community through Earthquake Disaster Experiential Learning

  The Futaba Gakusha is a community facility established in 2010, in one of the severest hit areas of the 1995 Great Hanshin-Awaji Earthquake. It was created by renovating the Futaba Elementary School (closed in 2008) through the efforts of the residents. The building was used as an evacuation shelter where more than 1,000 disaster victims evacuated after the earthquake. The building is managed and operated by Futaba, an incorporated nonprofit organization that was established by local community organizations. The Futaba Gakusha is initiating the earthquake disaster experiential learning programs. The programs have been developed based on the memories of the local community related to the earthquake. The program consists of evacuation shelter experiential activities using cardboard and *kataribe* (Japanese storytelling) activities of disaster experiences. For the evacuation shelter experiential activity, participants engage in activities to create evacuation spaces using cardboard, imaging how difficult life must have been at that time through physical experience, and the instructor-practitioner shares stories about actual events that have occurred. Through these activities, Futaba Gakusha connects the memories of the earthquake from the past with the "present day." This means earthquake disaster experiential learning programs function to conjure up a diverse array of local community memories through oral storytelling and physical experience.

- チョン カイ リン：小学校の防災教育ツールとしてのボードゲーム「BENCANA」の開発

  2014 年のマレーシア東部の岸部の洪水は建国以来最悪のものであった。これを機に被災地でその後始められている防災学習の取り組みについて報告する。災害時の被災地の状況を思うと、洪水危険地域のレジリアンスを高める努力が必要であるのは明らかである。災害後に私は調査のために被災地の学校を訪れ、先生方に会って話を聞いてみた。先生方自身が災害対応で疲弊していて、子供たちを守ることなどには考えが及んでいないことが分かった。これは深刻な事態であると考えた。子供たちも学校で災害に備えるための訓練を受けるべきである。子供たちが学校で学べば家で両親にも伝えてくれる。私たちは、研究者、コミュニティ及び学校の協力を得て、新たな防災教育のプログラムを開発することとした。小学校での防災教育がどのようにコミュニティの災害の備えに資するかを知りたいと考えている。そして小さな板を使った BENCANA というゲームが新たに開発された。災害常襲地区の小学校と比較的安全な地区の小学校を対象として比較する。研究成果を活用して、BENCANA がマレーシア全土で使われることとなるよう改善していきたい。次の段階として、関西国際大学との連携で、日本でいう防災士に相当する防災専門家の制度を構築することも検討している。マレーシアは災害に関しては比較的安全な国であった。しかし、気候変動が懸念される中、決して安心はできない。

- Chong Khai Lin: The Development of "BENCANA" Board Game as a Disaster Education

Tool in Primary Schools

The floods that hit the states on the eastern coast of Malaysia in December 2014 was one of the worst in the nation's history. Considering the extent of the damage, it was evident that efforts should be focused on building the resilience of the communities living in flood-prone areas. After the flood, I visited schools in the affected area for my research and met teachers. I found that teachers themselves were overwhelmed and could not think about children. This was serious. Children are our future and asset. Children should also be trained in school on disaster preparedness. If children learn in school, they can transfer their new knowledge to their parents. We decided to develop a new disaster education programs in collaboration with researchers, the local community, and schools. This study aims to know how the use of disaster education tools in primary schools may benefit the overall community preparedness. A board game named BENCANA was newly developed. Two focus groups conducted classes in two primary schools for comparison: one school located in a disaster-prone area another located in a relatively safe area. Through the data gathered in these sessions, we will improve the game to make it adaptable in primary schools throughout Malaysia. We are also working with Kansai University of International Studies and considering developing a DRR expert system in Malaysia as the next step. Malaysia has been a relatively low-risk country in terms of natural disasters. However, while climate change is being worried about, we now need to be careful.

- まとめ：ローカルコミュニティにおける語り継ぎは、被災直後は被災者の体験談を共有することにより、お互いの心を癒し、地域を復興することから始まり、時間の経過とともに地域の外にもその経験や取組みを伝えるように変化していた。追悼として始まった活動が、防災学習や避難訓練として経験のない次の世代に伝えていく活動にカタチを変えるなど、語り継ぎの方法は様々である。回復のプロセスには人もまちもそれぞれに異なったストーリーがあり、それぞれの地域が培った知見を大切にして繋いでいくことが重要である。被災地域と地域外の語りの関係は地域から地域外へ伝える「一方向」のように思われたが、実際には伝える過程の中で被災から時間が経過した地域の被災体験を呼び起こし、地域内で語り継ぎを行っていく一つのきっかけにもなっており、語り継ぎの関係が双方向であることが分かった。被災の経験と教訓を語り継ぐことは、未災地へ災害への警鐘を鳴らすとともに、被災地においては地域活動として定着した事例もあり、ローカルコミュニティの維持や再生に繋がっていく可能性を示している。

- Summary: Followings are findings through the discussion. First, the importance of the storytelling formulation process in each community. The storytelling first starts within the community to reduce the psychological harm from disaster by sharing common experiences. Then, the disaster stories are told to outsiders who want to learn about disasters. Several storytelling activities changed their organizers or purposes as time passes by. For example, there is an event that started as a commemoration ceremony for disaster victims, changed to a public event to raise disaster awareness. There are different processes and stories in each community, and it is important to learn from each recovery experience. Second, the relationship between the disaster-stricken community and the outside community which has experienced a disaster. Storytelling is considered to be "one way," from the disaster-affected community to the outside, but in most cases, the communicating process with other disaster-affected community which tries to transfer their experience encouraged the disaster-affected community to start storytelling. This means the disaster storytelling starts through mutual

communication between disaster-affected communities.



○ <u>分科会Ｄ：ジオパークと語り継ぎ</u>（13 時～15 時 15 分、3 階多目的室）/ **<u>Session D: Geopark and Telling Live Lessons</u>** (13:00 – 15:15, 3rd-floor multi-purpose room)

- 問題意識：阪神･淡路大震災の震源地に程近い六甲山は地震の繰り返しで高くなった山である。これが示すように、阪神・淡路大震災をもたらしたような地震が過去に何度も起きた痕跡が多く残されていることを研究者は知っていたが、地元には伝わっていなかった。一方、断層でもたらされる豊富な湧水など、地元への恵みも共有されていなかった。ユネスコの科学プログラムの一つであるジオパークは、ダイナミックに変動する地球の活動を地元の方々がよく知り、その証拠を大切にし、教育や観光にも活かして持続可能な地域社会を作っていく活動で、防災教育も重要なミッションとなっている。自らは語ってはくれない大地を読み解き、現代にどう語り継げばよいのか、幅広い視点で議論をする。

- パネリスト：
  中川和之 時事通信社解説委員、日本ジオパーク委員会調査運営部会員（座長）
  イブラヒム コモオ 世界ジオパークネットワーク 副会長（共同座長）
  ナンシー アグダ フィリピン大学国立地質科学研究所
  西谷香奈 伊豆大島ジオパーク推進委員会委員、グローバルネイチャークラブ
  柴田伊廣 文化庁文化財第二課、日本ジオパーク委員会調査運営部会員

- Angle of discussion: Mt. Rokko, located near the epicenter of the Great Hanshin Awaji Earthquake, grew higher through the earthquakes which occurred repeatedly. The numerous historically accumulated traces of earthquakes such as the Great Hanshin Awaji Earthquake that had been left behind there were already familiar to scientists, but remained unknown to local residents. The faults of Mt. Rokko provided abundant spring water, but this fortune was not shared with the local community. Geoparks promoted by UNESCO through one of its science programs are activities for local communities to understand the dynamism of geological transformation of the earth, conserve its traces and utilize them to develop sustainable societies through education and tourism. These activities include education for disaster risk reduction. This session intends to discuss from broader points of

view how to interpret the geological significance of sites and landscapes, and how to communicate it to local communities.

- Panelist:
  - Kazuyuki Nakagawa (Session Chair): Commentator, Jiji Press Ltd.; Inspection and operations subcommittee, Japan Geopark Committee
  - Ibrahim Komoo (Session Co-chair): Vice President, Global Geoparks Network
  - Nancy Aguda: National Institute of Geological Sciences, University of the Philippines
  - Kana Nishitani: Izu Oshima Geopark Promotion Committee, Global Nature Club
  - Takahiro Shibata: Cultural Properties Second Division, Agency for Cultural Affairs; Inspection and Operations Subcommittee, Japan Geopark Committee





- 中川和之：ユネスコの科学プログラムの一つであるジオパークは、ダイナミックに変動する地球の活動を地元の方々がよく知り、その証拠を大切にし、教育や観光にも活かして持続可能な地域社会を作っていく活動で、防災教育も重要なミッションとなっており、ボトムアップの活動がないと認定されない。「ジオパークならではの語り継ぎ方とはなにか。ジオの恵みとハザードの災いをどのように伝えるか。語らない大地を、誰がどのように語らせるのか。ジオパークで培った手法を社会にどう活用してもらうか。ジオパークの役割とは」などについて幅広い視点で議論したい。

- Kazuyuki Nakagawa: Geoparks, one of UNESCO's science programs, aim to contribute to sustainable local development through a better understanding of the dynamics of the Earth. Geoparks utilize geological heritage for education and tourism to create a sustainable society. Disaster prevention education is also one of their important missions. A bottom-up approach is a key element, without which it is not possible to be designated as a Geopark. I suggest discussing the following points from broad points of view: How Geoparks can tell live lessons; how to tell about the blessings and hazards of the Earth; how and who can tell stories on behalf of the Earth; how to share the experience of Geoparks with and apply it to our society; and the role of geoparks in society.

- イブラヒム コモオ：クンダサン地滑り地区－知識を社会へ

  マレーシアのある国内ジオパーク内の、世界自然遺産に認定されているキナバル山の麓での地すべり災害に遭った村で、ジオパークの活動の浸透で住民理解が進んだ事例を紹介する。この村では、以前から地盤が不安定で、隆起、陥没、横滑りが日常的にあったが、住民には理由は知られていなかったため、家屋などを部分的に修復、修理して対応するにとどまっていた。専

門家が、様々な調査をして、すべての場所が動いていること、地割れの箇所などがわかり、最終的にその地図を作成した。学校施設や豪華なホテルが地すべりで倒壊した事故などが起きて、地域にも危機感も出てきた。今では行政も住民も、現状を理解し、防止策や、財産や生命を守るための対応がとられるようになってきた。ジオパークの活動を通じて、科学的な情報を現場から提供することでよい方向に向っていると言える。

- Ibrahim Komoo: Kundasang Landslides Complex－From Knowledge to Society

  I would like to share an example from a Malaysian National Geopark, in which the spread of Geopark activities helped advance the understanding of local residents in the areas affected by landslide disasters at the foot of Mount Kinabalu (World Heritage Site). In this area, the ground has long been unstable, and uplifting, sinking, and shifting of the earth were ordinary occurrences. However, without an understanding of the reason for this instability, the local residents' response was limited to partial restoration and repairs. Specialists investigated and discovered that all the places were unstable, found the locations of the cracks in the earth, and finally created a map of those locations. Incidents like the destruction of school facilities and a luxurious hotel in a landslide increased the region's sense of danger. With an increased understanding of the situation, authorities and residents alike are now more equipped to respond with preventive measures and action to protect lives and property. It can be said that through Geopark activities, scientific information provided from the field helped steer the region in a good direction.

- ナンシー アグダ：ボホール島ジオパーク：2013 年 M7.2 地震と地域コミュニティの災害からの立ち直り

  ボホール島で災害からの復興に生かせる新たなジオパーク活動の事例について報告する。2013 年 10 月 15 日の朝、M7.2 の地震がボホールを襲った。200 人がなくなり、家屋被害も大きかった。さらに、地震で孤立するまちを台風が襲い、より大きな被害が出た。州政府、まちの行政体が復旧計画を作り、被害を受けていない地域から被害を受けたところに支援をし、5 年ほどで早く復興できた。ジオパーク認定のための調査やプロジェクトは、地震によっていったん頓挫して申請が遅れたが、震災 1 年後からボホールの政府と連携してすすめ、地元にはジオパークの経済効果などメリットも説明し、結果的にはほとんどの自治体が参加した。チョコレートヒルとして知られていた（夏に枯れて茶色くなる）場所に、地すべりで断層が露出して初めて白色が見えるようになり、これはジオパークのシンボルとなっている。ツーリズム自体が、住民の生活の手段になることもあった。被災した人々にとって、自然が島の歴史を語るものであることを認識する機会となった。

- Nancy Aguda: Bohol Island Geopark: 2013 M7.2 Earthquake and Community's Rise from Disaster

  The example from Bohol Island Geopark shows how well new Geopark activities can be utilized in recovery from a disaster. In the morning of October 15, 2013, a magnitude 7.2 earthquake struck Bohol Island. 200 people lost their lives, and many suffered damages to their homes. On top of this, the area isolated by the earthquake was then hit by a typhoon, resulting in even bigger damages. The provincial government and town authorities created a restoration plan; the areas that were not damaged sent aid to the damaged areas; and

they quickly recovered over about five years. Due to the earthquake, research and projects toward Geopark designation were halted for a while and the application was delayed. One year after the disaster, efforts were continued in cooperation with the government of Bohol. The benefits of a Geopark's economic effects on the community were explained, and as a result, most of the local governments participated. A landslide occurred in what is known as the Chocolate Hills (due to the brown color when plants wither in summer), exposing a fault and revealing a white color for the first time; this has become a symbol of the Geopark. Tourism also became a means of living for the local people. To victims of the disaster, this served as an opportunity to recognize that nature tells the history and story of the island.

- 西谷香奈：ジオパークのガイドとして思うこと

  日本のジオパーク運動が始まる以前からのプロのネイチャーガイドの立場で、火山島伊豆大島での具体的な事例を紹介する。伊豆大島は災害が多く、過去 100 年ほどで噴火もあり、地震による津波や台風災害でも土砂崩れで死者が出ており、海を渡る強い風による大火事もあった。私は、前の噴火の 1 年後に移り住んだ。水はけもよいし砂防ダムもあり、過去の土砂災害について語り継がれていた訳でもなかったため、6 年前の土砂災害で被災してびっくりした。11 年間ガイドをしており「火山が噴火しなければ、波に削られてやがて島がなくなる。噴火が作った地面の上に私たちが暮らしている」と言っていた。しかし、実際に被災して、この言葉の奥に大変苦しい思い、悲しい思いがたくさんあるとわかり、しばらくこの言葉が出てこなくなった。災害で仕事も減り、山の状況を調べながら個人のブログで情報発信し、半日は泥かきのボランティアという生活が続いた。17 日目に初めてのお客さまを受け入れ、「自然は常に動いている、大島はそれを感じるところ、伝えなければいけませんから」と言われ、その言葉に感動した。1 カ月後に、住民セミナーをジオパークでやった。町は説明会を開く余裕がなく、住民は不安がっていた。道路が原因で崩れたという声もあったが、崩れるべき地層があった事などを科学的に説明することが大切だと思った。「何を語り継いでいるか」といえば、「地球（火山）は生きている！」ということである。人の暮らしも災害もすべて大地とつながっている。語り継ぎというよりも、目の前の景色や体験としての思いを共有している。

- Kana Nishitani: Things to think about as a guide for a geopark

  I have been a professional nature guide since before Geopark activities began in Japan, and I would like to report on a specific example from the volcanic island Izu Oshima from the standpoint of a nature guide. A lot of disasters occur in Izu Oshima, including in the last 100 years volcanic eruptions, earthquake-induced tsunamis, deadly landslides caused by typhoons, and large fires from strong sea winds. I moved to the island one year after the previous volcanic eruption. Because drainage was good and there was an erosion control dam, the stories of past landslides were not passed down, and I was surprised when struck by a landslide disaster six years ago. Over eleven years of guiding, I had been saying, "Without the volcano's eruptions, the island would be worn away by the waves and eventually disappear. We are living on ground created by those eruptions." However, after experiencing the landslide, I came to understand that behind those words is a lot of pain and sadness as well, and for a while it became difficult to say such. As a result of the disaster my work also decreased, so while examining the condition of the mountain, I shared information on my personal blog and participated in half-day volunteer work shoveling mud. On the 17th day after the disaster, I guided my first visitor, who told me, "Nature is

constantly changing. Oshima is a place where we can feel that, and it needs to be taught." I was moved by these words. One month later, the Geopark held a seminar for local residents. The town was unable to hold an explanatory meeting, so residents were uneasy. Some doubted that roads were the cause of the collapse, but the truth is that the cause of the collapse was the very geological formations that were supposed to collapse. I came to realize that providing a scientific explanation is very important. A Geopark can be enjoyed by anyone. If asked what lesson we are telling, the answer is: The Earth (the volcano) is alive! The lifestyles of the people and even the disasters are all connected to the Earth. Even more so than passing down lessons, we are sharing the experiences and the scenery right in front of our eyes.

- 柴田伊廣：天然記念物の保存活用と地震断層

  文化庁文化財第二課で天然記念物を担当している立場と、それ以前に室戸ユネスコ世界ジオパークの専門員をしていた立場から、熊本地震の布田川断層の状況などについて紹介する。室戸での経験を踏まえ、ジオパークはボトムアップであり、ローカルにこそ最先端があることを強く感じた。断層を理解することは、日本の文化や歴史を考える際に重要であり、であるからこそ「文化庁」が保全や活用を担当している。布田川（ふたがわ）断層帯では、2016 年 4 月の熊本地震で地上に断層が 31 キロにわたって出現し、阿蘇ジオパークに隣接する熊本県益城町の象徴的な 3 カ所を天然記念物と指定した。そのひとつは、地表に 2mの断層のズレが現れた麦畑である。その土地の管理者である農家の若者は、彼の小学校時代、理科の先生から布田川断層のことを学んでいて、地震が来る可能性を知っていたので、怖くなかったと証言していた。ここは、断層に沿って湧き水が湧く地でもある。子どもたちには正しい知識が必要だと考え、地震や火山、地質の 3 学会で子ども向けのサマースクールを行い、実験や見学をおこない、地震、断層、湧き水、ゆたかな農作物、などが関連していることが理解されるようになった。子どもたちには恐怖ではなく、まちの誇りのひとつとして断層を仲間にしてあげて欲しいと伝えている。

- Tadahiro Shibata: Conservation use of natural monuments and earthquake faults

  I work for Japan's Agency for Cultural Affairs. Prior to that, I worked for Muroto UNESCO Global Geopark. I would like to speak about the state of the Futagawa faults which is the cause of the Kumamoto earthquake. Based on my experience in Muroto, I believe that the bottom-up approach of Geoparks is essential because locals are playing a key role in the leading edge. The understanding of geological faults is essential when thinking about Japanese culture and history; and the Agency for Cultural Affairs is in charge of the preservation and application of that geological heritage. In the Futagawa fault zone, during the Kumamoto earthquakes of April 2016, a fault appeared above ground over the length of 31 kilometers. In Mashiki town in Kumamoto prefecture, near Aso UNESCO Global Geopark, three typical locations were designated as natural monuments. One of these is a two-meter slip in a fault line that appeared in a wheat field, which I showed in the video. The young farmer in the video who manages that land had learned about the Futagawa faults from his science teacher in elementary school. Therefore, he knew of the possibility of an earthquake and was not afraid. This is also a place where water springs up along the fault. In order to have children appreciate the correct meaning of such springs, a summer school for children was held with the cooperation of the academic societies of seismology,

volcanology, and geology. Participants learned about earthquakes, faults, water springs, agriculture, and more through experiments and observation; and understood these connections. I hope that children see these faults not as something to fear but as something the town should hold pride in as their 'friends.'

- まとめ：全体を通して、ジオパークは、自然のことだけでなく、人と自然、災害のストーリーを語るうえで素晴らしいしくみであることが確認できた。ツーリストだけでなく、地域の人々、行政とも共有する必要がある。ジオパーク同士のネットワークは広がりつつあるので、「違う分野とも連携してくことが重要」との意見があった。

- Summary: Overall, the session affirmed that Geopark is a wonderful program that not only tells us about nature but also about people and nature, as well as the stories of disasters. These stories are not limited to tourism but can also be shared with the local people and authorities. The network of Geoparks that understand the value of these stories continues to grow, and as one person expressed, "From now on, we must collaborate with different fields as well."



○ **分科会Ｅ：災害遺構と記憶の継承**（15 時 45 分～18 時、2 階ホール）/ **Session E: Disaster Remains and Passing-on of Memories** (15:45 – 18:00, 2nd-floor hall)

- 問題意識：東日本大震災による津波被害の影響で、遺構や遺物が残り、大災害の被災地では、遺構や遺物を保存・公開する動きが生まれる。そして、それらを被災体験の語り継ぎや防災教育などに生かそうとの活動も始まる。その一方で、こうした活動は被災の苦悩や悲痛さを喚起するものとして、反対もしくは距離を置く人びとも存在する。また、いつしか建造物は老朽化し、語り部は高齢化していくため、財源の確保や人材の育成は、いずれ必ず直面する問題でもある。災害遺構の有効活用や課題への取り組みについて、実情の報告を踏まえて検討する。

- パネリスト：
  石原凌河 龍谷大学政策学部 准教授（座長）
  ポール ミラー カンタベリー大学 教授（共同座長）
  杉本伸一 三陸ジオパーク推進協議会

関俊明 公益財団法人群馬県埋蔵文化財調査事業団
蒋正興 国立自然科学博物館 自然科學教育園區管理中心 研究員
坂口奈央 東北大学大学院文学研究科

- Angle of discussion: Some groups of people in areas hit by gigantic disasters move to suggest that remains of disasters be preserved and made open to the public. They begin to suggest that those remains be used for telling live lessons of disaster experiences and public education on disaster risks. Some others on the other hand oppose this or keep a distance from such initiatives and insist that such activities only revive the pain and sadness of disasters. Moreover, as buildings deteriorate and storytellers become older, challenges of funding and handing-over of storytelling activities shall be faced over time. This session discusses ways of making effective use of disaster remains and addressing challenges.

- Panelists:
  - Ryoga Ishihara (Session Chair): Associate Professor, Faculty of Policy Science, Ryukoku University
  - Paul Millar (Session Co-chair): University of Canterbury
  - Shinichi Sugimoto: Sanriku Geopark Promotion Council
  - Toshiaki Seki: Gunma Archaeological Research Foundation
  - Chiang Cheng-Shing: Curator, 921 Earthquake Museum
  - Nao Sakaguchi: Tohoku University Graduate School Faculty of Arts and Letters





- 石原凌河：東日本大震災による津波被害の影響で、遺構や遺物が残り、大災害の被災地では、遺構や遺物を保存・公開する動きが生まれる。そして、それらを被災体験の語り継ぎや防災教育などに生かそうとの活動も始まる。その一方で、こうした活動は被災の苦悩や悲痛さを喚起するものとして、反対もしくは距離を置く人びとも存在する。また、いつしか建造物は老朽化し、語り部は高齢化していくため、財源の確保や人材の育成は、いずれ必ず直面する問題でもある。本セッションでは、国内外の災害遺構の保存・活用事例についてパネリストから紹介していただくとともに、災害遺構の有効活用や課題への取り組みについて議論したい。

- Ryoga Ishihara: Due to the damage caused by the tsunami caused by the Great East Japan Earthquake, remains and relics remain, and in the areas affected by the great disaster, there is a movement to preserve and release the remains and relics. Then, activities to make use of them in the storytelling of disaster experiences and disaster prevention education will begin. On the other hand, some people oppose or distance from these activities as they arouse the suffering and sorrow of the disaster. In addition, as buildings are aging and storytellers are aging, securing financial resources and developing human resources are issues that will

always be faced. In this session, we would like panelists to introduce examples of preservation and utilization of disaster remains in Japan and overseas, and discuss effective utilization of disaster remains and efforts to address related issues.

- 杉本伸一：災害遺構の保存と活用–雲仙普賢岳噴火災害と東日本大震災津波被害を事例として–

  東日本大震災と雲仙岳噴火災害の遺構の保存の事例を報告する。雲仙普賢岳の噴火災害（1990 年～1995 年）では、火砕流によって焼失した小学校の校舎や土石流で埋もれた家屋などが災害のメモリアルとして保存され、地域の活性化や災害の伝承に活用されている。災害遺構の保存は住民の提案により、住民が主体となって行われている。東日本大震災の被災地の災害遺構の保存は行政主導で進められているが、住民の意見の対立などにより保存が進展していない例もみられる。災害遺構を長期的に保存・活用するためには、単にモノとして残すだけでなく、遺構を活用した住民主体の活動が重要であり、遺構の保存と復興まちづくりとをいかに関連づけるかが重要である。そのための橋渡し役となる専門家の支援が必要であり、また、地域全体で遺構を活用していく道筋を見出す必要がある。

- Shinichi Sugimoto: Preservation and utilization of disaster remains: A case study of the Mt. Unzen Fugendake eruption disaster and the Great East Japan Earthquake tsunami

  I would like to present a case study of the preservation of the remains of the Great East Japan Earthquake and Mt. Unzen's eruption disaster. In the case of Mr. Unzen eruption from 1990 to 1995, things like an elementary school building which was burnt due to the pyroclastic flow and houses which are stranded in debris flow are preserved, and those are being made use of for revitalization of the local economy and passing-on of disaster stories. It is noticeable that such preservation has been implemented as the initiative of the local residents themselves, following their own proposal. In the case of the Great East Japan Earthquake, preservation of the remains of the disaster is being initiated by prefectural and municipal government offices; however, in some cases, little progress has been made due to conflicts among the local residents. To preserve and utilize the disaster remains in the long term, it is important not only to leave them as objects but also to make use of them by the residents themselves. The support of experts is needed who can act as a bridge between the two elements: preservation of remains and reconstruction. It is also necessary to find a way to utilize the remains throughout the region.

- 関俊明：天明三(1783)年浅間災害遺跡・遺物と記憶の継承

  約 240 年前に発生した浅間噴火災害の遺跡・遺物が掘り起こされ、現代でも語り継ぎの実践がなされているが、一世代（約 30 年）から次の世代に代わる時を大きな節目として語り継ぎの意義は移り変わってきた。「33 回忌」は災害を経験した世代から第 2 世代に交代する時期であり、多くの供養碑の建立や被害記録の書き写しなどが行われた。第 2 から第 3 世代では、多くの被害絵図が描き残されるなど復興と記憶の整理がなされた。第 5 から第 6 世代では、偶発的な遺物の発見が連続した事で新たな記憶が呼び起こされることとなった。第 6 から第 7 世代でも、遺物の発見を契機に記憶が呼び返され、自分たちの先祖をたどろうとする動きとなった。第 7 から第 8 世代では、遺跡調査（1979 年～）に世間の注目が集まる中、語り継ぐことで自分たちのアイデンティティを確立する動きとなった。第 8 世代では、地域のイベントなどの中で「教育」という力を使い次の世代に語り継いでいく活動が進んでいる。世代を超えた語り継ぎのためには、風化

とともに新たに記憶を呼び起こすことが重要である。区切りとしての周年行事を行うことや、犠牲者に供養の念を手向け、二度と同じ被害を繰り返さないという想いや正確に災害を伝えようとする切迫感が、語り継ぎの活動を後押しする原動力になる。

- Toshiaki Seki: The Disaster Ruins of the Mt. Asama disaster in "Tenmei 3" (1783AD) and memory transmission

  The remains of the Asama eruption disaster, which occurred about 240 years ago, have been dug up, and the practice of handing down stories is still being carried out today. However, the meaning of storytelling has been evolving over time, particularly every 30 years (which is more or less the lifetime of one generation). The Buddhist memorial service of the 33rd anniversary of the death of the victims coincided with the timing of handing over from the generation who actually experienced the disaster to the 2nd generation. At times from the 2nd to 3rd generation, many drawings of damages were produced and memories were reorganized. At times from the 5th to 6th generation, many remains were rediscovered incidentally one after another, by which memories were recollected and renewed. At times from the 6th to 7th generation, rediscovery of remains prompted again the recollection of memories, and the local residents became curious in tracing back their ancestors. At times from 7th to 8th generation, the official archaeological research from 1979 attracted greater interest from the public, and the local residents began storytelling through which they establish their unique identity. In the 8th generation, storytelling activities are continuing by taking advantage of the power of education in the context of various local events. Bearing this in mind, I stress the importance of evoking new memories as they fade away to pass on the stories to the next generation. I believe that various conducts such as to mark the anniversary of the disaster, to pay tribute to the victims, to ensure that the same disaster will not be repeated, and to convey the urgency of the disaster accurately are the driving force behind the activities to pass on the stories.

- 蒋正興：国立自然科学博物館は台湾 921 地震の困難と課題にどのように向き合うべきか？

  20 年前の台湾集集地震の遺構である中学校の被災校舎の事例を報告する。台湾の遺構の事例においても、日本での課題と同様に、維持管理・修繕の資金調達の課題や、遺構そのものが風化していくこと、さらに悲劇的な出来事を思い出したくない理由で当初地域住民は反対していたといった類似の課題を見出すことができる。遺構の保存に反対していた人々に対しては、政府と住民が何度も対話を重ねるとともに、野島断層保存館など日本の災害ミュージアムに訪問してもらい、語り継ぎの重要性を理解してもらったことで、遺構の保存と災害ミュージアムの整備につながった。遺構の保存については、日本国内でのみ議論するのではなく、世界的な課題として議論する必要がある。

- Chiang Cheng-Shing: Taiwan's 921 Earthquake - Difficulties and Challenges Faced by the National Museum of Natural Science

  I would like to report on the remains of a junior high school campus that was badly damaged during the Chi-Chi Earthquake in Taiwan 20 years ago. In the case of Taiwanese monuments, there are similar issues to those in Japan, such as funding for maintenance and repair, weathering of the monuments themselves, and opposition of local residents who do not want

memories of tragic events to remain in their communities. In this case, the government and residents held a series of dialogues, and residents were invited to visit disaster museums in Japan such as the Nojima Fault Preservation Museum. This led to an understanding among the residents of the importance of the preservation of this monument and the development of a disaster museum at this site. Discussion among various actors is required in the successful preservation of monuments not only in Japan but also around the world.

- 坂口奈央：なぜ被災住民は災害遺構を残さなかったのか －東日本大震災の事例より－

  東日本大震災で甚大な被害を受けた大槌町の二つの解体された遺構の事例として、津波で陸に打ち上げられて取り残された大型船と津波で完全に破壊された旧大槌町役場庁舎について報告する。当初は両者とも保存することが検討されていたが、いろいろな経緯を経て両者ともに撤去・解体されることとなった。撤去の判断に至った考え方には差異がある。大型船の撤去では、かつて遠洋漁業で町が栄えそして衰退していった事へのさまざまな思いが強く反映され、また「船は朽ちていくもの、それを見ていくのはつらい」「昔から船は海にあるもの、それが海のしきたり」という考え方が重視された。一方、旧町役場庁舎は、住民を守るべき人たちが亡くなってしまった場所であること、解体工事をめぐる役場の手続の不手際がメディアに取り上げられるなど庁舎の保存か否かをめぐる町民の判断に外部の注目が過剰に集まることとなってしまったことなどで、大槌町役場の存在が「恥」であるという考え方が強く働いた。

- Nao Sakaguchi: Why didn’t the residents preserve the disaster remains?–A case of Great East Japan Earthquake and Tsunami－

  I would like to share two examples of demolished remains in the Otsuchi town that was severely damaged by the Great East Japan Earthquake: the large fishing ship that was stranded inland, and the former town hall of Otsuchi. Initially, the discussion was in favor of preserving both things. However, through various circumstances and processes, it was eventually decided that both be demolished. The thinking behind the decision is different in those two cases. In the case of the removal of the large ship, the decision strongly reflected various emotions about the history that the town once flourished with deep-sea fishery but eventually declined, and the traditional ideas of ships such that "a ship decays”, “a ship must be in the sea". On the other hand, the town hall was dismantled because it was the place where the people who were supposed to protect the residents died, the media picked up too much on the mismanagement of the procedures of the demolition of the town hall, which led to the thinking that the existence of the Otsuchi town hall was a "disgrace".

- ポール ミラー：災害遺構の保存についてさまざまな角度や視点から考えていかなくてはならない。被災者への配慮や次世代への継承、行政機関や教育機関の災害に関する情報収集・提供センターとしての在り方、災害の状況やその場所の特殊性を確実に記録し理解するために経るべき過程、まちの歴史など考慮すべき点があまりに多い。災害遺構を活用した次世代への伝承方法についても、次世代の人たち自身を巻き込んで展開していく方策について更なる議論が必要である。実際に経験していない世代が災害を自分事にしていくには、災害にまつわるストーリーと共に、災害遺構が実在している場所と、災害をバーチャルに表現することの組み合わせが重要である。次世代への語り継ぎにおいて、デジタルアーカイブから取り出される写真や画像の意義が薄れることはないが、被災者へのインタビューの記録はその時の感情や考えを残すことができ、次世代へ強く訴えることができる。今後、デジタル技術と災害の遺構や災害のあった場所との融合

が進んでいく中で、遺産の保存の方法についても更なる検討が必要である。

- Paul Millar: Following each panelist's report, it is clear that we need to think about the preservation of disaster remains from various angles and perspectives. There are numerous issues to be taken into account, such as consideration for the victims of the disaster and passing their stories respectfully onto the next generation, the way we should, as administrative and educational institutions, act as a disaster clearinghouse, and the steps we must take to ensure that we preserve and understand the situation of the disaster and the uniqueness of the place, and the history of the town. Further discussion is needed on how to pass on the remains of the disaster to the next generation by involving them in such projects. For the generation that did not actually experience a disaster to learn about it, it is important to combine real sites where the remains of the disaster exist with the telling of stories, and virtual accounts and representations of the disaster. Still, photographs and images from digital archives are meaningful for passing on to the next generation, but recordings of interviews with disaster victims can convey the emotions and thoughts of the time in ways that may strongly appeal to the next generation. In the future, the integration of digital technology with the physical remains and locations of disasters will continue with technology, and further study is needed on how to use technology to preserve such legacies.

- ポール ミラー：カンタベリー地震のデジタルアーカイブ（CEISMIC）

  CEISMIC は 2011 年のカンタベリー地震に関する知見や記憶、経験を保存し、追悼や教育、研究に活用するためのデジタルアーカイブである。様々な映像や動画、音声、文書が収録されている。現在その数は 20 万点であり、予算の範囲内でさらに 15 万点が追加中である。極めて高度に連合化された仕組みであり、ライブラリーやミュージアム、行政組織、大学など様々な組織からなるコンソーシアムに支えられている。その背後にある考え方は、公開されているツールの利用、公開アクセスの利用、組織間の協力、人々やグループを広く巻き込むことである。CEISMIC 内の全ての収録物には時間情報と位置情報及び関連する各種資料が紐づけられている。被災地でのストーリー収集では移動スタジオが活躍した。海運用のコンテナを 2012 年に改造し、それを被災地各所に移動させながら、そこに立ち寄る様々な人たちから 700 以上の話を収録した。その 7 年後、2019 年からは、同じ人たちからその後のことを再度聞く取組みも始めた。被災地の人たちの「語り」を対象とした経時的研究として大変ユニークなもので、語りの変化と災害後の諸要因の関係などを理解し記述する上で役に立つ。個々人のストーリーを聞くと、公式の記録や政治的な論説では聞く事のない事、すなわち個々の人々が何を考えているか、何を期待しているかなどを直接知る事ができる。

- Paul Millar: The UC CEISMIC Canterbury Earthquakes Digital Archive: Supporting Post-Disaster Research, Teaching and Commemoration

  CEISMIC is a digital archive established to preserve the knowledge, memories, and experiences of the 2011 Canterbury earthquakes for commemoration, teaching, and research. It brings together images, videos, audio, and documents from a wide range of content partners. Currently, the number of items archived is around 200,000 with an additional 150,000 being added as resources permit. It is a highly federated archive, supported by a consortium of various organizations like libraries, museums, governmental offices, and universities. The ethos behind its creation is to support the use of open-source tools, open

access, usage, institutional collaboration, and very broad inclusion of people and groups. The majority of digital objects in CEISMIC are time-aligned and geo-located and linked to other relevant materials. As one of the methods of story-collection, CEISMIC outfitted a shipping container as a mobile studio in 2012, shifting it around different areas of the earthquake-damaged city and collecting over seven hundred stories from a wide variety of people. We then began re-interviewing the same people seven years later, beginning in 2019, asking them to update their stories. This is a unique longitudinal study of post-disaster narratives which is helping us understand and illustrate how changes to stories relate to post-disaster factors. Individual stories can tell us a lot about a sort of things that we do not hear from the mainstream media or political discourse, and provide direct insights into what ordinary people are thinking and expecting.

- まとめ：最後に、パネリスト全員で、①災害遺構を保存する意義と、②災害の記憶継承のために災害遺構をどのように活用する必要があるのか、について議論を行った。災害遺構を保存する意義として、実物資料としての遺構は感動を伝え、想像力を掻き立てる資源になり得ることや、遺構は災害に負けなかった希望の印であり、被災した地域のつながりを紡ぐ媒体となり得るといった意見がなされた。災害遺構をどのように活用する必要があるのかについては、早急に保存を決めるのではなく、待つことやあえて放置することの重要性や、モノだけでなく災害当時の想いもあわせて伝えることの必要性、モノと人々とを繋ぐ語り部やガイドの役割の重要性などについて意見が挙がった。

- Summary: Finally, the panelists discussed (1) the significance of preserving the disaster remains, and (2) how they should be used to preserve the memory of disasters. In terms of the significance of preserving disaster sites, they were said to be a resource that conveys emotion and stimulates the imagination, and that they are a sign of hope that they were not defeated by the disaster, and that they can be a medium for spinning the connections between the affected areas. As to how disaster remains should be utilized, opinions were raised on the importance of waiting or leaving them unattended rather than deciding to preserve them immediately, the need to convey not only the objects but also the memories of the time of the disaster, and the importance of the role of storytellers and guides to connect people with objects.



○ **分科会Ｆ：語り継ぎと交流**（15 時 45 分～18 時、3 階多目的室）/ **Session E: Interregional Disaster Cooperation: Keeping Memories Alive** (15:45-18:00, 3rd floor multi-purpose room)

- 問題意識:語り継ぎの難敵は災害体験の風化である。災害の痛切な記憶も時の経過とともに徐々に薄れることを免れ得ない。世代が交代し、災害体験世代が社会の中心から退くに従い、体験を語り継ぐことの難しさがいや増す。語り継ぎの持続のためには、災害の記憶を時に新たにする契機が必要であろう。この契機は、かつての被災地が新たな被災地を支援する交流活動や、被災地が非被災地にその体験を伝える交流の中に見出されるように思われる。本分科会は、国内外から交流活動の担い手を迎え、被災地のさまざまな交流活動が語り継ぎの持続に及ぼしうる効果を検証し、語り継ぎにとり実りある交流のあり方を検討する。

- パネリスト：
  坂戸勝 元独立行政法人国際交流基金理事（座長）
  エコアグス プラウォト ドゥタワカナキリスト教大学 教授（共同座長）
  吉椿雅道 CODE 海外災害援助市民センター 事務局長
  張国遠 新安世紀教育安全科技研究院 院長・副教授
  J. デイヴィッド ワッゴナー三世 ワッゴナー&ボール建築環境事務所 創立者・代表

- Angle of discussion: What makes it difficult for the next generations to inherit live lessons from disaster is a lapse of time. Any severe experience of disaster cannot avoid, as time passes, fading away. The difficulty of inheriting live lessons becomes even stronger through the change of generations, particularly when the generation holding personal experiences of disaster has gone away. To sustain the memories of disaster over generations needs some impulse which from time to time refreshes them. This impulse may also be found in the activities for a region of a former disaster to share their experiences and live lessons with a newly affected region or one without disaster experience. This session consists of practitioners of domestic and international disaster support or disaster risk reduction activities and aims to examine possible effects of those activities on the sustainability of disaster memories and to discuss effective forms of cooperation that enhance inheriting live lessons over generations.

- Panelists:
  - Masaru Sakato (Session Chair): Former Executive Vice President, The Japan Foundation
  - Eko Agus Prawoto (Session Co-chair): Professor, Duta Wacana Christian University
  - Masamichi Yoshitsubaki: Secretary-General, Citizens towards Overseas Disaster Emergency
  - Zhang Guo Yuan: President & Associate Professor, New Century Institute of Education and Safety Science and Technology
  - J. David Waggonner III: Founding Principal, Waggonner & Ball Architecture / Environment





- 坂戸勝：時の経過と共に災害の記憶は薄れていく。多くの被災地相互の交流や協力が行なわれているが、そのような交流が災害の語り継ぎにどのような影響を与えているか。災害語り継ぎの維持継承にどのように役立つか。

- Masaru Sakato: Memories of a disaster cannot avoid, as time passes, fading away. While we see a development of activities for a region of former disaster to share their experiences with a newly affected region or one without disaster experience, it is worth examining possible effects of those activities on inheriting live lessons over generations and sustainability of disaster memories.

- 吉椿雅道：NGO の救援活動と交流

  「地域・国を超えて伝える」ことについて報告する。CODE は、阪神・淡路大震災時の時世界 70 か国から支援をいただいたお礼に、世界各国で起こる災害被災地で支援活動を行っている。25 年で 35 か国、62 回の活動を行ってきた。その中の、四川省地震（2008）、チリ地震（2010）、インドネシア地震（2018）の復興支援事例を紹介する。復興支援も長く続けると交流活動へと変わっていく。それぞれの災害被災者が日本の災害被災地や今後災害が起こるといわれている場所（未災地）を訪問することのサポートも行っている。被災地と被災地、被災者と被災者をつなぐ活動を行う中で、言葉は通じなくても被災者同士は気持ちが自然と通じ合うこと、被災地で生まれた歌を未経験者が聞いて涙することなど、被災地の想いを伝えるのは言葉だけではないことに交流を通じて気づいていった。

- Masamichi Yoshitsubaki: NGO`s Relief Activities & Exchange

  I would like to present on sharing memories beyond borders. Citizens for Overseas Disaster Emergency (CODE) is engaged in the activities of extending support to overseas disaster-hit areas as an expression of Kobe's appreciation for the support Japan received from over 70 countries of the world after the Great Hanshin-Awaji Earthquake. Over the last 25 years, CODE has implemented 62 projects in 35 countries and regions abroad, among which I present such representative cases as Sichuan Earthquake (2008), Chile Earthquake (2010), and the disasters in Indonesia (2018). Disaster cooperation activities, as they last for a long time, gradually expand people's exchange factor. CODE supports disaster victims' visits to other disaster-hit areas in Japan or the areas which have been so far spared from disasters. Through the activities connecting disaster-hit areas and disaster victims, I noticed the fact that they could share their thoughts and emotions even if they did not understand each other's language. What transmits people's hearts and minds is not limited to words, even songs help people share disaster memories.

- エコ アグス プラウォト：記憶の伝達：伝説、科学的説明、庶民文化から災害への備えに向けて

  「世代間の語り継ぎ」について報告する。「記憶」とは、希望をつないでおくこと、生活の活力を維持することである。人と人との関係でもあり、地域だけでなく海外の人との関係にもつながる。地元の神話や伝説は記憶継承の役割を担う。インドネシアは 500 以上の民族から構成される国であり、地理的条件から、津波、土砂災害、旱魃、火山噴火といった災害も多い。人は辛い経験を忘れようとする、それは自然なことだが、経験から学ぶためにはきちんと情報を整理し共有し、次世代につないでいく必要がある。防災上、科学的知識は必要であり、学ぶと頭に残るけれども「心」に残らない。長期的な記憶にしていくためには、伝説や、その他のメディアを組み合わせることが大切である。過去の出来事を語り継ぐために人は神話や伝説を作っていく。神話や伝説を分析すると災害とつながることや科学的に裏付けられることも多いことがわかってきた。ただ、神話ですべてを語ることはできない。だが、解釈の余地を残しておいてくれる。どのような状況でも当てはめて考えることができるため、長く人の教訓として語り継がれる利点もある。また、イベントで伝説をもとにした（大きな人形と音楽を使った）人形劇を行ったが、このような取り組みは、人々の心に訴え、楽しみながら心に響く効果があった。コミック、映画など様々な媒体を通じて新しい知識と結びつけながら科学的知識に裏付けられた記憶を語り継いでいく必要がある。多くの人が知るということは、人類全体の記憶として長く語り継がれることにつながる。その意味で交流は重要な役割を果たす。

- Eko Agus Prawoto: Extending the memory of the community toward disaster preparedness from myth, scientific explanation and popular culture

  I would like to share my view on passing memories down over generations. Memories help people hold hope and lives keep vital. They connect people living not only in the same region but also in different regions beyond borders. Local myths and legends play an important role of passing down disaster memories over generations. Indonesia is a country consisting of more than 500 ethnic groups. Due to its geographic location it is prone to natural disasters such as tsunami, landslides, droughts and volcano eruptions. People are inclined to forget painful experiences, which is quite natural. However, if people want to learn lessons from their experiences, it is necessary to put memories in order, share and pass them down over generations. Scientific explanations might work well for disaster reduction, but they will not remain long in memories or hearts of people. In order to keep memories alive for a long time, they need to be incorporated in such media as myths. Myths and legends are born in people's wish for keeping disaster stories over generations. Analysis of myths and legends has revealed many cases in which memories of disasters or scientific backgrounds were found in them. Myths do not suggest all of the facts, but leave rooms for flexible interpretation applicable to various situations. That is why they live long and convey lessons. Puppet theater was also useful for conveying messages in a form of attracting entertainment. Disaster memories supported by scientific knowledge need to be passed down by using various new media such as comics and films. Memories can be kept for a long time if they become shared by many people and sustained as common heritage of human being. In this sense, exchange of disaster experiences is very significant.

- 張国遠：学校での災害教育の現状と対策

教育システムの中での語り継ぎについて報告する。中国では 2008 年に四川大地震が発生し、10 年後にまた災害が起こった。このことから、現在、中国政府は災害教育（防災教育）に重点を置くようになっている。学生や学校教師は災害からの教訓を学び取っているかを研究しているが、中国では、中学校での防災教育に課題があることがわかってきた。中学生は、防災や防災教育への関心は高く、意識も高い。一方で、知識、技術は他の学校レベルと比較するとあまり高くない。また、防災教育を行う教師の技術力も高くないことも明確となってきた。しかし、意識のレベルは高いことから、知識を語り継いでいくための教育の必要性を提案している。

- Zhang Guo Yuan: Research on the Current Situation and Countermeasures of Disaster Education in Schools

  I would like to introduce my activities in promoting storytelling through education. China experienced the Sichuan Earthquake in 2008 and another one 10 years thereafter. Therefore, the Chinese government puts emphasis on disaster education (education for disaster reduction). Students and teachers are studying if they have enough learned lessons from disasters. Through these activities, it has become clear that there are challenges to overcome in disaster education at the secondary education level. Students on that level have a keen interest in disaster reduction and disaster education, while they remain comparatively low in their knowledge and skill. Teachers who are engaged in disaster education also do not possess high education skills. However, we feel confident that disaster education is attracting high attention among students and teachers, and that this should be further promoted to inherit proper knowledge.

- J. デイヴィッド ワッゴナー三世：記憶と動機づけ

  「まちに組み込まれたメッセージ」について報告する。ニューオリンズの物語－堤防が決壊、市域は孤立、古いまちは洪水被害に襲われないのに新しいまちは洪水の被害にあう。古いまちには何らかの知恵があるのではないだろうか、こう考えるのが自然だろう。生物の多様性を理解し、地面の弱いところを考慮し、水とともに暮らす仕組みを作っていった。設計によりまちを再構築する際には、土地が何を記憶しているか（まちの構造に残された災害からの教訓）を把握し、今後どうなるかを考えてまちを構成しないといけない。その意味では、災害が起こるたびにいい状況を作るチャンスをもらっているともいえる。よく観察してアクションをとることで災害に一層強いまちを作ることができる。私たちは、自然をコントロールしようとするのではなく、敬意を払わなければいけない。人間だけでなく土地も記憶を語り継いでくれている。そのことに敬意を払い、土地ともっと強いつながりを持つ必要がある。

- J. David Waggonner III: Memory and Motivation

  I would like to present my view that messages for disaster reduction can be found in the natural environment. As we recollect and reflect upon Katrina, we recall the levees were breached, the City of New Orleans was isolated, and new districts were inundated while older ones were spared flooding. It is quite natural to think that those old districts were carefully and wisely chosen to live in. People knew biodiversity, took damp ground into account, and worked out a system to live with water. When we rebuild a city by design, we need to find what the land remembers, namely grasp the lessons disasters left in the city's environmental structure, and design the city with a foresight of its future structure. In this

sense, disasters give us a chance to reflect and plan better. Careful observation provides us with a chance of taking action to plan a better disaster-resilient city. We need to pay respect to nature, not try to control it. Not only we, human beings, but also lands pass on memories. We need to be humble about this fact and need to establish a closer relationship with the local environments.

- まとめ：「交流」は私たち、応援側・受援側両方に気づきをもたらしてくれる。交流による刺激があることで私たちの過去の災害の記憶は再生され、後世につながっていく。ただ、下記の 3 つの点が重要である。（1）地域の人のライフスタイルを尊重し、地域の価値観を守る（住民と対話し、関係を構築する)、（2）すべての意思決定は地元の人たちが行う（外部の人からの強い介入は控える)、（3）地域住民が自分たちで復興を行うことを支援する（持続可能性を考慮する、地域にあった素材を活用する)。コミュニティが当たり前と思っていることに防災の知識や科学的根拠の裏付けがあることを伝えるのも外からの支援者の重要な役割である。ネパールの伝統的な家を建設するときのレンガの積み方はエンジニアが検証しても非常に意味ある建て方であった。

- Summary: Exchange brings new understanding to both sides of extending and receiving support. Exchange provides us with a stimulus that enables us to recall past experiences and sustain them over generations. However, we should keep the following points in mind: (1) to pay respect for local lifestyle and sense of value by better understanding through dialogue; (2) to pay respect for decision making by local people and refrain from outside interference; and (3) to support local initiatives to rebuild through sustainable materials and methods. It is also one of the benefits of exchange that people through contact with outside knowledge and experience find latent wisdom for disaster reduction or scientific background in what their communities have not paid particular attention to. An indigenous way of laying bricks for building traditional houses has been proved by an outside engineer to be technologically rational.



４．　ポスターセッション ／ Poster Session

- 2020 年 1 月 26 日 9 時 30 分から 11 時 45 分まで、人と防災未来センター東館において、澤田雅浩座長（兵庫県立大学大学院減災復興政策研究科准教授）とアレサンドロ パスート共同座長（イタリア国立研究評議院地質水文保全研究所 研究部長）の統括の下、ポスターセッションが開催された。災害の記憶を様々な形で語り継ぐ活動の報告や語り継ぎに関する調査研究成果など、各々の活動や知見などを学びあった。

- On 26 January 2020, from 9:30 to 11:45, in the East Building of Disaster Reduction and Human Renovation Institution (DRI), the Poster Session was convened under the overall coordination of Mr. Masahiro Sawada, Chair of the Session, Associate Professor, Graduate School of Disaster Resilience and Governance, University of Hyogo, and Mr. Alessandro Pasuto, Co-chair: Alessandro Pasuto: Research Director, CNR - National Research Council of Italy, IRPI - Research Institute for Geo-Hydrological Protection. The participants learned various achievements and knowledge from each other such as various activities of preserving and passing on the memories of disasters in many different ways and a variety of achievements of academic research on storytelling.





- 参加者は公募で、合計 33 件の発表があった。内訳は、カンボジア 1、中国 1、インド 1、インドネシア 2（1 件は事務局代読）、イラン 1、ラオス 1、マレーシア 1、ミャンマー1、ネパール 2（1 件は事務局代読）、パキスタン 1、スリランカ 1、タイ 1、米国 1、ベトナム 1、日本 17。

- The participants were collected on a public subscription basis, totaling up to 33 presentations from 1 from Cambodia, 1 from China, 1 from India, 2 from Indonesia (1 as remote participation), 1 from Iran, 1 from Laos, 1 from Malaysia, 1 from Myanmar, 2 from Nepal (1 as remote participation), 1 from Pakistan, 1 from Sri Lanka, 1 from Thailand, 1 from the United States of America, 1 from Vietnam and 17 from Japan.

- 33 件のポスターについて、ホールにて発表者から概要をフラッシュトークの形で共有した上でホワイエでのポスターセッションへと移行した。フラッシュトークを行ったことで、それぞれの発表内容が事前に把握できたこともあり、多くの交流が生まれることとなった。フラッシュトークの概要は下記の通りである。

- Brief presentations were made on 33 posters in a flash-talk manner, followed by the poster session in the foyer. Many rich exchanges were made, thanks to the flash talks which enabled a clearer understanding of the presented posters. The followings are the summaries of the flash talks.

(1) フラッシュトーク（9 時 30 分～10 時 15 分）/ **Flash Talks** (9:30-10:15)

- リープ ダム（国連ハビタット カンボジア事務所）：災害に強い住宅を全ての人々に―メコン川沿い集落における災害に強い住宅建設に向けたコミュニティの教訓

  Leap Dam (United Nations Human Settlements Programme, Cambodia): RESILIENT HOUSING FOR ALL – Incorporating community lessons in building disaster-resilient housing of the Mekong river communities

  コミュニティを組織化するプロセスは、経験や教訓を共有、天然資源の管理や資材の再利用、社会的ネットワークの形成などを通して災害への適応能力を高めていくうえで非常に重要。

  The community establishment process is vital in exchanging experiences and lessons learned and in revealing their adaptive capacity to deal with disasters through natural resources management, reuse of materials, and strong social networks.

- ジャン イ（セーブ・ザ・チルドレン 中国）：中国の文脈での災害記憶

  Jiang Yi (Save the Children P.R. China): Remembering Disasters in China's Context

  災害教育において、どうすれば子供に災害を覚えてもらうことができるか。ここでは子どもたちに災害の歴史に心で触れさせる状況ドラマ式の教育方法を提案する。子供たちに様々な被災状況を想定した演劇に参加して被災者や目撃者の気持ちを追体験してもらい、その体験や上演を通じて災害発生現場の感覚に対する共感の気持ちを作り出してもらう。

  How to remember disasters in DRR education for children? This presentation puts forward the use of situational drama teaching methodology. In participating in the situational drama play, children are guided to experience the feelings of disaster survivors and witnesses, to generate empathy through the experience and performance of children in the scene of disaster occurrence.





- アブデシュ クマール ガングゥル（「持続可能な開発にむけた教育」スリナガル地域拠点 コーディネーター/代表：インドの災害を語り継ぐ

  Abdhesh Kumar Gangwar (Coordinator and Focal Point, Regional Centre of Expertise on Education for Sustainable Development (RCE), Srinagar, India): Telling Tales of Some Indian Disasters

  災害に強く気候変動にも対応し持続可能な地域を形成していくため、コミュニティや学校で、防災の広報や防災訓練を実施したり、災害対応計画を策定したりすることを支援している。イ

ンドには博物館やジオパークや回廊はないが、移動型の展示をやっている。災害の種類に応じて提示の内容を変えることができ、費用と内容の両面で大変効果的。

We help schools and villages undertake DRR awareness-raising and training, and develop disaster management plans, towards disaster-resilient, climate-smart, and sustainable communities. We do not have expensive museums; but we have Multi-Media Mobile Exhibitions, which come in handy in taking them around for creating awareness and imparting training. We change content depending on the type of disaster. It is quite effective both cost-wise and content-wise.

- シティ マグフィラ（インドネシア・アチェ晃月学校協会）：生存者

Shiti Maghfira (Kougetsu School Association, Aceh, Indonesia): Survivor

このおばあさんは 2004 年の津波を生き抜いた。運よくボートが家の屋根の上にひっかかってそれに乗り込むことができた。59 人がこのボートの中で 9 時間過ごした。これはバンダアチェの震災遺構となっている。それ以来彼女は津波の語り継ぎを毎日のように行っている。

This grandmother survived the 2004 tsunami because of this boat. When the tide was coming, suddenly the boat came and got hooked on the top of her neighbor's house. She and the other 59 people got into the boat and spent 9 hours there. The boat has now become a disaster tourism site in Banda Aceh. She every day tells about her story and the tsunami survivors.





- アンディ フェルダナ（コミュニティラジオ「メラピ山のこだま」（遠隔参加、事務局代読）：メラピ山で災害との調和に生きる

Andi Ferdana (Gema Merapi Community Radio, Indonesia): Living in harmony with the disaster at Merapi

ジャワ島のメラピ火山噴火後、地域の人々の生活と生計の糧は農業と家畜の飼育から観光業への大きく変化した。噴火で全てが破壊されたが、自然のプロセスの一部だと受け止めている。いまでも住民はメラピ山と調和を持って生きている。

After the eruption receded, people's life and livelihood changed from farming and livestock to tourism. For those residents, although the eruption destroyed all, they realize that it is all part of the natural process; and they accept it. Even today, the residents still live in harmony with Merapi.

- モハメド アリ ザマニ（イラン住宅財団 復興計画部長）：技術支援と建築材料展示の複合施設

のバム地震被災地での設立

Mohammad Alizamani (Head of Reconstruction Planning, Housing Foundation of Islamic Republic of Iran): Establishment the Technical Services & building Materials Exhibition Complex in the Bam Earthquake (2003)

2003 年バム地震の復興では、「参加型復興、レジリアンスな街、アイデンティティの復活」という目的を達成するため、技術支援・資材展示コンプレックスが設けられ、被災者はもとより建設業者、設計コンサルタント、資材調達・運送業者などあらゆる関係者が集結し連携することとなり、速やかな復興に貢献した。

After the 2003 Bam earthquake, to achieve 3 goals: participatory reconstruction, the resilience of the city, and identity revival, Technical Services and Materials Exhibit Complex was set up for integration and mobilization of all relevant services and stakeholders including beneficiaries, contractors, designers, etc., which contributed to successful reconstruction.





- マニヴァー スヤヴォン（ラオス ジェンダー開発協会 代表）：レジリアンスの声－コミュニティが主体となった人道支援とラオス女性

Manivanh Suyavong (Director, Gender Development Association, Lao PDR): Voices of Resilience: Lao Women in Community-Based Humanitarian Response

台風カツナ 10 周年を迎えようとしている今、どんな困難の中でも生きることを諦めず私たちのサポートに対し感謝の気持ちを忘れなかった人々との出会いを思い出し、困難な状況から学んだ教訓と災害からの復興の成果のことを考えている。この時の経験は草の根レベルの活動へ対する私のパッションの原点となり、現在の仕事にも繋がっている。

As the 10th anniversary of Typhoon Ketsana approaches, I remember the countless interactions that I had with people, who despite their suffering, were determined to survive and never hesitated to show their gratitude for our support. I also reflect on the lessons learned and acknowledge the achievements that came from devastation. These experiences ignited my passion for grassroots development and led me to my current position as Director of the Gender Development Association.

- オン ケ シン（マレーシア サインズ大学）：洪水の語り継ぎ～あなたの物語と私の物語 ソーシャルメディアを通じた洪水の語り継ぎのクラウドソーシング

Ong Ke Shin (University Sains Malaysia): Tales of flood, Yours and Mine: crowdsourcing flood stories through social media

このパイロットプロジェクトの目的は、ソーシャルメディアを利用したクラウドソーシングによって 2017 年のペナンの洪水の画像や動画、物語を再構成する可能性を探るとともに、それが、市民を巻き込んで洪水に関する記憶の保存や解釈、反省や内省を行うためのプラットフォームとして有効に機能するかどうかを検証すること。

This pilot project aims to explore the possibility of using social media to recollect images, videos, and stories of the most severe flood in Penang via crowdsourcing, and to examine the effectiveness of social media to serve as an inclusive platform to engage the public in preserving, interpreting, reflecting and introspecting on flooding.





- ニ ソエ（ミャンマー 元 アセアン サイクロン・ナルギス 人道問題タスクフォース調整室 戦略的支援調整官）：サイクロン・ナルギスその後の本当の物語

  Nyi Soe (Former Strategic Support Officer, Coordinating Office of ASEAN Humanitarian Task Force (AHTF) for Cyclone Nargis): Cyclone Nargis: A first-hand Narrative of the Aftermath

  災害を甘く見てはいけない。備えが必要だ。防災訓練はあらゆる人々にとっての義務であり、防災知識の普及も同様である。ひとつだけ「災い転じて福となす」があった。2008 年のサイクロン・ナルギスへの対応で国際社会と協力したことがきっかけとなって 2010 年に総選挙を経てミャンマーの民主化につながった。

  We must not underestimate the disaster. We have to be prepared. DRR training is a must for everybody. So is DRR awareness. Blessing in disguise was that, with the international cooperation in response to the Cyclone Nargis in 2008, we had a chance to be on the way to the democratization of Myanmar after the general election in 2010.

- バルシャ シュレスタ（ネパール 国家復興本部 中央レベルプロジェクト推進ユニット）/ サンジャヤ ウプレティ（トゥリブバン大学工学院建築学科 准教授）：歴史遺産保護のための努力ーネパール ラニポカリにおける 2015 年ゴルカ地震復興

  Barsha Shrestha / Sanjaya Uprety (Central Level Project Implementation Unit (CLPIU), National Reconstruction Authority, Nepal / Associate Professor, Department of Architecture, Institute of Engineering, Tribhuvan University): Struggle for Heritage Conservation - The

Post Disaster Reconstruction of Ranipokhari in Kathmandu

活動家たちの働きかけを受けて、政府は、遺跡群を商業施設にしていこうという考え方を真の遺跡保存とする方向に転換した。市民から反対の声があがれば、政府によるあやまった復興の取り組みから遺跡を守ることができる。

In response to the efforts of activists, the government changed the idea of turning the archaeological site into a commercial facility, to the preservation of the archaeological site. Citizens' opposition can protect the ruins from the government's misguided reconstruction efforts.





- ルペシュ シュレスタ（カトマンズ盆地保存トラスト）（遠隔参加、事務局代読）：モニュメントは崩壊し再生する－よみがえる知恵、スキル、記憶

Rupesh Shrestha (Kathmandu Valley Preservation Trust): Living heritage of Patan rebuilding heritage inside Kathmandu valley

2015 年の地震は歴史的建造物群に大きな被害をもたらした。その復興に当たっては多くの建築家などが集められた。若い世代は上の世代から技術を学び、重要な役割を果たした。災害は惨事だが、職人の技術を再生させる機会にもなる。遺跡の保存とは単に建物を守るだけでなく、人々が引き続き遺跡に触れ祈ることができるようにすることなのである。

The 2015 Nepal Earthquake caused massive damage to many historic monuments. Architects and craftsmen were mobilized to initiate the preservation of damaged monuments. Younger generations learned from older generations. The earthquake was certainly a calamity, but also an opportunity to revive craftsmen's skills. Heritage preservation is not only fencing and protecting ruins, but rather also letting people continue to touch the monuments and worship inside.

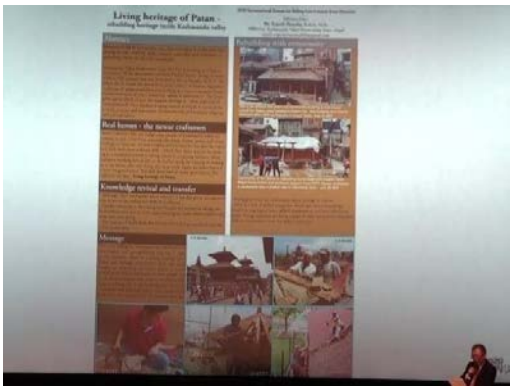
- サルワル バリ（パキスタン パッタン開発機構）：民主化を通じたコミュニティのレジリエンスの構築

Sarwar Bari (Pattan Development Organization): Building Community Resilience Through Democratization

3 つの柱が重要である：①包摂的な社会、②一人に集中するのではなく交替のあるリーダーシップ、③コンセンサス。対話する事でコンセンサスができる。これによって人々は自分たちが

欲するものをはっきりさせることができるようになる。これによってより民主的な社会が構築されていく。災害文化が将来の災害への対処をより適切なものにしてくれる。

Three pillars: Inclusive society; leadership should rotate instead of with one man; and consensus. Through dialogue, a consensus is built. This ultimately helps them to articulate their demands. This makes communities more democratic. Culture of disaster will help to fight future disasters successfully.





- サジャ マジード（スリランカ東南大学）: 2004 年の津波フィールドワーカーから 2019 年の防災博士号までの サジャの物語

Saja Majeed (South Eastern University of Sri Lanka): Disaster survivor to disaster researcher－The story of Saja from 2004 Tsunami response worker to 2019 Ph.D. in disaster resilience

津波があった日を境に私の人生は完全に変わってしまった。災害マネジメントのボランティアになり、15 年にわたって地域で災害知識の普及啓もうに努めてきた。つい最近、災害レジリアンスに関する博士論文をまとめた。今後も津波の経験についての研究を続け、災害リスクに曝されている人々のために、世界中の地域コミュニティの意識を高める活動を続けていきたい。

My life has changed completely since the day of the tsunami. I became a disaster management volunteer and have been working to disseminate and promote disaster knowledge in the community for 15 years. Most recently, I have compiled a dissertation on disaster resilience. I would like to continue researching the experience of the tsunami and continue activities to raise awareness of local communities around the world for those at risk of disaster.

- ラチャニーコーン ソンティップ（国際津波ミュージアム館長、NPO 法人 教育文化機構）: 津波博物館による語り継ぎ―15 周年記念及び日タイの友情

Ratchaneekorn Thongthip (Director, International Tsunami Museum, Institute for Education and Culture, NPO, Thailand): Tsunami storytelling from a museum - The 15th memorial and friendship between Japan and Thailand

国際津波博物館と津波記念館は教育文化機構というＮＰＯによって運営されている。小さな予算であるが 14 年にわたって運営を続けてきた。入場料収入も大変少額であるが、それでも子供たちのために多くのことができる。毎年 1,000 人を超える子供たちの支援を行っている。2017

年には第 1 回世界津波博物館会議に来る機会があった。大変有意義なものであった。

The International Tsunami Museum and Tsunami Memorial Museum are operated by a non-profit organization, the Institute for Education and Culture. We have been operating for 14 years with a very small budget. The revenue from the entrance fee is very small, but we can still support over 1,000 local children annually. In 2017, I was invited to attend the first World Tsunami Museum Conference. It was a very good learning opportunity.





- マーレーン ムリー（ハワイ 太平洋津波ミュージアム 代表）：物語を共有する―太平洋津波博物館が津波の記憶を引き継ぐ方法

Marlene Murray (Executive Director, Pacific Tsunami Museum): Sharing Stories - How the Pacific Tsunami Museum Keeps Tsunami Memories Alive

太平洋津波博物館では・・・津波にまつわる遺物も展示され、体験を生きたものとして蘇えらせる話が添えられている。25 分間のビデオも上映されていて、歴史や津波の映像、科学的事実などが映写されているが、最もインパクトがあるのはやはり生存者の語である。心が奪われるような物語や画像を通じてこそ、教訓を学び、記憶を生かし続けることができる。

The museum … also displays artifacts from tsunami events, with accompanying narratives that help make the story “come alive.” A 25-minute video is shown in our theater which includes history, tsunami footage, and scientific facts. However, the most impactful aspect of the film is the survivor stories, with vivid descriptions of their experiences. It is through riveting stories and images that we learn lessons and keep memories alive.

- グエン ヴオン（ベトナム GoViet）：災害対策 / 災害対応のためのバーチャルリアリティ

Nguyen Vuong (GoViet, Vietnam): Virtual Reality for Disaster Preparedness and Response

私たちはいま Digital 4.0 の時代に足を踏み入れている。オンライン VR 博物館というプラットフォームを利用して、災害を経験していない人々にも被災者に共感を覚えてもらうべきである。VR 技術を適用すれば、だれでもベトナム中部の人々が実際に経験した洪水や台風を我がこととして疑似体験できる。これで、災害を無事に乗り切るのに役立つ方法を学ぶことができる。

People of the current generation are stepping into an era of Digital 4.0. They should be encouraged to share empathy with those who suffered through a powerful platform as an online VR museum. Applying VR technology, one can simulate the flood, typhoon, etc. that

actually happened to the people in Central Vietnam. They can experience the disaster on their own terms with a guide that helps them go through it safely.





- 丸林祐子（ライデン大学大学院芸術社会研究科 博士研究員、九州大学）：死者へ捧げる献立

  Yuko Marubayashi (Ph.D. candidate, Leiden University, Center for the Arts in Society, Netherlands): Recipes for the Dead - An Attempt at Integrating Japanese Death Culture and Acts of Testimony

  阪神・淡路大震災の遺族にとっては、社会的な時間の流れと、心の中の時間の流れは異なる。死者と遺族の関係性は過去のものではなく、現在のものであり未来に開かれたものとして存在している。遺族は想像力を使って死者と共に食事や料理をして関係性を継続している。遺族の心の中の死者との関係性をどのように社会的な語りにしていくことが出来るか。

  For the bereaved from the Great Hanshin-Awaji Earthquake, the passage of time in a social sense differs from that in their heart. The relationship between the dead and the bereaved is not something in the past but something at present and open to the future. The bereaved retains the relationship through cooking and dining with the dead by imagination. How can the relationship with the dead in the heart of the bereaved be a story in a social sense?

- 伊藤駿 / 中丸和（NPO 法人日本教育再興連盟 / 大阪大学（伊藤）・京都大学（中丸））：語り継ぎの担い一育成のための学向けプロジェクトベースドラーニング

  Shun Ito / Nagomi Nakamaru (Renaissance of Japanese Education / Osaka University (Ito), Kyoto University (Nakamaru)): Project-Based Learning for Training Youth to Tell History of Disasters

  阪神・淡路大震災を体験してそれを「自分ごと」として語り継げる人が減る中で、語り継ぎを次世代にまで行っていくには、次世代を担う若者が災害を「自分ごと」として捉えて伝えていく必要がある。このため、学生向けに課題解決型学習プログラムを作って活動している。

  While the number of people who actually experienced the Great Hanshin-Awaji Earthquake and intend to pass down their experiences as their own decreases, the younger generation is expected to take over such storytelling activities as their mission. With a view to this, we are engaged in developing an educational program of a problem-solving type for students.





- 朝廣和夫（九州大学芸術工学研究院環境デザイン部門 准教授）：災害時における共助による農支援について

  Kazuo Asahiro (Associate Professor, Department of Environmental Design, Faculty of Design, Kyushu University): Support for Farmland Restoration through Mutual Assistance after Disasters

  九州の農山村で 20 数年環境保全ボランティアをやってきたが、2012 年 7 月九州北部豪雨では農業復興ボランティアとして活動した。2016 年熊本地震、2017 年九州北部豪雨でも活動した。今年から福岡県 JA と農業ボランティアコーディネーター育成に着手する。今後の災害では農業ボランティアセンターを JA 中心に立ち上げていく。

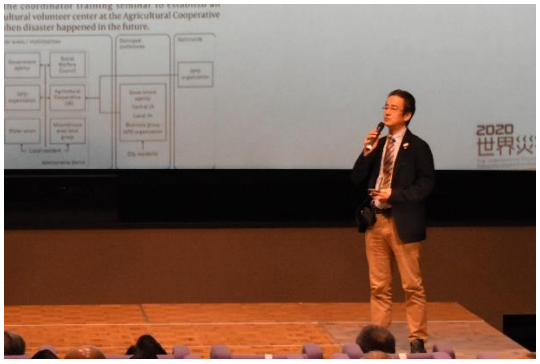
  I have been engaged in a volunteer activity of environmental protection in rural agricultural areas of Kyushu island for over 20 years. In the heavy rain in North Kyushu in July 2012, I worked as a volunteer for restoring agriculture there. I worked also in the 2016 Kumamoto earthquake and the 2017 North Kyushu heavy rain. We begin the training of agriculture volunteer coordinator in collaboration with Fukuoka Prefecture Agricultural Cooperative. In future disasters, we will set up an agriculture volunteer center with Agricultural Cooperative as the core.

- アンドゥルー ミッチェル（熊本大学）：熊本地震における外国人居住者の経験

  Andrew Mitchell （Kumamoto University）： Kumamoto Earthquake Experience Project (KEEP)

  多くの外国人は問題に直面した。日本語が分からず、助けを得るのに大変苦労した者もいた。ほとんどの者は地震のことは知らず防災訓練も受けていなかった。地震を経験した人々の物語を記録し共有するため、熊本地震体験プロジェクト（KEEP）が 2016 年 5 月に設立された。自分たちの経験を伝えることで、人々が災害への備えを改善する方法を学べるよう願っている。

  Many foreign residents found life especially tough. Some could not speak Japanese and struggled to get help. Most had no earthquake awareness or disaster training. The Kumamoto Earthquake Experience Project (KEEP) was formed in May 2016 to record and share the stories of those who experienced the earthquakes. By conveying their and our own experiences, we hope that people can learn how to better prepare for disasters.





- 川崎梨江 / 匹田篤（広島大学大学院総合科学研究科）: 2014 年の広島土砂災害の被災者へのインタビューの分析

  Rie Kawasaki / Atsushi Hikita (Graduate School of Integrated Arts and Science, Hiroshima University): Study of Survivors' Storytelling about Sediment Disaster in Hiroshima, 2014

  体験や記憶は時と共に風化していくが、個人的コンテキストとともに解釈された体験や情報は長期間記憶される。同じ被災者に災害から 3 年目と 5 年目にインタビューしたところ、被災者間で共有されていた語が 2 回目では 1 回目の半数以下だった。「個人化」された体験や記憶は、それがゆえに共有されにくい。「個人化」された体験や記憶を共有する表現方法も検討していく。

  Experiences and memories are usually weathered and fade with time. However, if interpreted with personal context, they are remembered for a long time. We interviewed survivors twice under the same conditions: 3 years and 5 years after the disaster. In the second round, the number of words that survivors commonly used was less than half of the first round. Personalized experiences and memories are difficult to share. We continue to study expression methods of sharing personalized experiences and memories.

- 森康成（北淡震災記念公園 震災の語り部ボランティア）: 1995 年の大震災 における 淡路島での個人的な体験

  Yasushige Mori (Volunteer Storyteller, Hokudan Earthquake Memorial Park in Awaji): A Personal Story of Catastrophe of the 1995 Earthquake in Awaji Island in Japan

  私は北淡震災記念公園で語り部をしている。淡路島は神戸の南 30 ㎞にあり、1995 年の大震災で海岸に断層が現れた。家々が破壊され、多くに人が亡くなった。私の家も全壊した。そういうわけで私は地震の語り部をしている。ポスターを見て、話を聞いてください。

  I am a storyteller from the Hokudan Earthquake Memorial Park in Awaji Island. The Island is located 30km south of Kobe. There, in 1995 a massive fault appeared on the coast. Houses were destroyed and many people were killed. My house was totally destroyed. That is the reason I do 'kataribe', storyteller of an earthquake. Please come and have a look at my poster and listen to my story.





- 浅利満理子（3.11 メモリアルネットワーク）：東日本大震災被災地における民間伝承ネットワークの取り組み紹介

  Mariko Asari (3.11 Memorial Network): Introduction to the Approach of a Non-governmental Network of Community Organizations Devoted to Preserving & Disseminating Information Relating to the 2011 Great East Japan Earthquake & Tsunami

  語り部や被災地ガイドの現場での課題感を元に立ち上がったのが本ネットワークである。3.11 伝承ロードは施設のネットワーク、私たちは人のネットワークである。岩手、宮城、福島を中心に語り部、NPO、学校関係者、行政、研究者など 460 人、66 団体が参加している。次の世代につなげるため、基金による助成も始めた。皆さんも仲間になって欲しい。

  3.11 Memorial Network has been set up, driven by the consciousness of challenges in the practices of storytelling, guiding to disaster-hit sites, etc. While 3.11 Densho Road is a network of facilities, this network is a network of individuals. The network consists of storytellers, NPOs, schools, government offices, and researchers mainly from Iwate, Miyagi, and Fukushima, totaling up to 460 persons or 66 groups. We have also begun financial support for promoting the engagement of the next generation. All of you are welcome to join us.

- 中川政治（公益社団法人 3.11 みらいサポート）： 東日本大震災時の避難行動可視化の取り組み

  Masaharu Nakagawa (3.11 Future Support Association): Visualization of evacuation behavior patterns in the 2011Tohoku Tsunami

  被災者から聞き取りを行って、津波襲来までの被災地の一人一人の避難行動を動画で可視化してみた。地元の展示館で上演している。これを避難の教訓にしてほしいと思う。津波の襲来までの数分間に何をすればいいのかを真剣に考えてもらう。こどもとちゃんと話をしているか。２階から２階に飛び移って助かった人は、「あきらめないことだね」。

  Based on the interviews with the disaster victims, we have visualized the evaluation behaviors of each individual in the tsunami-hit area until the time of arrival of the tsunami. We play it in a local museum. We hope that this is referred to as a lesson in evacuation drills. We hope that people seriously think about what they must do in the few minutes before the arrival of a tsunami. Do they discuss the risk with their children seriously? According to a person who survived the tsunami by jumping from the second floor to another house, “Do not give up!”




- 田中正人 / 江川未紗（追手門学院大学）：避難行動を日常化する

  Masato Tanaka / Misa Egawa (Otemon Gakuin University): Making Evacuation Behavior a Daily Routine

  2014 年西日本豪雨の広島の被災地の現地調査とボランティア活動に参加して、避難行動を日常化することが重要であると感じた。ナレッジを行動につなげないといけない。被災者の言葉にはそのヒントがたくさんある。避難情報がどれほど洗練されてもなかなか行動にはつながらない。むしろ行動そのものを日常の中にどう織り込んでいけるかが重要なのではないか。

  We participated in an on-site research and volunteer activities in Hiroshima hit by the 2014 West Japan heavy rain, through which we felt the importance of making the evacuation a daily exercise. We must translate our knowledge into actual practice. We notice many hints in the words of the victims of disasters. No matter how highly sophisticated the information for evacuation, people do not necessarily move. We believe that the key to that is how we incorporate such practices into our daily life.

- 中村洋介 兵庫県立大学大学院 減災復興政策研究科 博士前期課程: 震災 25 年 語り継ぐ学校防災–その時学校では何が起こっていたのか

  Yosuke Nakamura (Graduate School of Disaster Resilience and Governance, University of Hyogo): Dissemination of various kinds of Experience at Educational Site－The Case Study of the Great Hanshin-Awaji Earthquake－

  阪神・淡路大震災当時に学校で避難所対応をしていた先生は既に現場を退いてその時の記憶は埋もれてしまっている。それを知識として掘り起こして体系化するべきである。当時の先生方からの聞き取りを元に、被災地図とも照らし合わせて、当時をありありと想像できるような、若い教員の防災教育の教材を作りたい。マニュアルも見直して、新しい学校の防災体制の創造につなげたい。

  The school teachers who were engaged in managing evacuation centers that were set up in school buildings have already retired. Their memories which have been fading should be recollected and recorded systematically. We plan to collect such memories through interviews with retired teachers; verify the memories against the maps of damage, and develop education materials for junior teachers that allow them to vividly imagine difficult situations at the time of the disaster. Manuals need to be revisited, with which we hope to link to the creation of a new way of disaster management system in schools.





- 宮定章（特定非営利活動法人 まち・コミュニケーション、兵庫県立大学減災復興政策研究科 研究員）：災害に負けない地域づくり～備えあれば憂いなし 神戸市長田区認定 NPO 法人まち・コミュニケーションの事例

  Miyasada Akira (Researcher, Graduate School of Disaster Resilience and Governance, University of Hyogo): Telling disaster prevention like cherry blossoms (SAKURA) ～ Prepare first, Safety and Lively life later, for disaster ～

  阪神・淡路大震災は悲惨な経験であったが、毎日を大切に生きること、自然との共生など、普段気づかないことの大事さを感じる機会でもあった。離れ離れになった被災者が、少しでも多く元住んでいた地区に戻ろうと協力しあい地域づくりを行ってきた。ネットワークができ、世界の方々と交流をする機会が増え、被災地同士の交流も行ってきた。多くの気づき、学びがあった。

  While the Great Hanshin-Awaji Earthquake was indeed a greatly tragic experience, it was also an opportunity to realize something very important such as the preciousness of ordinary daily life and coexistence with nature, which we do not normally appreciate much. The survivors of the earthquake had to be scattered due to the different places they went for evacuation, but they strived to come back to where they used to live and cooperated in rebuilding the community. We have been able to develop a network with more opportunities to exchange with people around the world. We have also been promoting exchanges between disaster-hit areas. We have realized and learned a lot.

- 折橋祐希 / 喜田悠太郎（兵庫県立大学大学院 減災復興政策研究科 博士前期課程）: 阪神間における災害デジタルアーカイブの構築とそのプロセス～1938 阪神大水害と 1995 阪神・淡路大震災を例に

  Yuki Orihashi / Yutaro Kida (Graduate School of Disaster Resilience and Governance, University of Hyogo): The Construction and its Process of Digitally Archiving Records of The Great Hanshin Flood in 1938 and the 1995 Great Hanshin-Awaji Earthquake

  1938 年阪神大水害と 1995 年阪神・淡路大震災のデジタルアーカイブを構築した。ＧＩＳを活用して、過去の写真やテキストなどに位置情報を紐づけた。当時の状況を俯瞰的に現すことができる。地域の中高生に手伝ってもらった。今後、災害を経験していない人から災害を経験していない人に伝える機会が増える。経験していないことを伝える経験をすることで自信がつくのではないか。

We have developed a digital archive of the Great Hanshin Flood (1938) and the Great Hanshin-Awaji Earthquake (1995). Making use of GIS, the photos and the texts in the past are linked to geographical coordinates. This allows for the illustration of the situation at the time of disasters comprehensively. We were helped by local young students to develop the system. Opportunities will increase in which someone who has not experienced disasters tells stories of the disasters to someone else. We expect that this kind of practice will help one become confident.





- 鈴木比奈子 / 谷川亘 / 内山庄一郎 / 浦本豪一郎（国立研究開発法人 防災科学技術研究所 / 海洋研究開発機構 / 高知大学）：地域の災害経験の共有－災害記念碑デジタルアーカイブマップの公開

  Hinako Suzuki (Multi-hazard Risk Assessment Division, Disaster Information Laboratory, National Research Institute for Earth Science and Disaster Resilience): Sharing communities' disaster experiences－disclosing digital archive map of disaster monuments

  日本では 1600 年くらい前から文字情報として災害が記録されているが、忘れられている。それを思い出す方法の一つは石碑で、全国に残っている。災害記念碑（津波、水害、土砂災害）を地図で情報共有するため、「災害記念碑デジタルアーカイブマップ」を作った。私たち自身が経験していない災害を再認識させてくれる。それを別の媒体につなげていくことも可能である。

  In Japan, although disasters have been recorded in the form of written letters since 1,600 years ago, the information is forgotten. One of the ways to recollect is stone monuments, many of which still remain throughout the country. To have in common the information on disaster monuments (tsunamis, floods, and landslides) in the form of map, we have developed the “Disaster Commemoration Monuments Digital Archive Map”. This allows us to re-recognize the disasters which we did not experience. Technically, such information can well be connected to different types of media as well.

- 荒井勲（NPO ひまわりの夢企画）：あなたにも出来る被災者支援

  Isao Arai (NPO Sunflower's Dream): Handmade support for survivor

  日本語では「ひまわりおじさん」で通っている。語り部をずっとやっている。中越地震、東日本大震災、熊本地震などで被災者支援活動を続けてきた。25 年になる。ポスターの前でひまわりのタネを配る。

I am known as “Uncle Sunflower” here. I have been active as a storyteller all the way through. I have also been engaged in various activities in support of those affected by the 2004 Chuetsu Earthquake, 2011 The Great East Japan Earthquake and Tsunami, 2015 Kumamoto Earthquake, etc. for 25 years. I will give you sunflower seeds in front of my poster.





- 稲垣文彦（公益社団法人 中越防災安全推進機構 業務執行理事 統括本部長）：中越メモリアル回廊のための取り組み

Fumihiro Inagaki (Chuetsu Organization for Safe and Secure Society): Initiatives taken for the CHU-ETSU Earthquake Memorial Corridor

中越メモリアル回廊は、「中越まるごとアーカイブ」をキーワードに、被災した現場をなるべく現状のまま残すことで、震災経験の風化を防止する事を目的としている。回廊施設として 4 施設 3 パークを被災各地に震災の記憶を伝える場として整備し、震災アーカイブの収集・活用の拠点としている。今後 6 年は財源があるが、その後は民間資金で継続すべく検討を始めている。

The CHU-ETSU Earthquake Memorial Corridor aims at preventing the fading of the experiences of the earthquake by preserving the damaged sites as they are, with “Archiving Chuetsu as a whole” as the keyword. It consists of 4 facilities and 3 parts in different sites as the hubs of collection and utilization of the earthquake archive information, which convey the memories of the earthquake. While the resources to run this initiative are secured for the next 6 years, we have begun deliberation on ways to continue the initiative with the funds from the private sector thereafter.

- 東山陽次（雲仙岳災害記念館 学芸員）：雲仙岳噴火災害の長期的な語り継ぎとその課題

Yoji Higashiyama (Mt. Unzen Disaster Memorial Hall): Passing Down the History of the Damages Caused by Mt.Unzen Volcano and the Issues at Hand

語り部ガイドの高齢化や復興を含む被災地の変化などから、次第に語り部の認知度が薄れ、災害の風化が進み、災害伝承の新しい方法の検討が求められてきた。そこで、当館では今年から新たな試みとして、小学生高学年から中学生を対象とする火山ジュニアマイスタースクールを始め、将来の地域の防災を担う若者を育てるための様々なプログラムを実施している。

Due to the aging of the storytelling volunteers as well as the transformation of the damaged areas including restoration, the level of recognition of storytellers has gradually been lowered. While the fading of the memories of the disaster progresses, some sort of innovative ways of passing down the stories of disasters. With this in mind, for example, Mt. Unzen

Disaster Memorial Hall begins this year “Volcano Junior Meister School” targeting young teenagers. Intending to foster the youth who can take responsibility for disaster risk reduction in the local communities in the future, we are implementing various other programs as well.





- 高田知紀（神戸市立工業高等専門学校都市工学科 准教授）：妖怪伝承を知的資源として活用した防災教育プログラム

Tomoki Takada (Kobe City College of Technology): A Study on Education Framework for Disaster Risk Reduction by Utilizing “Yokai” as Intellectual Resources

妖怪とは、地域の中で語り継がれてきた怪異現象である。そこには、災害の予兆や災害時の行動の教訓など、自然災害にかかわる伝承がたくさん含まれている。そこに注目して、子供たちと地域の危ない場所を探し、そこに現れる妖怪を考えることによって、子供たちが自分たちの感性で地域のリスクを認識して、それへの対応を考えるというワークショップを展開している。



“Yokai” is a mysterious, unusual, and strange phenomenon, stories of which have been passed down over generations in communities. The stories include various lessons regarding natural disasters such as signs of coming disasters, code of conduct at the time of disasters, etc. With this in mind, I initiate workshops in which children identify dangerous sites where they live; they recognize risks around them by imagining a Yokai who may appear in such locations; and they discuss possible countermeasures.

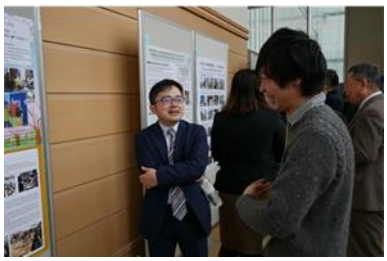
(2) 交流（10 時 15 分～11 時 45 分）/ **Exchange** (10:45 – 11:45)

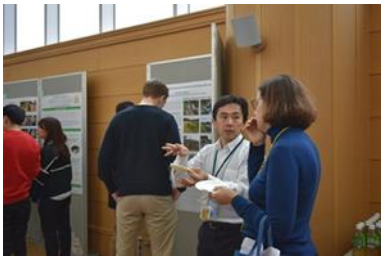
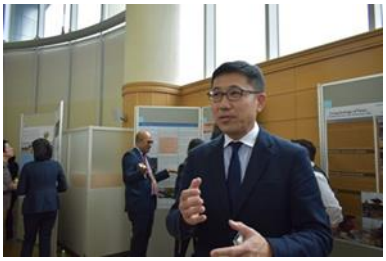
- 会場で展示されているポスターをめぐって、発表者と他のポスターセッション参加者、分科会パネリスト、公開シンポジウムや全体会議参加者などが、軽食をとりながら、自由に意見交換、情報交換などを行い、ネットワークを深めた。

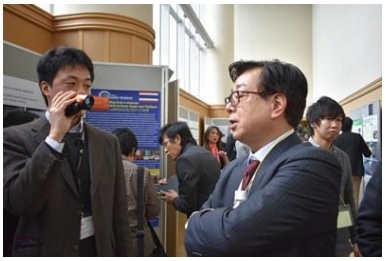
- After the flash talks, all the participants moved to the foyer where all the posters are exhibited, and they enjoyed the free discussion, exchange of information, and deepen networks over some light meal.





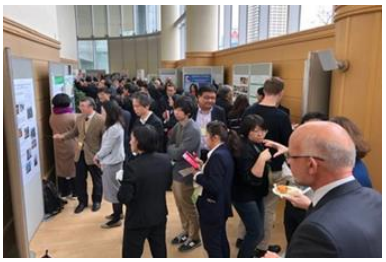
SHARING STORIES


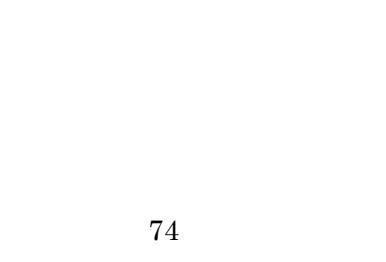



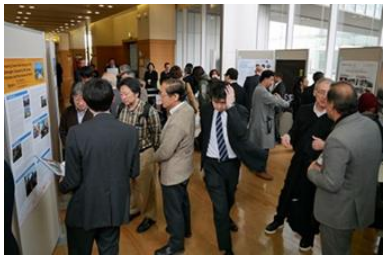



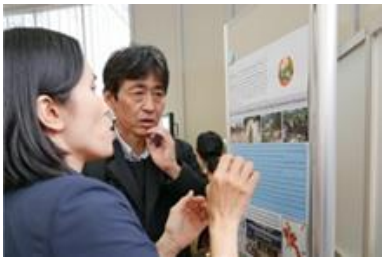


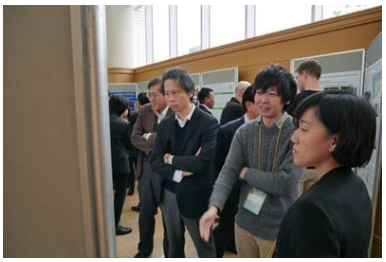
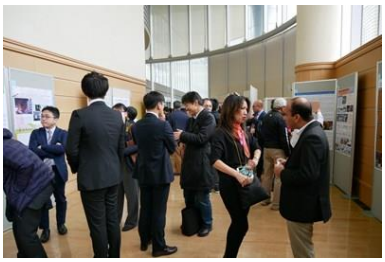


SURVIVOR


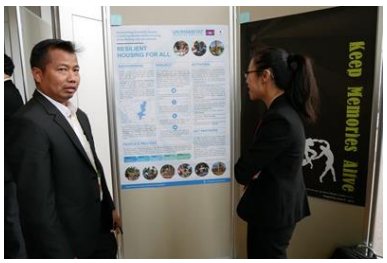






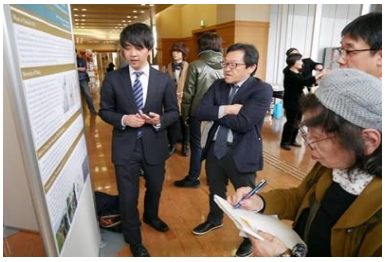


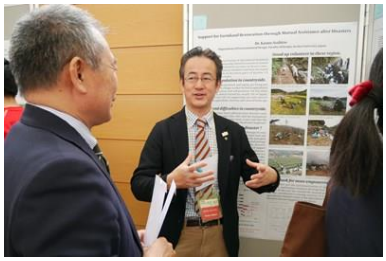


Keep Memories Alive


SHARING STORIES














私たちが、次代に伝える大切なこと
2020

５． 全体会議 / Plenary Session

- 2020 年 1 月 26 日 9 時から 13 時 30 分まで、小林郁雄 世界災害語り継ぎネットワーク代表、兵庫県立大学特任教授の総合司会の下、全体会議が人と防災未来センター東館で約 100 人の参加を得て開催された。

- On 26 January 2020, from 900 to 1330, under the overall coordination by Mr. Ikuo Kobayashi, Representative of International Network of Telling Live Lessons as the Master of Ceremony, Plenary Session was held in the East Building of Disaster Reduction and Human Renovation Institution (DRI) with around 100 participants.

(1) 基調トーク（9 時～9 時 30 分）/ Tone-Setting Talks (9:00-9:30)

- **林春男 国立研究開発法人防災科学技術研究所 理事長 / Haruo Hayashi: President, National Research Institute for Earth Science and Disaster Resilience**

- 英語ではこういう「語り継ぎ」の場に行くと「remember」という場合が多い。ワシントン D.C. にあるホロコーストミュージアムもオクラホマシティ連邦政府ビル爆破事件もパールハーバーも remember だ。第 3 者にプッシュしているように聞こえる。日本語で「忘れない」と言うと一人称の語感がある。





- 「語り継ぎ」みたいなものに興味を持ち始めたきっかけは、1983 年に米国留学中に書いた博士論文だった。タイトルは「Self-identity of Japanese Americans during the Internment Period」。戦争中、強制収容所の 1 世、2 世のアイデンティティの変化をテーマにした。在米生活 3 年、自分自身のアイデンティティが揺らいでいく時期でもあった。自分が思っている自分と周りが見ている自分が極端に食い違ったときに人はどうするのか調べてみたいと思った。極端な状況の中での変化を見るのが有益だろうと思って、強制収容所をテーマにした。2 世たちは当時、自分たちはアメリカンだと思っていたが、JAP と言われるようになって、1 年半くらいかけて、ジャパニーズアメリカンというものを採用するようになった。他方、1 世たちは日本を断ち切ろうとして、大和民族という言葉を選ぶ、というのが結論だった。UCLA に JARP アーカイブというものがあって、当時の資料を集めたものがあったので、そこで収容所の新聞を使って archival study というものをやった。たくさんのオーラルヒストリーと artifacts があった。ただ、JARP が始まったのが 1962 年で、強制収容の時期から約 20 年経っていたことから、そこでのオーラルヒストリーの価値は何か、一番厳しいところを乗りきっていった人たちの話はそこに残っていないということを強く感じた。オーラルヒストリーの限界かと感じた。

- その後広島大学に移り、1988 年から 94 年までそこにいた。ちょうど戦後 50 年で、8 月 6 日以

前のヒロシマを再現するということを NHK が企画していて、それに参画していた。そこに出てくるのがやはりオーラルヒストリー。ただ、当時話を聞けるのは戦争の時に 10 代の人たち、20 代までが限界。その人たちからどれだけのことが聞き出せるのかと悩んでいた。95 年になる前に京都大学に移ったので、広島での話はそれで終わりとなった。その後、95 年に阪神・淡路大震災が起きた。その時には、同時代人の責任として、社会の真ん中で、中枢で考えていた人たちのオーラルヒストリーを集めようとして、96 年からプジェクトが始まった。その結果は 30 年間未公開として人と防災未来センターに置いてある。ある程度整理がついた 99 年からはパネルスタディを行って定量的にプロセスを追うということをしてきた。語り継ぐのは大事だが、難しいことでもある。同時代人の責任を果たせるということが非常に大事だと思っている。

- 大事なことは日本語でいうところの「温故知新」である。JARP アーカイブでは、自分のセルフアイデンティティが揺らでいく中で、なにか結論を知りたいと思って歴史を見た。残すべきものは何か、語り継ぐべきものは何か。それは、何か将来に役に立つもの、レッスンというものなのかもしれない。その中で、比較的残しやすいのは facts、ハザードやダメージ、アクティビティなどの facts である。石碑などには何百年も前のことが書いてあったりする。しかし、もっと本来残すべきなのはストーリーなのではないか。大きな環境変化の中で人々がどう適応していったのかのプロセスを学ぶべきである。それを語り継ぐ必要があるのではないか。それが将来に向けての備えになる。同時代を生きた人には記録する責務があるのではないか。私自身が何のために語り継ぐのかというと、当面の目標としては、2035 年ぐらいに予想されている非常に大きな災害、国難災害を乗り切っていくための知恵を手に入れたいと考えており、それが語り継ぎに取り組んでいる原動力である。

- In English, the issue in this Forum tends to be referred to as “remember”. That is the case in the United States Holocaust Memorial Museum in Washington D.C., Oklahoma City National Memorial Museum on the federal government bombing in 1995 and the Japanese attack on the U.S. Naval base at Pearl Harbor in Hawaii. The English word “remember” seems to carry connotation of some kind of imperative i.e. pushing someone not to forget. On the other hand, the Japanese words “not to forget” tends to have connotation of the first-person statement.

- What triggered me to become interested in “storytelling” was my Ph.D. thesis which I wrote in 1983 during my stay in the US as a student. The title was “Self-identity of Japanese Americans during the Internment Period”. The thesis was about the transformation of the self-identities of the first generation of Japanese immigrants to the US and the second generation in concentration camps during World War II. I was in the third year then to stay in the US; and I was feeling that my self-identity was becoming unclear. I was interested in researching about what people would do when they realized that there was a sheer gap between the way they identify themselves and the way other people identify them. Considering that it would be useful to study extreme cases, I selected the concentration camp as the theme of my Ph.D. thesis. In the beginning, the second generation identified themselves as “American”. However, they realized that they were called “Jap”; and over a time of a year and a half, they adopted “Japanese American”. As opposed to that, the first generations opted for the “Yamato people” in an attempt to disconnect themselves from Japan. This is the essence of my thesis. In the course of the research, I conducted what is called archival study extensively with the various materials that were available in “JARP Archive” at UCLA. There were many oral histories and artifacts there. However, as JARP

began in 1962 which was some 20 years after the concentration camps, I felt strongly that there hardly remained the stories of those who had undergone the severest period. What is the value of oral history? I thought that oral history cannot help any further.

- I moved to Hiroshima University thereafter, and stayed there from 1988 to 1994. The time coincided with the 50th anniversary of the end of World War II. I was participating in an NHK project whereby the city of Hiroshima before 6 August (the day of the atomic bombing) would be reproduced. This is also where oral histories would be important elements. However, as those from whom we could hear their stories were the ones who had been teenagers or in the 20s at the most, I was facing the same challenge as to how much we would be able to extract from such people. However, I could not continue the project in Hiroshima, as I moved to Kyoto University before 1995. In 1995, the Great Hanshin-Awaji Earthquake occurred. I took it as my responsibility as one of the contemporaries then to systematically collect oral histories of those who were at work in the center of the society. The project of oral history began in 1996. We decided to keep those stories confidential for 30 years, which are kept in DRI. When the shape of the project was streamlined in 1999, we commenced a panel study so as to trace the process quantitatively. Recording stories is very important, but also very difficult. I believe it is extremely important for the contemporaries to be able to take and fulfill their responsibility.

- As Confucius said, "visiting old, learning new" is the key. While I felt that my self-identity was swaying and I somehow wanted to know the conclusion of this quest, I looked into the history in JARP Archive. What should be recorded? What should be passed on? It may be something that can be useful in the future. It can be something called "lessons". Relatively easier to record is facts such as hazards, damages, and activities. Stone monuments record the facts of the past centuries ago. However, I wonder what really needs to be recorded may be stories. We ought to learn the process of how people adapted themselves in the context of an extensive change in the environment. I gather that that is what we should record and pass on to the next generation. That is what helps us prepared for the future. I believe that it is the responsibility of the contemporaries. As for me, the purpose of recording and passing on things is for the moment for us to acquire wisdom to overcome the extraordinarily large-scale and severe disaster i.e. the national crisis which is anticipated in around 2035. This is what drives me for storytelling.

○ **小池俊雄 国立研究開発法人土木研究所水災害・リスクマネジメント国際センター(ICHARM) センター長 / Toshio Koike: Director of International Centre for Water Hazard and Risk Management (ICHARM)**

- 「語り継ぎ」というものを議論する場に初めて参加した。昨日の分科会にも参加し、一言で言うと感動した。このような分野があることを初めて理解した。私は、日本にあるユネスコのセンターのひとつで水災害関係を扱っている ICHARM という組織にいる。また、日本学術会議と政府の社会資本整備審議会河川部会（日本の治水政策を担当）にも関わっており、本日はその立場から発言する。

- 全世界の災害はこの 35 年で 3 倍に増えている。件数の半分ぐらいは低所得国と低位中所得国で発生している。人的被害は 8 割が低所得国と低位中所得国であるのに対して、経済被害の 8

割は高位中所得国と高所得国である。日本では、2013 年の伊豆大島土砂災害、2014 年の広島の土砂災害に続いて毎年のように災害が続き、様々な法改正や政策提言などをやってきた。だいぶやったと思ったところに 2018 年西日本豪雨や 2019 年の台風 19 号で再び被害を受けた。2019 年には全国の無数の箇所で 12 時間降水量や 48 時間降水量の過去最大を記録している。破堤や土砂災害、2 年続きでの 3 桁の犠牲者、浸水などが続く中、休みなく対策を進めているが追い付いていないのが現状である。





- 2016 年の学術会議で「ラストワンマイルチャレンジ」というものを提言した。災害を減らすにはインフラ整備や政策、法律が重要であるのはもちろんであるが、一人ひとりの行動も大事だ。知っていることと行動することにはかなりのギャップがある。人々が知識を行動に移す場合、「知識」を習得し、「興味」を持ち、関わりたいという「動機」となり、機会さえあれば行動しようという「意図」が湧いて、「行動」につながるというプロセスを経るのであり、そこには危機感とか責任感、そのことが効果的であるとの認識、実行可能であること、費用対効果、社会的規範が関係しているという研究をやってきた。災害は日常ではなく非日常であり、多くの人が被災するが、全体からすると限られた人しか経験しない。また、人間は忘れやすい。千葉県と愛知県の中学生を水俣に連れて行き語り部の話を聞かせたところ、「知識」や行動の「意図」は上がるが、「興味」や「動機」は醒めてしまうことがわかった。その場では生徒はぼろぼろ泣くが、興味や動機は下がってしまう。考えたり行動したりすることが続いていく社会作りが必要だとかねて感じていたところであったので、昨日の分科会でも感銘を受けた。

- 災害が起きて、やがて語り継ぎのセンターが出来ると、データや展示、教育、トレーニング、研究などが集まってくる。それだけでなく、広島の 2014 年の土砂災害後に立ち上がった「モンドラゴン」のように、心の復興の場としての機能も生まれてくる。2014 年に被災された方々の心の癒しだけではなく、2018 年に被災された方々が 2014 年の被災地に来て癒されるという話に大変感動した。このように、他のミュージアムとのコンタクトやことなる被災地の人々の交流、被災した都市同士のネットワークも出来てきている。これはすごいと思った。これは、社会でメモリーをいつまでも忘れない、それを受け継ぐ、分かち合う、社会を元気にさせる、サステイナビリティを築くということにつながると思った。1925 年の北但馬地震で被災した城崎の温泉街の復興では、家屋を木造で建て直して温泉街の文化を継承する一方、公共施設はコンクリート構造として火が拡がらないようにし、同時に河川改修で水害対策を講じる、これによってサステイナビリティを構築していったという話を聞いて、素晴らしいと思った。

- 「語り継ぎ」というものそのものが、いろんな人を集めてくる力、コンビニングパワー持っている、これがレジリエントな社会を作る、ということを強く感じた。そして、こういうものはより安定した文化になる。考えや態度、行動がまとまって持続的にその地域に根付くのが文化である。災害に関わる文化が醸成されてくる。これに加えて、法律や行政、インフラ、社会的

秩序を作るなどという言うことをやると、それは文明になる。リスボン大地震や過去の大災害が文化、社会を壊したとよく言われるが、語り継ぎは、災害に強い文明を作るきっかけの一つになるのではないかと思った。

- This is the first time that I participate in a forum where the issue of storytelling is discussed. I attended the breakout sessions of yesterday as well. My feedback is in short "I am moved!". I have just realized for the first time that this kind of subject area exists. I lead ICHARM which deals with water-related disasters as one of the research centers of UNESCO. I am also engaged in the Science Council of Japan, and the River Committee (in charge of Japan's flood control policy) of the Panel on Infrastructure Development of the Japanese Government. My intervention of today will be from the points of view of such positions.

- The number of disaster events in the world has tripled over the last 35 years. Around half of the events occur in Low-Income Countries and Lower Middle-Income Countries. 80% of casualties are in LICs and LMICs while 80% of economic losses are in Upper Middle-Income Countries and High- Income Countries. In Japan, following a series of disasters in almost every year such as heavy rains and landslides in Izu Oshima island in 2013, landslides in Hiroshima in 2014, various law amendments have been taken into effect and many policy recommendations. When we thought that such counter-disaster arrangements had been done quite extensively, Japan suffered again from West Japan heavy rains in 2018 and Typhoon 19 in 2019. In 2019, 12-hour precipitation and 48-hour precipitation hit the highest records in numerous places throughout Japan. While levee breaches, landslides, 3-digit casualties in 2 consecutive years, inundations, etc. continue, countermeasures even with no break cannot keep up with the pace of the occurrence of disasters.

- In 2016, the Science Council of Japan made a recommendation called "Last One Mile Challenge". To reduce disasters, while infrastructure, policies, and laws are important for sure, the practice of each individual also matters very much. There is a great gap between knowing and doing. When people put knowledge into action, the process is such that they learn knowledge; they become interested, they are motivated to be engaged; intention emerges for acting when there is an opportunity; eventually leading to actions. This process is linked with various factors such sense of crisis and responsibility, recognition of the effectiveness of such actions, cost-benefit effect, social norms, etc. This is what I have been researching on. Disasters are not a usual event but an unusual one. Many people suffer from disasters; however, it is still a limited number of people who experience disasters. Moreover, people tend to forget. When we brought junior high school students (young teenagers) of Chiba and Aichi Prefectures to Minamata and have them listen to storytellers, it was realized that, while the levels of knowledge and intention of actions go up, the levels of interest and motivation go down. Although the students cry when listening to the storytellers, interest and motivation shrink thereafter. I have been thinking it is important that we build a society where people continue to think and behave; and therefore, I was impressed in the breakout sessions of yesterday as well.

- When a disaster occurs and the center of storytelling is founded thereafter, various data, exhibitions, education, training, and research gather. In addition, like the case of Mondragon which was founded after the landslide disaster in Hiroshima in 2014, the function as a venue

for the restoration of hearts and minds emerges as well. I was moved to hear that not only the people who suffered in 2014 come to Mondragon and felt relieved, but those who suffered in 2018 also come to the disaster-sites of 2014 and felt relieved. Besides, many similar initiatives are emerging such as various contacts of different museums, exchanges of people from different disaster-hit areas, and networks of disaster-hit cities. I found it amazing. I took it that this leads to a society where memories will not be lost, passed on, and shared, and that this vitalizes the society and constructs sustainability. I found it fascinating to hear that, in the case of reconstruction of Kinosaki hot-spring resort town damaged by the 1925 earthquake, houses were rebuilt with wood so as to retain the culture of the hot-spring resort town is retained; that public facilities were reconstructed in reinforced concrete structure so as not to let the fire spread; that river bed and levees were improved so as to ensure better flood control; and that the sustainability of the town was thus strengthened.

- I felt strongly that the conduct of storytelling itself has the power to attract various people i.e. convening power, which creates a resilient society. I believe that this kind of thing can evolve as a sustainable culture. When ways of thinking, attitude, and behavior are integrated and made rooted in a regional society sustainably, that becomes culture. The culture rooted in a disaster is fostered. Moreover, if laws and administrative management, infrastructure, and social discipline are created, that becomes civilization. While it is often said that mega-disasters like the Great Lisbon Earthquake destroyed the culture and society, storytelling can be one of the triggers to create a disaster-resilient civilization.

○ 人の記憶について（林、小池） / **People's memories (Hayashi, Koike)**

- 林：「人は忘れる」というが、私は、それは違うと思う。阪神・淡路大震災を経験した人はおそらく生涯それを背負っていくだろうと思う。ただ、そういう人の数が相対的に減っていくので、それが人口に膾炙する確率はますます下がっていくのは事実であろう。水俣の語り部の話を聞くと、あの子どもたちにとってはやはり他人ごとであり、他人ごとは忘れていくのは仕方がない。鮮烈な体験はかなり残ると思う。ただ、阪神・淡路大震災のオーラルヒストリーを集めていて思ったのは、それでも使えるのは 10 年ちょっとだ。それは、人の記憶はリプレイスされていくからだ。もっと大きなイベントを体験するとそのイベントの記憶はなくなる。例えば、震災当時に首相であった村山さんには、震災のことはあまり印象に残っていなかったようだ。その後に取り組んだ従軍慰安婦の方がずっと鮮烈であったのだろう。あるいは、明石市長の記憶に残っているのは、震災後に起きた花火の雑踏事故のことであった。オーラルヒストリーのプロジェクトは伊丹の市長を最後に終えた。震災時に市長であって最近それを退いたという経験に連続性があったからだ。

- 小池：忘れるというより、フェードアウトと言った方が良かったかもしれない。岡山県真備は 2 年前、5mの湛水をした地区のまちづくりをどうするかを考えたが、やはり元のところに住むこととなってしまうのである。2019 年 10 月の 19 号災害で宮城県の吉田川が破堤し、直後は町長の呼びかけで、町全体で移転しようという話があったが、つい最近、移転しないと決めた。記憶だけでなく他のいろいろなものが入ってきてその時の鮮烈な記憶がフェードアウトしていくこともあるのではないかと思い、先ほどのような発言を行った。

- Haruo Hayashi: While it is said "people forget", I think it differently. I believe that the people who experienced the Great Hanshin-Awaji Earthquake will carry it for the rest of their life.

That said, it is true that the number of such people decreases relatively; and therefore, the probability that stories of experiences are shared decreases further. While I appreciate that the children are strongly touched by the storytellers, the stories are still about someone else. It cannot be avoided that they forget things about someone else. On the other hand, memories of striking experience do remain for a considerably long time. However, what I came to realize when we were collecting oral histories of the Great Hanshin-Awaji Earthquake was that even such memories of experiences are meaningful up to 10 years or so. This is because people's memories of events are always replaced when they later experience other events of greater impact. For example, it seemed that for the former Prime Minister Murayama at the time of 1995 earthquake, his memory of the earthquake was not greatly strong; but he remembered the issues of military comfort women much more vividly. Else, what remains in the mind of the former Mayor of Akashi city is the incident of the crowd after the fireworks which happened after the 1995 earthquake. We closed the oral history project with the former Mayor of Itami city as the last interviewee. He was the Mayor at the time of the earthquake and retired recently. He was the last person with the continuity of his experience as the Mayor.

- Toshio Koike: It may have been more appropriate to say "fade out" rather than "forget". The citizens of Mabi of Okayama Prefecture discussed what should be done to the areas which were inundated with 5-meter deep water 2 years ago; however, they ended up living in the same place. The citizens of the site in Miyagi Prefecture where the levee of the Yoshida River was breached due to Typhoon 19 in October 2019 also discussed the relocation of the site as a whole in response to the appeal from the Mayor immediately after the flooding, but have recently decided not to relocate. Due to various factors other than memories coming into consideration, the vivid memories at the time of the disaster may fade out. This is what I would have liked to say.





NB : この後上述の通りポスターセッション開催 (9 時 30 分～11 時 45 分) / Poster Session was held as described above thereafter (0930 - 1145)

(2) 全体会議（11 時 45 分～13 時 15 分）/ **Plenary Session** (11:45 – 13:15)

- 永松伸吾 全体会議座長（関西大学教授）より、各分科会には海外からのゲストに共同座長を務めて頂いたことについての説明があり、全員の紹介があった。その後、各分科会の内容についてそれぞれの共同座長より報告があった。

- Mr. Shingo Nagamatsu, Chair of the Plenary Session (Professor, Faculty of Social Safety Science, Kansai University), explained that each Breakout Session was co-chaired by a participant from overseas, and introduced all the Co-chairs, who were also the panelists of the Plenary Session. It was followed by the reports from the Co-chairs of the respective Sessions on the summaries of the discussion.



- パネリスト：
  永松伸吾 関西大学社会安全学部 教授（座長）
  マーレーン ムリー 太平洋津波博物館 館長（分科会 A 共同座長）
  イカプトラ ガジャマダ大学 教授（分科会 B 共同座長）
  ギュルム タヌルジャン ボスフォラス大学 准教授（分科会 C 共同座長）
  イブラヒム コモオ アジア太平洋ジオパークネットワークコーディネーター（分科会 D 共同座長）
  ポール ミラー カンタベリー大学 教授（分科会 E 共同座長）
  エコアグス プラウォト ドゥタワカナキリスト教大学 教授（分科会 F 共同座長）
  アレサンドロ パスート イタリア国立研究評議院地質水文保全研究所 研究部長（ポスターセッション共同座長）
  深澤良信 世界災害語り継ぎネットワーク（テルネット） 事務局長

- Panelists:
  - Shingo Nagamatsu (Chair): Professor, Faculty of Societal Safety Sciences, Kansai University
  - Marlene Murray: Director, Pacific Tsunami Museum (Session A Co-chair)
  - Ikaputra: Professor, University of Gadjah Mada (Session B Co-chair)
  - Gülüm Tanircan: Associate Professor, Bogazici University (Session C Co-chair)
  - Ibrahim Komoo: Vice President, Global Geoparks Network (Session D Co-chair)
  - Paul Millar: University of Canterbury (Session E Co-chair)
  - Eko Agus Prawoto: Professor, Duta Wacana Christian University (Session F Co-chair)
  - Alessandro Pasuto: Research Director, CNR - National Research Council of Italy, IRPI -

Research Institute for Geo-Hydrological Protection (Poster Session Co-chair)
- Yoshinobu Fukasawa, Secretary, International Network of Telling Live Lessons from Disaster (TeLL-Net)

○ 分科会・ポスターセッションからの報告 / **Remarks by the Panelists**

- 永松伸吾（全体会議座長）/ Shingo Nagamatsu, Chair of Plenary Session, General Managing Chair of Breakout Sessions:

昨日の分科会に参加して、熱気のある素晴らしい議論を聞くことができた。2 つの分科会が並行して開催されていたため、すべてをフォローすることはできなかったが、恐らく他の分科会も同様に充実したものであったものと思う。分科会の共同座長は，全員海外からの参加者にお願いした。各パネリストにはまず、それぞれの分科会などからの報告をして頂き、その後、自由討議に移り、語り継ぎの課題などについても議論して頂きたい。

I have been taking part in preparation of this Forum since the beginning in particular in organizing and managing the breakout sessions. I note with pleasure that the discussion in all the sessions was greatly enthusiastic and fruitful. All the co-chairs of the breakout sessions are the participants from overseas. I invite each to report briefly on the discussion of the respective sessions, to be followed by a free discussion in which the panelists will be requested to touch upon challenges that the activities of telling live lessons face.

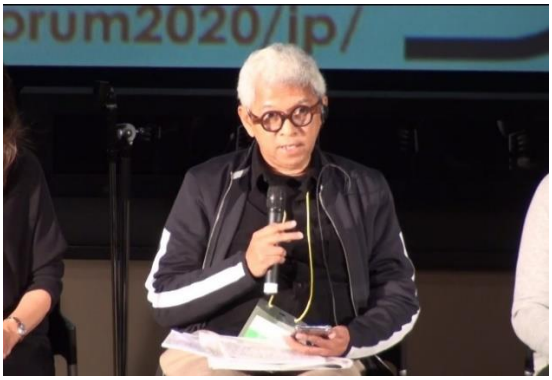
- マーレーン ムリー（分科会 A「語り継ぎとミュージアムの役割」共同座長）/ Marlene Murray, Co-chair of Session A - Role of Museums in Telling Live Lessons:

当分科会の参加者が代表するミュージアムは 5 館で、それぞれ災害の種類も違う。運営主体も 3 つが民間であり 2 つが自治体や政府である。また 100 年の歴史があるところもあれば、今年開館するところもある。すべてのミュージアムで語り継ぎの活動が行われており、多くの場合、地域で特に子どもたちへの働きかけを行っている。実際の被災者が語り部となった語り継ぎが最もインパクトがあるのは言うまでもないが、その他にも多くの方法がある。問題は、いかにして世代を越えてそれを継続させていくかということである。一例として、磐梯山噴火記念館では、132 年前の出来事で誰も直接経験したわけでもないのに、子供たちを巻き込んだ努力を定期的に続けることで、コミュニティでの語り部のボランティア活動が始まったという。また、ミュージアムという物理的な場があることで語り継ぎが出来るという意見もあった。ミュージアムを通じて科学者や地域コミュニティに相互作用が生まれ、新しいアイデアも出てきて、持続可能な語り継ぎを刺激できるというわけである。ミュージアムは世代を渡って語り継ぐ環境を提供できる。遺構や出版物、写真、ビデオなども広い意味で語り継ぎであるし、踊りや絵画、音楽などのアートも語り継ぎの方法であるとの指摘もあった。防災の活動は、それが地域の文化になるまで続けられなくてはいけない。そのためにも、ミュージアムの役割は重要である。

The session discussed several key issues and features pertaining to the museum. The five museums target different hazards such as tsunami, earthquakes, and volcanic eruptions. Three museums are operated privately and the other two are supported by the local or national government. The duration between the development of the museum and the time of the disaster occurrence varies from two years to one hundred years. One museum is scheduled to open in late 2020. All the museums conduct storytelling activities and many of them outreach in the community, in particular with school children. While direct storytelling

by survivors from disasters might be the most impressive, there are many other ways of passing down the memories to the next generations. The question is how we can sustain the storytelling activities beyond our generation. One strategy and outcome were noted by Mr. Sato. His regular efforts to outreach with children actually inspired voluntary storytelling activities in the local community, even though nobody was directly impacted by the disaster. This is in fact about the eruption of Mt Bandai which happened 132 years ago. Some of the advantages of conducting activities at museums are that museums provide a physical venue for storytelling, i.e. a venue where various people such as scientists, local community, and others can interact and generate new ideas and initiatives which could stimulate sustainable storytelling activities. And museums can provide a sustainable environment for storytelling activities for generations. A broader meaning of storytelling includes objects which have survived disasters; books and other publications; photos and videos; and the arts including dance, paintings, music, etc. Disaster risk reduction activities need to be continued until they are integrated into the local culture. Museums can play a major role in this regard.





- イカプトラ（分科会 B「語り継ぎとツーリズム」共同座長）/ Ikaputra, Co-chair of Session B - A Tool for Telling Live Lessons:

災害ツーリズムとは、悲劇の場所への訪問を含む旅行のことである。それが成功するためには、３つのＡが必要である。一つはアトラクションであり、魅力あるコンテンツが必要。もう一つはアクセシビリティであり、交通が確保されていなければならない。最後にアメニティであり、ライフライン等が利用可能で一定の快適性が保証されなければならない。そして、ツーリズムによってコミュニティが経済的な利益も得られなければならない。分科会では、観光客が元々減りつつある中での三陸鉄道の奮闘、3.11 伝承ロード沿いの 192 カ所で語り継ぎを行なれている事例、くまモンで有名な熊本の復興、近くにボロブドゥールその他多くの世界遺産を有するメラピ火山噴火からの復興などの事例が報告され、比較された。ダークツーリズムの難しいところは、そこには住んでいる人がいて、被災者もいるということから、すべての人に歓迎されるものではないということである。もう一つの問題は、だれがその担い手になるかということである。行政、民間、地域コミュニティそれぞれに役割がある。役割分担の工夫として、三陸鉄道では、ツーリズムにアクセシビリティを提供するのと同時に、鉄道自身がアトラクションになっている。熊本でのミュージアムや回廊の構想も興味深い。メラピ火山の麓では、コミュニティ自らが開設したミュージアムがある。観光地としてどう教訓を共有していくかがこれからの課題である。

The focus of this session was disaster tourism or dark tourism, which is related to the places of death and disaster. The session also discussed the basics of tourism development i.e. three

principles which we call AAA: attractions, accessibility, and amenities. Even with an attraction, if there is no accessibility then tourism cannot be paid for. Amenities should be improved to attract tourists so that the local community can gain economic benefits. With this kind of "triple-A" we tried to see how the cases that were shared in this session can be compared --- as a process, as products, and even what actually are the driving causes of the development of tourism. We started with seeing how to connect between before and after the disaster. We classified the cases of 4 disasters into two types. The first type is the one whereby the number of tourists is even decreasing. One case is the Sanriku Railway and the areas and cities around to which people are not going. Another case is the road corridors of the 3.11 Storytelling Road, which involve 192 spots of telling lessons connecting Aomori, Miyagi, and Fukushima. The other two cases in the second type are the ones whereby there are already good destinations. In Kumamoto, Kumamon has already become the mascot. And also, Yogyakarta as well which is near the eruption of Mt. Merapi, because it is the second tourist city in Indonesia, which has world heritage like Borobudur, Prambanan, etc. But with disaster tourism, it is a challenge to develop new destinations and new attractions. The problem is that the dark side is not always agreed upon by the people who live there and by those who are survivors, those who suffer from the disaster. According to Mr. Kusano, often 50% agree and 50% do not. Another problem is as to who are the stakeholders who will develop such dark destinations. The government can be a leader; a company may supply financial support; communities can play a very important role in developing dark tourism. Such things happened in destinations like that of the Sanriku Railway, which has good accessibility for disaster tourism via the railway system. They even provide attractions inside the train. Other good examples are the corridor of almost 200 monuments of lessons in Sanriku; the two earthquake museums and disaster corridor in Kumamoto; and the community museums near Mt. Merapi. Finally, the future challenge is how to share the lesson learned from dark tourism destinations with other people who do not live there, or who may be living in areas prone to future disasters.

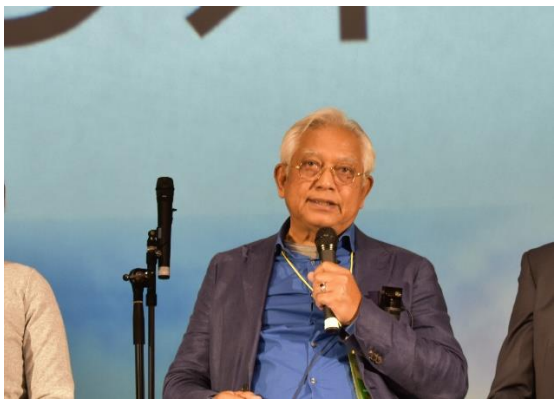
- ギュルム タヌルジャン（分科会 C「語り継ぎとローカルコミュニティ」共同座長）/ Gülüm Tanircan, Co-chair of Session C - Telling Live Lessons and Local Community:

  当分科会の議論での主要なポイントの一つは、語り継ぎの活動は地域コミュニティから生まれてくるが、復興過程の中で次第に役割が変化するということである。豪雨と土砂災害のあと発足した広島の「モンドラゴン」の事例や、1925 年の地震と火災からの城崎地域の復興の事例を見ると、地域コミュニティが語り継ぎにどのように取り組み、そして災害への対応力を強化していったがわかる。2 点目は、コミュニティにある知恵は重要であり、科学者や研究者はそのような地域に残る知恵を尊重し真剣にとらえて、それを知識に変えていくという役割があるということである。3 点目としては、次の災害への備えの問題として、子どもたちへの教育が重要であるということである。子どもだけでなく大人へ伝承していくことも重要である。その方法として、ゲームをすることであったり、語りをすることであったり，紙芝居を使った事例などが報告された。ゲームやスマホアプリにも可能性がある。

  Memories should be preserved and shared with the next generation in various ways. Telling live lessons to communities is one of those ways. And, through these ways, disaster culture can be constructed in communities. The major point that we extracted from this session is that the activity for transferring experiences starts with the people in the community, but

changes its role during the recovery phase. Some nice examples were presented such as the development of the Mondragon project in the Hiroshima area after the heavy rain and the following landslides, and also the reconstruction of the Kinosaki region after the 1925 earthquake and the following fire. Those are very good examples to see how local communities react to tell live lessons and strengthen their knowledge and their capacity against disasters. The next major point is that learning from experienced people is important. Each community has wisdom, local wisdom. Such community wisdom should be respected. And academia has an important role in interpreting this local wisdom and changing it into knowledge. Academicians should take into consideration local wisdom more seriously and then use it in their scientific research. The third point is that adults might be ignorant about disaster preparedness issues. Therefore, the training of children about disaster is important. There are several ways to reach and to train children, like gamification, board games, and several tablet applications. Those are efficient ways to teach them. One way to tell the lessons or to tell the experiences to children is to use such games and applications.





- イブラヒム コモオ（分科会 D「ジオパークと語り継ぎ」共同座長）/ Ibrahim Komoo , Co-chair of Session D - Geopark and Telling Live Lessons：

日本には 9 のグローバル・ジオパークと 35 の国内ジオパークがある。ジオパークは世界的な価値をもつ地質学的な遺産であり、これを保全し、それを通じた教育の効果を高め、また観光地として地元に経済的利益をもたらすための総合的な取り組みである。ジオハザードや気候変動の影響を学ぶこともできる生きたミュージアムであり、自然災害についての語り継ぎと深く関係している。マレーシアの国内ジオパークの一つであるキナバル山の山麓のクンダサンでは、専門家による研究がコミュニティとの関わりの中で行われ、地盤が不安定で危険なところだという認識が進み防災対策が進展した。フィリピンのジオパークとなっているボホール島では 2013 年の地震で 200 人が死亡し、5 万棟の家屋が被災した。ジオパークを作ろうという計画が持ち上がり、これを発足させる際には、ボホール地震を忘れないための記念行事との連携が功を奏した。行事では、地震の時の経験が語られ、鐘が鳴らされ、地域コミュニティがジオパークの発足に積極的に参画することとなった。伊豆大島の事例では「噴火がこれらの島を作った、なければ島がなかった」との話が秀逸であった。島民の一人は 9 歳、32 歳、60 歳及び 63 歳の時の 4 回にわたって噴火を経験したという話もインパクトがあった。「我々の惑星は生き物のようだ」という表現もいい得て妙である。地質学者はよく「私たちは活動的な大地に住んでいる」と言うが退屈な表現だ。活断層を天然記念物として指定するにあたって、地震や災害、断層と人々の生活がどう関係しているかを説明することで、地域の人々が活断層は地域の大切な財産であることを理解して、協力を得ることができたという事例も紹介された。地域コミュニティ

の人々の心に響くような災害に関するストーリーとはどのようなものかや、ジオパークと防災の連携などについても議論した。ジオパークとは、語り継ぎのための自然界のツールであると思う。地質学上の遺産や環境についてのストーリーを語ることだけではなく、人々と自然とのかかわりあいを語ることなのである。私たちジオパーク関係者は「岩は私たちを結びつける」というが、それ以上に、ジオパークとは災害からの教訓を語り継ぐことそのものなのである。

Mr. Nakagawa introduced the concept of geoparks, and the guidelines to create a geopark, talking about nine UNESCO global geoparks and more than 35 national geoparks in Japan. He also discussed geoparks as a holistic approach to managing an area where the geological heritage of international value is conserved, in combination with public education and tourism attraction. He also said that many geoparks pay attention to geo-hazards and climate change, and that geoparks are like living museums and very conducive to storytelling about heritage and natural disasters. Mr. Komoo talked about his research and community engagement in a place called Kundasan. Kundasan experienced a large landslide at the foothills of Mt. Kinabalu, which is a national geopark. In the beginning, the community there didn't realize that they are living in an area with large scale landslides but by doing research plus by engaging the community, finally, they realized that they are living in a dangerous area. And they can move, and they can take part actively in pursuing activity toward DRR. Ms. Aguda shared her experience of developing the Bohol Island geopark. She spoke about the earthquake on October 15th, 2013 with a magnitude of 7.2 which killed 200 people and damaged more than 50,000 houses. And this was the story during the development of the geopark. In fact, during the launching of the geopark, it was in collaboration with a commemoration of the Bohol earthquake. The commemoration was performed by ringing the bell and using earthquake stories. They made the local community actively involved in geopark development. Ms. Nishitani, a geopark guide, spoke about her experience in volcanic eruption and tourism. And during her presentation, many stories excited the session participants. One of the things she said that really triggered our interest was “Eruptions created this island: without volcanic eruptions, we don't have our land.” She also talked about the experience of one local person who experienced 4 disasters that destroyed her home at the ages of 9, 32, 60, and 63. And this is also a very powerful story. She also said: “Our planet is like a living creature.” This is a powerful example. Geologists usually say: “We are living in the dynamic Earth”, which is very boring. Finally, Mr. Shibata made a presentation on his experience in the conservation of natural monuments. He gave an example of some active faults: people would say what faults are and why faults can become a monument. By telling stories, i.e. about the relationship between earthquake and disaster and faults, people began to realize the importance of faults and they became a social asset. In conclusion, the main issue of the discussion of this session was related to how to create a geopark. The session discussed networking at all levels; what kind of stories are suitable for geoparks — stories about a disaster, particularly the stories that can touch the hearts of the local community; and collaboration between geoparks and the DRR Group. After listening to all the presenters and participants, I am convinced that geoparks are a natural tool for storytelling. It is not just telling stories about geological heritage and the environment. It's about the connection between people and nature. In geoparks, we used to say rocks connect us. But more importantly, it is about telling live lessons from disasters.

- ポール ミラー（分科会 E「災害遺構と記憶の継承」共同座長）/ Paul Millar, Co-chair of Session E - Disaster Remains and Passing-on of Memories:

  当分科会では 4 件の報告があった。ある報告で出された問題提起に他の報告が応えるなど、あたかも互いに対話をしているようであった。まず、どのように遺構を残すかについての議論があった。例えば、大槌町で打ち上げられた船や被災した役場の残骸などを巡って様々な感情や思いが交錯する。保存したいという人もいれば、見るのは恥、辛いので保存したくないという人もいる。災害の遺構には被災者の記憶や感情がまとわりついているのである。浅間噴火災害の遺跡・遺物は、237 年の時間が経過しているがゆえに客観的に見ることが出来る。遺構を保存することで将来の世代が災害を理解できる。そしてそこで生じた悲劇や困難を理解できる。当時の被災者の心情に深く共感を覚える事を通じて多くの事を学ぶことができる。遺構をめぐる議論はつまるところ教育であり、将来へのメッセージであり、理解の促進である。そこにはストーリーがあって、それが、遺構と共に保全されてはじめて意味が出てくるのである。ただ、将来世代が遺構に付随するストーリーや教訓をどのように理解するかを決めつけることはできない。それはもっぱら将来世代に委ねるほかない。台湾での博物館からは、資金が減っていく中で、モニュメント、記録をどう保存していくかという問題提起があった。しかし、どれほどそれが困難なことであっても、継続する努力を続けていく価値はある。どこかの段階で、作ったものを将来世代が引き継いで、さらなる語り継ぎ、継承につながるはずである。だからこそテルネットには意味があるし実際に災害を経験したときのストーリーは重要なのである。インターネットやユーチューブなどを通じて見るだけでなく、現場で見ないと伝わらないものがある。遺構がコミュニティにあるからこそ、現場にあるからこそ、遺構にまつわるストーリーが周りと深く共鳴して、単なるオンラインの検索などよりはるかに効果的なものとなるのである。

  Session E had four excellent speakers. What impressed me was that all the presentations in various ways talked to each other and informed each other. Where one paper would raise an issue, or perhaps address a problem, another paper would respond to that. Mr. Sugimoto in his paper, where he was talking about disaster recovery, observed the way that the physical remains, the houses, the boats, the places are often left behind in some damaged form after a disaster. He noted that these sorts of artifacts can have very strong emotional connections for the communities. Their existence and condition can often bring about quite a degree of tension and sometimes opposite reactions to a particular place or a particular artifact. So, while some local people might wish to preserve a place, others might see it imbued with pain or with shame, and be less desirous of retaining it and would rather move on and replace it. We must take into account the way disaster remains have the memories of the survivors attached to them. Ms. Sakaguchi also talked about a similar situation and she explained to us about the Japanese concept of shame and the way that shame can be attached to certain places where loss or damage has occurred. Such places can come to reflect the beliefs or the experiences and feelings of certain demographics of society. Alongside the focus on the contemporary response to disaster remains was a very interesting paper from Mr. Seki talking about the Mt. Asama disaster 237 years or eight generations ago, noting that, with the passing of time, the immediate effect on the survivors wasn't an issue. It was possible over time to take a more objective view of disaster remains, and to learn other sorts of lessons from them. A lot of these lessons are learned through empathy, and one of the reasons to preserve disaster remains may be so that future generations can understand and empathize with the sufferings of the people who have been through a severe disaster, and in that way,

learning can take place. So, wrapped around all of these talks about disaster remains was the idea of education, the idea of informing the future, the idea of developing understanding. It became very clear that disaster remains are only relevant when we can erect stories around them, when narratives are related to the remains. Otherwise, they may just be buildings or places with no history. So, it is important that when we are talking about preserving disaster remains, we are also talking about preserving the stories that go with those remains. Mr. Seki talked about the various commemorations of the Mt. Asama eruption, and the way that the community evolved its understanding of the disaster over time. I believe one important lesson from that situation is that when we preserve disaster remains, and we construct our stories around them, the one thing we cannot do is to dictate to the future how they respond to and learn from our experiences. The only thing we can do is to make those learning opportunities available, to make our experiences available, and to allow the future to develop its own understanding and develop its own response. What was very clear coming out of these papers, and was foregrounded in Mr. Chiang's talk about his preservation of disaster remains in Taiwan, was that there is always a time when the immediacy and present pain and suffering of the disaster recedes into the past, and this is natural. This makes it very difficult for the present to keep funding and maintaining the remains that tell the story of that disaster. We have all experienced that whether we create archives, manage museums, or try to keep artifacts alive and restore them, there is a life cycle for these sorts of activities. Often funding becomes less, interest becomes less, and it becomes more and more of a challenge for us to keep our records and our memories and our monuments going. However, I think what emerged from this discussion was that even if these efforts are hard, they are worth doing and continuing with. It is important that we persist, with the belief that at some point in the future some other person or group is going to pick up the project and take it forward, potentially in a different way. In summary, disaster remains mean little if they are not also related to stories and memories. That is why a conference and organization like TeLL-Net is so important, because live lessons from disasters are so important. Disaster remains, close in time to an event, are imbued with the reality of that experience—a reality that can vary according to personal experience, and which can represent intolerable pain as much as there may be a need to preserve memory. Later, as we move past an experience, we are able to relate to the disaster through a process of empathy, through commemoration and remembering. Disaster remains are very helpful when it comes to education about disaster impact, response, and recovery because, as we have discussed, we cannot all live our lives virtually all the time. We are never going to understand the physical experience if we simply experience it on the internet, through YouTube, or via an online image. Place matters, location matters, and context matters. When a place of disaster is located within its community, and within its physical environment, it has a particular resonance and profundity that tells a story far more effectively than simply streaming it online. The virtual might complement the disaster experience, but in a way that goes hand-in-hand with the actual. Because places matter and people matter, so too do disaster-remains matter.




- エコ アグス・プラウォト（分科会 F 「語り継ぎと交流」共同座長）/ Eko Agus Prawoto, Co-chair of Session F - Interregional Disaster Cooperation: Keeping Memories Alive：

  経験の共有のあり方についてのディスカッションが行われた。協力関係は、コミュニティ内であったり、コミュニティ間であったり、他国のコミュニティ間であったりいろいろある。協力のあり方も、それを効果的にするにはいろいろな方法がある。それらをつなぐプラットフォームが必要である。背景にある文化、社会的な問題を含めて互いを理解することが重要である。他者を理解することで強い協力関係が生まれる基盤ができる。地域に根ざした知識も重要である。解決策を外から持ち込んでくるだけではなく、現地の知識をベースにした解決策を考えることが重要である。国際的な協力は、たんに相手を知るだけで達成されるのではない。他者を知るのは自分を知ることであり、自分の文化を自覚することである。これは相互作用である。このようなことで、コミュニティの能力が高まる。地域の文化の独自性を継続することにもなる。協力とは、人と自然との協力でもある。自然も尊重されなければならない。知識を育み、コミュニティにその意味を付与するのが、自然であり土地なのである。地域のあらゆる物語は土地に根ざしている。土地に存在する災害リスクをコントロールするのではなく、それに適応することが重要である。自然と調和して、協力して生きていかなければならない。その点において、土木工学的なアプローチだけでは失敗をするかもしれない。

- Building relationships or cooperation can be done on various kinds of levels: it can be inside the community, between communities, or between communities and other communities in different countries. It is important also that we know about the level of disaster literacy. It could create a clear base for what we should do in building or in making the cooperation work effectively. Exchange, networking, and sharing need a platform which is to understand the other. It could be cultural, social values, or even the collective memory of the people. Myths are also important because it is like the storage of the collective memory of people. We, of course, cannot directly understand the myths but we have to give new meanings to them. Understanding others also builds a strong base for relationship or cooperation. It will help develop deep empathy and understanding for others. Locality must be appreciated. This would create a relationship that will sustain the local identity and also dignity of the community including the local narratives or myths as the resource of storytelling. We could also make, find, or discover the possible solution based on that local knowledge. We are not just bringing an outside solution directly but appreciate and generate solutions based on the local models. That kind of inter-regional cooperation is not only giving or sharing, because knowing others also means knowing ourselves, and sharing with others is also receiving. Knowing other cultures means also remembering our own culture or heritage. So, this is like a reciprocal relationship. The local-based exchange should encourage or reactivate the

capacity of the community instead of creating dependency. This is a very important piece. And this also means to sustain the cultural identity and collective memory of the community. The cooperation is not only about community, the community of people to people, but it is also about human beings with nature. The land has memory. So, nature should be more respected, because it is the land that generates the knowledge and the myths of the community. All the myths are rooted in this land. Sometimes we forgot about the land. And in relationships with the land or with danger, we should try to adapt instead of to control. We have to work with nature to collaborate with nature. Because engineering systems might fail but nature will stay longer.

- アレサンドロ パスート（ポスターセッション共同座長）/ Alessandro Pasuto, Co-chair of the Poster Session：

33 のポスターがあり、それぞれの経験やベストプラクティスの紹介があった。6 のポスターが洪水、2 が火山噴火、11 が地震、6 が津波による災害に関するものであった。そこからいくつかのポイントが浮かび上がってきた。1 点目は、語り継ぎのための事物や資料を集め保護していくことの重要性である。目に見えるものもあれば見えないものもある。デジタルの技術でよいアーカイブを創ることができる。2 点目は、文化遺産がリスクに瀕しているという点である。ネパール大地震で被災したカトマンズの文化遺産についての報告もあった。私が若いときにも 1966 年 11 月のイタリアの洪水で文化遺産が失われるのを見た。3 点目は、復興や災害以降の保存についての異なるアプローチである。壊れた建物を災害の証しとしてそのまま保存すべきという人たちとそうでない人たちがいる。4 点目は、災害を語り継ぐだけでなく、研究者が正しいデータをもって人々を指導することの重要性である。語り部のトレーニングも重要である。私はイタリアのアルプス地方ヴァイヨントで起こった 1963 年の土砂災害の現場に人々を連れて行き、地元の語り部の話を聞いてもらうことを時々行うが、その説明が科学的には正しくないことがある。正しいデータに基づく理知的なコミュニケーションと、聞き手の心に訴える感動的なコミュニケーションの２つがあるが、ギリシャのことわざによれば「美徳は中程度のところにある」だ。様々なアプローチ、媒体、知識を包摂し、様々な科学分野の専門家や一般の人々が将来世代の命を守るという最終的な目的の下で協力していく必要がある。

The session had 33 posters that illustrate different experiences, best practices and successful stories. Six posters dealt with floods; two with volcanic eruptions; eleven with earthquakes; and six with tsunamis. All the posters dealt with phenomena affecting a wide area and lots of people. Going into the details of those posters, several points arose. The first point is the importance of the collection of material and documents, and the preservation of these. There are tangible and intangible materials that could be useful in order to tell a story. To this end, digital techniques can help us in creating good archives that could be available through the internet for a wide range of people. This is an important application of new technology in order to preserve memories and transfer those to the next generation. Another point is some aspects related to the cultural heritage at risk. Some posters from Nepal dealt with the earthquake in 2015 which caused great damages to the cultural heritage of Kathmandu. And, this reminded me of the severe flood affecting Florence in November 1966 in Italy, in which a very large number of the art masterpieces held there were destroyed. We have to take care of the cultural heritage because it is a benchmark of the achievement of our culture. Thirdly, it was interesting to see different approaches related to reconstruction. Some remains, ruins and broken buildings can be a witness of what happened in the past, which

I believe should be preserved, as one poster discussed with the stone monuments. However, there is a conflict of attitude between those who want to rebuild everything as it was and where it was, and the others who want to preserve something just to testify the effects of the disaster. It is important to have equilibrium. The fourth point is about the importance of combining two issues: not only telling stories, but also involving universities and research institutions in improving the preparedness of the people with correct data and phenomena explanation. Similarly, the training of storytellers is another important matter. For example, in Vajoint where in 1963 one of the most disastrous landslides in the Alps occurred claiming almost 2,000 lives in Italy and where I often bring study groups, I hear from time to time the storytellers not telling the correct story from scientific point of view. There are two different ways in which I can tell a story: speaking to the head of the people, i.e. providing with data a clear view of what happened, and speaking to the heart of the people, i.e. providing a story emotionally with shocking photos, etc. With this respect, I quote a Greek saying "in medio stat virtus" or "Virtue stands in the middle". In conclusion, I will summarize everything with one single key word: inclusiveness. All scientists, be it human sciences, health sciences, engineers, social scientists, psychologists, economists along with the general public should all be brought together in order to reach our ultimate goal: safe life for the future generations.

- 永松伸吾（全体会議座長）/ Shingo Nagamatsu, Chair of the Plenary Session, General Managing Chair of the Breakout Sessions:

分科会 A では事実や現象を語り継ぐ大切さだけでなく、アートや文化の役割についての言及もあって、興味深かった。分科会 B のテーマであるツーリズムは 10 年前にはなかった新しいテーマである。語り継ぎの新たなあり方として今回採用した。トリブル A（アトラクション、アクセシビリティ、アメニティ）が面白かった。分科会 C のテーマはローカルコミュニティで、ゲームの有効性や我々自身もその一員である研究者の役割などが議論されていた。分科会 D のテーマはジオパークで、これも新しいテーマ。ここ 10 年の間にこのように語り継ぎの新たな形がいろいろと出てきたことが面白い。ジオパークは地質現象だけを語るのではなく、人々や社会のことも視野に入れているということも分かって面白かった。分科会 E では 237 年前の浅間山の噴火の語り継ぎの報告があり、持続可能性という点で興味深かった。分科会 F のテーマは交流。最初私には良くわからなかったが、ジオパークは人と自然との関わりで、コミュニティは人と人との関わり、災害遺構は人と場所との関わりであることを知り、本日参加している多くの皆さんが実に様々なやり方で語り継いでいることを目の当たりにして、本日合点がいった。

Session A mentioned the importance of not only informing facts and phenomena but also the role of art and culture, which was very interesting. The theme of session B, i.e. tourism, is new which was not discussed in the 2010 TeLL-Net Forum. We decided to bring it in as a new way of storytelling. The session discussed very interesting keywords, i.e. AAA: attraction, accessibility, and amenity. Session C, under the theme: local community, touched upon innovative measures like gamification and the importance of the role of researchers including ourselves. The theme of session D, i.e., geoparks, is also new. It is interesting to note that, over the last ten years, such new ways of storytelling have been emerging. It is also noteworthy that geoparks talk not only about geological phenomena but also about people and society as well. Session E touched upon, among others, the issue of sustainability by discussing Mt. Asama's eruption of 237 years ago, which provided another new angle. The

theme of session F, i.e., exchange, was unclear to me in the beginning. However, having learned that geoparks talk about the interaction between people and nature; communities talk about the people in communities; remains talk about places; and observing that a wide variety of participants in this hall talk about various types of storytelling, I have just come to appreciate that exchange is also a very important subject.

○ フロアーからのコメント / **Comments from the floor**

- サルワル バリ（パキスタン）/ Sarwar Bari, Pattan Development Organization, Pakistan:

  発展途上国では、災害について語るのは、しばしば裕福でよい教育を受けている男性であり、そのような人たちは災害から身を守ることができるため、必ずしも多くの貧しい被災者の声を代表しているわけではないことがある。女性が声を出しにくいという事情もあることにも留意すべきである。

  It should be noted that in some countries most of the vocal people are rich, often men, well educated - people who may not be affected very badly. Women cannot be reached out, because men are the gatekeepers as well. If we are telling stories of disaster, it is very important to make sure that the stories are also coming from women.

- サジャ マジード（スリランカ）/ Saja Majeed, South Eastern University, Sri Lanka:

  「被災者は全く望みがない状況に置かれている」と一方的に語られる場合があるが、果たしてそうなのか。語り継ぎの倫理面にも配慮する必要がある。このようなことについてのガイドラインが出来れば素晴らしい。

  There should be ethical considerations in telling stories and posting pictures. Sometimes disaster victims are shown as hopeless people; but ethical considerations should be given to such cases, similar to ethical clearance in the case of research. If the forum could develop a kind of ethical guideline, that could be helpful.

- 荒井勲（日本）/ Isao Arai, NPO Sunflower's Dream, Japan:

  語り継ぎは「恩返し」であると思って活動を続けてきた。

  Based on my many-year engagement as a storyteller in Kobe, I propose the word “Ongaeshi” as the spirit of storytelling, i.e. to offer kindness to the listeners of storytelling in return for the kindness that we received when we were a victim.





○ 将来に向けて / **For the Future**

- マーレーン ムリー / Marlene Murray

  このフォーラムの 3 日間は驚くべき体験であり、いろんな多くの国、皆さんと同じグループにいることを誇りに思う。この活動を継続して行ければ、大きな違いをもたらすことが出来る。

  I have just been amazed at what the people in this room are working on in so many different countries. I am proud to be a part of this group. We are all doing such great work and such important work. If we continue doing what we are doing, we can make a tremendous difference. All of us should be congratulated.

- イカプトラ / Ikaputra

  災害の経験を活かして命を守るにはどうしたら良いかについて学ぶ良い機会であった。教材は、災害遺構や経験そのもの、ジオパーク、防災イベントなどであり、方法は、ミュージアムや災害ツーリズムなどである。教材も方法もコミュニティから得ることができる。教材をどう開発するか、だれが指導者なのかということも考えないといけない。

  The 2020 TeLL-Net Forum is about education on how we save our life based on our live experiences. Sources of learning can be disaster remains, experiences themselves, geoparks, disaster events, etc. Methods used can be museums, disaster tourism, or others. Sources and methods can be obtained from within communities. Another question is as to how educational materials can be developed and who can be teachers.

- ギュルム タヌルジャン / Gülüm Tanircan

  エンジニアとしてトルコが耐震構造など過去の地震から多くのことを学んでいることについては自信があるが、ここで議論されている語り継ぎのようなものが行われているかどうかは疑問である。メディアの役割は非常に重要である。語り継ぎ、教訓は、メディアに誤解され、誤用されていることがあるので、何らかのガイドラインが必要である。

  Turkey learned a lot from past earthquakes and improved earthquake codes and building codes significantly. However, storytelling has not been working at all. The media should play an important role in disseminating knowledge and information, touching people's hearts, and alerting people to disaster. But, media sometimes gives priority to increasing ratings and not to disseminating knowledge. There should be some kind of guidelines.

- イブラヒム コモオ / Ibrahim Komoo

  ジオパークはボトムアップ型なのでコミュニティが受け入れやすいプログラムである。地質学上の遺産の保全に取り組んでいるが、残念ながら発展途上諸国ではそれは十分ではない。ジオパークは、コミュニティに所得をもたらす観光にも力を入れている。日本で過去に被災した地域では、特にその災害の語り継ぎに取り組むことが重要である。

  Geoparks are one of the programs that are accepted by communities because they are a bottom-up process. They focus on the conservation of geological heritage, which unfortunately is not being preserved in developing countries. Geoparks also focus on tourism that can bring income to the community. In Japan, we must also tell stories, particularly in an area that is struck by disaster. The story about disasters should be the main activity.

- ポール ミラー / Paul Millar

  地球温暖化や気候変動は実に深刻な問題である。災害の語り継ぎなどを通じて我々の行動を大きく変えるための強いメッセージを出すべきではないか。将来世代に対して今の世代が負うべき責任を考え、気候変動によって最も大きな被害を受けるのは世界の最も貧しい人々であることを考えるとき、我々は力を合わせてこの困難な課題に取り組むべきと思う。

  In the context of disasters, global warming and climate change is something that no one who follows the science and understands what is going on can ignore. I wonder whether we need to send some stronger messages about the things that we can do, like telling live lessons about disasters and encourage major behavioral changes that we could collectively make? As our obligation to future generations, and considering that many of the people most affected will be the poorest people in the world, I would encourage all of us to deal with this very difficult topic. I believe a collection of concerned people from around the world, like those here in the Tell-Net forum, have the ability to make a change.

- エコ・プラウォト / Eko Agus Prawoto:

  土地は人間の生活や文化の知恵の源だ。地球が語ることにもう一度耳を傾けよう。私たちは何ができるのか、何をすべきなのか、どこまでやるべきか、どこまでを外に求めどこまでを内なるものに求めるのかを考え、私たちの今置かれている状況や将来を良く理解しなければならない。

  The land is the generator of the whole knowledge about the life of the culture of human beings. We have to go back to listen to the earth. To understand our position and think for the future, we have to try to find balance again as to what we can do, what we should do and how far we should go, which part should be from outside and which part from inside.

- アレサンドロ パスート / Alessandro Pasuto

  自然は災害を起こしている原因で、災害そのものは自然ではない。地震も津波も火山もその他の自然現象はすべて元々存在していたものであり、これからも起きることだ。人間が自然に反することを行うとき、それが災害の現認となるのだ。

  Nature is our mother. But it is only the phenomena that cause the disaster, not the disaster itself. Earthquakes, tsunamis, volcanoes, and other phenomena have existed since the beginning, and will continue to exist until the end. It should be noted that when humans go against nature this is the cause of disasters.





- 深澤良信 世界災害語り継ぎネットワーク（テルネット）事務局長 / Yoshinobu Fukasawa, Secretary, International Network on Telling Live Lessons from Disasters (TeLL-Net)

  2020 年フォーラムとテルネットは車の両輪である。フォーラムのインパクトは開催したときには大きいが一過性である。テルネットはフォーラムの勢いを維持するエンジンであり長期的に続けて行きたい。三日間いろいろなテーマで議論した。これがきっかけとなって、テルネットが次の段階に向けて再活性化していくことを願う。フェイスブックなども活用していきたい。例えば、2005 年のパキスタン大地震の１５周年事業を開催する際に、ここに集う各国の関係者にも参加を呼びかけたらどうか。あるいは、2013 年の台風で大被害を受けたフィリピンについても同様である。このようなコミュニケーションを継続させて、世界各地で語り継ぎを続けていくための勢いとしていきたい。数年後には国連の会議などがあるかも知れない。そのような場でもテルネットを通して世界の語り継ぎ関係者が声を合わせてメッセージを発信できたら良い。

  TeLL-Net (International Network of Telling Live Lessons from Disasters) and the 2020 Forum (2020 International Forum on Telling Live Lessons from Disasters): those are both wheels on the same cart. The 2020 Forum is a one-time event that can convey messages rather strongly but the impact of which can fade down quickly. TeLL-Net is expected to be a sort of platform through which the same issues are addressed but perhaps with less impact. We were hoping that the 2020 Forum would serve as a good opportunity to give a boost to TeLL-Net towards more dynamic activities and impact. We as initiators, myself, in particular, have not been able to make it as active as we hoped because of other engagements and priorities. The 2020 Forum has been greatly successful, giving TeLL-Net enough fuel to go further. It will function as a good venue where we can get together, stimulate each other continuously, and where dialogues and communications happen regularly. To this end, the TeLL-Net Facebook account has already been set up. This will help strengthen interaction among TeLL-Net members significantly. For example, if Pakistan considers organizing an event this year in commemoration of the 15th anniversary of the earthquake that hit the country in 2005, such information can be communicated to TeLL-Net members and some input from other countries may be welcomed. The same can be considered in 2023 for the Philippines as well for Typhoon Yolanda which hit Tacloban and other areas in 2013. Several TeLL-Net members may join such events and help the organizers deepen discussion and strengthen messages. We hope this kind of interactive communication and mutual help will continue and gain momentum worldwide. In some years, there may be a greater international occasion such as a UN conference in which TeLL-Net may be given an

opportunity to raise the collective voice on the importance of preserving and passing down the memories of live experiences in disasters. The secretariat of the 2020 TeLL-Net Forum extends profound appreciation to all the attendees for their active participation, and thanks them also in advance for their continued support to TeLL-Net.

○ 座長結語 **/ Closing Remark by the Chair**

- 永松伸吾 / Shingo Nagamatsu



自分自身は阪神淡路大震災を経験しておらず、被災地の経験と、自分の未経験との間でギャップを感じて生きてきたし、追い付くように仕事をしてきた。本日冒頭に林春男先生が語った、語り継ぎはアイデンティティなのだ、という指摘はとても腑に落ちた。教訓（レッスン）という言葉には若干の違和感があった。阪神・淡路大震災を語るのは、首都直下地震で役に立つから、という実務的な動機だけではないはずだ。誰かの教訓のためだけではなく、語ることがアイデンティティそのもので、被災者にとって今を生きている証でもある。だからこそ、若者が災害を歌うこと、災害体験を絵にすることに私たちは共感をする。そして語り継ぎがアイデンティティの発露であるとすれば、そこに耳を傾けることはその全人格を尊重することである。人を人として尊重し、認め合うということ、テルネットはそういう活動ではないかと思った。

I did not personally experience the 1995 Hanshin Awaji Great Earthquake. This has been making me feel a gap in knowledge and emotion between myself and survivors, and I have been working hard as a disaster researcher to fill this gap. In the tone-setting talk this morning, Mr. Hayashi gave us an idea that storytelling was all about the identity of tellers, which made great sense to me. I was feeling somewhat uncomfortable that the term TeLL-Net is comprised of, among others, the word “lesson”, because I believe that the meaning of the storytelling is much more than mere telling practical lessons. I further believe that the storytelling by the survivors from the 1995 Kobe Earthquake will still be greatly relevant even in a different context such as the next disaster in Tokyo, not necessarily because the lessons in Kobe will be technically useful, but because telling their disaster story is vivid proof that they are still alive, which makes up a major part of their identity as a survivor or as a Kobe native. That’s why we have a strong empathy with the young people who sang about the disaster in their songs, and with the painter who paints the experiences. If all are true, listening to a disaster story must be treating its teller’s life with respect. In this sense, I have come to think that TeLL-Net is all about acknowledgment, embracement, and encouragement of others worldwide through sharing harsh but meaningful experiences in disasters.

(3) 閉会（13 時 15 分～13 時 30 分）**/ Closing Remarks (l3:15－13:30)**

○ **小林郁雄 2020 世界災害語り継ぎフォーラム実行委員会 委員長 / Ikuo Kobayashi, Chairman of the Implementing Committee of 2020 International Forum on Telling Live Lessons from**

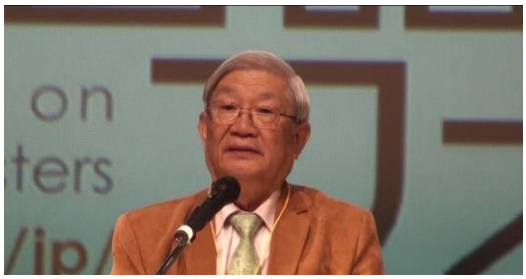
Disasters



- 本来取り扱いたかったテーマにはマスメディア、教育、ICT といったものもあったが、様々な制約から削らなければならなかった。次回以降取り組みたい。語り継ぎとは何かという話をフォーラムの冒頭でお話ししたが、「毎日を大切に生きていこう」ということ。それは私自身に向けて言ったことだが、皆さんにもそうお伝えしたい。

- We would have liked to deal with other themes such as mass media, education, and ICT; however, we had to eliminate those themes due to various restrictions. We will discuss such themes in the next round of TeLL-Net Forum. At the beginning of this Form, I spoke about what the storytelling is. I meant “let us value every single day, and live on”. This was my message to myself, and to all the participants as well.

○ 五百旗頭真 ひょうご震災記念 21 世紀研究機構理事長 / Makoto Iokibe, President, Hyogo Earthquake Memorial, 21 Century Research Institute



- 災害の経験や記憶が、空間が離れ、時間が経てば風化するのは避けがたい。しかし重要なのは、災害は繰り返されるということである。日本は地震の活動期にあり、風水害は温暖化により激しさを増している。我々はこれらの経験を昔物語で忘れてはいけない。しっかり思い起こして、対応の土台とする必要がある。

- 災害の体験は非常に個別的であり、一人ひとり違うストーリーがある。私は甲陽園の駅前の家で、1 月 17 日にドーンと突然何か分からない大衝撃で目を覚ました。直後に猛烈な揺れを感じ地震だとわかったが、自分が理解している地震ではなかった。この家を壊すまで終わらないという殺意を感じる地震であった。勤務先であった神戸大の学生３７人を失った。狭い地域に死屍累々の大衝撃であった。言葉を失いながらも、大人だから泣かなかった。

- 広島の友人から疎開を勧められ、妻と子供の３人はお世話になることとなった。友人一家は大変よくしてくれた。１ か月して私もようやく訪問することができて様子を見ると、家族は大変明るかった。翌朝、近所の女の子たちが小１の末娘を連れに来た。娘は友人にあてがわれた赤いランドセルを背負って、お姉さんたちと嬉しそうに階段を飛び跳ねるように降りていった。それを見たときに、被災地神戸はひとりぼっちではない、全国の人たちはこんなに良くしてくれている、娘がこんなに良くしてもらっていると、そこで私は初めて涙した。

- その１６年後に東日本大震災が発生し、当時防衛大学校の校長だった私は、首相から復興構想会議の議長の依頼があり、これを引き受けることにした。会議の方針は、広島でお世話になった時の体験に基づいて決めた。災害は順繰りにどこにでも起こるのだから、国民共同体でやるしかない。どこでおきても他の地域がサポートする、国と国民はできる限りのことをする、それが私の方針だった。それまでの日本が「失われた２０年」と言われていた中で、復興税の提案は批判を受けた。しかし、被災地をお金がないからと見捨てるのではなく、復興のためには増税をしても支えるべきと考えた。結局、国民の６割が支持する中で実施された。

- 防衛大学校の校長を退いて後、私は熊本の大学の理事長の職にあった。その４年目に地震が起こった。県知事が復興委員会の座長をしてほしいというので、河田先生と一緒にお世話をした。その時「しあわせはこべるように」が熊本ローカル放送で流れているのを聞いた。「傷ついた神戸、生まれ変わる神戸」で始まり、２番は「傷ついた熊本、生まれ変わる熊本のまち」となる。そこで二度目の涙を流した。愛おしい神戸の故郷と共に、大変な目に遭った熊本で「なくなった人の分までしっかり生きよう」と思わず涙した。

- 一日目には、堀内さんの縦横無尽の司会で多くの人を巻き込みながら、アートについての議論があった。賀川氏が描いた巨大な絵は四角のカンバスに収められていた。四角は水平と垂直の秩序で出来ている。しかし、阪神・淡路大震災後のまちは、建物をはじめあらゆるものがあらゆる角度になり、精神的に苦しかった。秩序は垂直と水平で出来ている。それを地震はぐちゃぐちゃにする。賀川氏の絵も、ミクロで見ると悲惨だが、全部、垂直と水平の秩序に収めている。それはどんなに悲惨な中でも、これからやっていくという秩序観を持っていると感じた。

- ミュージアムなど、科学の力を借りた語り継ぎに加え、心にふれるアートも動員してのメッセージもある。その両義性の中で、語り継ぎが生かされている。経験の風化の宿命は、未来の災害対応を考えると放置できない問題である。動機付けを持って語り継ぎを大事にする必要がある。その意味で災害を語るコミュニティが必要だと思うが、現にインターナショナルなコミュニティを強く感じた次第である。世界中から来られた方、地元の方々、皆さんに心から感謝したい。

- It is inevitable that the experiences and memories of disasters when one moves far from the place and time passes. Important thing is that disasters occur repeatedly. Japan has entered the period that earthquakes occur actively and meteorological disasters are augmenting powers. We must not forget such experiences as something in the past. We must remember those as the base for our preparedness for future.

- Disaster experiences are very personal. Everybody has his/her own story. In my case, on January the 17th, in my house in Kobe, I woke up suddenly at an extraordinarily great shock which I could not realize what that was. Immediately I felt an extremely violent shake and I realized that it was an earthquake. But it was not the earthquake that I knew. I felt as if the earthquake had a clear intention not to end the shaking until it destroyed my house and killed me. We lost 37 students at Kobe University where I used to work then. It was a monstrous shock to see full of dead bodies in a small space. I lost my words, but I did not cry as a grown-up person.

- A friend of mine in Hiroshima invited us to evacuate there, and we decided that my wife and three children would go there. My friend's family were very kind to take care of them. One month later, I was finally able to visit there and noticed that my family looked quite happy. The next morning, the girls in the neighborhood came to pick up my little youngest 6-year old daughter to go to school together. She took on a red-color school bag on her back which was given by my friend and she hopped down the stairs joyfully with a full of smile. That made me emotionally realize that Kobe was not alone, Kobe was being helped this much by the people throughout the country, and my daughter was being taken care of this much kindly. Then, I shed tears for the first time.

- Sixteen years later, the Great East Japan Earthquake occurred. While I was the President of the National Defense Academy, upon the request from the Prime Minister, I decided to take the chairmanship of The Reconstruction Design Council in response to the Great East Japan Earthquake. I set up the primary policy of the Council based on my experience of how we were helped in Hiroshima. Disasters occur one after another anywhere. There is no other way but to address the calamity as the whole nation. No matter where it happens, other areas extend support to the damaged area, and the government and the nation do as much as possible. That was my policy. When we launched a proposal on the taxation for reconstruction, we were criticized against the background that Japan had been in the long and endless economic slump i.e. "the lost 20 years". However, I was convinced that rather than abandoning the disaster-hit areas due to lack of financial resources, the country should support the affected area even with a tax increase. Eventually, the reconstruction tax was introduced with the support of 60% of the whole nation.

- After I retired as the President of the National Defense Academy, I was in the position of the President of one of the universities in Kumamoto. In the fourth year, the Kumao Earthquake occurred. Upon request of the Prefecture Governor, I assumed the chairmanship of the Reconstruction Committee of Kumamoto Prefecture along with Prof. Kawata. One day, I happened to hear a local broadcasting station in Kumamoto broadcasting the song "Bring happiness to the world" (NB). The first verse of the song went "Kobe, hurt by the earthquake, let us bring Kobe back to the original shape … Kobe will be born again" and the second verse went "Kumamoto, hurt by the earthquake, let us bring Kumamoto back to the original shape … Kumamoto will be born again". This is the moment that I shed tears for the second time. In Kumamoto which was hit so harshly, I refreshed my determination with my tears to "value every single day, and live on even on behalf of those who had to die" along with my beloved hometown Kobe. (NB: A famous song that was composed by Mr. Usui in Kobe right after the 1995 earthquake, which is now sung in many disaster-hit areas in and out of Japan.)

- As for the Forum, on the first day, I really enjoyed the active talk and moderation of Mr. Horiuchi who walked around freely right and left in the hall and brought in many participants to the dialogue, and I appreciated the discussion on the art. Mr. Kagawa's gigantic paintings were drawn on rectangular canvases. Rectangular is composed of horizontal and vertical. But, in Kobe after the Great Hanshin-Awaji Earthquake, everything including buildings was slanted and bent with all random angles, which made me mentally distressed. Vertical and horizontal compose the order. Earthquakes devastate the order. Mr. Kagawa's painting was miserable in terms of each micro element; however, all the elements are placed within the ordered framework of vertical and horizontal. I felt his sense of order in that, no matter how miserable circumstances he is under, Mr. Kagawa is determined to restart from there.

- I noticed various types of storytelling such as museums whereby storytelling is conducted with the help of science and technology, and messages whereby heart-touching art is mobilized. In these ways, storytelling is given life. The issue of fading cannot be ignored when we consider the importance of disaster management in the future. We must place importance on the motivation which drives storytelling. In this sense, I believe that some

kind of community is needed whereby people discuss storytelling. And, I have happily realized that there is already such a community in place at the international level. I should therefore like to express my heartfelt appreciation to those who took the trouble of traveling from all over the world, Kobe citizens, and everyone.





人と防災未来センター東館 /
East Building of Disaster Reduction and Human Renovation Institution (DRI)

６． 実施体制 ／ Support Setting

- 支援・助言：2020 世界災害語り継ぎフォーラム支援委員会

  Support and advice: Supporting Committee of 2020 International Forum on Telling Live Lessons from Disasters

役職等 Title	氏名 Name	所属等 Affiliation
委員長 Chairman	井戸敏三 Toshizo IDO	兵庫県知事 Governor, Hyogo Prefecture
委員 Member	山平晃嗣 Terutsugu YAMAHIRA	神戸市危機管理監 Chief Crisis Management Officer, Kobe City
委員 Member	林春男 Haruo HAYASHI	国立研究開発法人防災科学技術研究所理事長 President, National Research Institute for Earth Science and Disaster Resilience
委員 Member	加藤宏 Hiroshi KATO	独立行政法人国際協力機構理事 Board Member, Japan International Cooperation Agency
委員 Member	五百旗頭真 Makoto IOKIBE	ひょうご震災記念 21 世紀研究機構理事長 President, Hyogo Earthquake Memorial, 21 Century Research Institute
委員 Member	河田惠昭 Yoshiaki KAWATA	阪神・淡路大震災記念 人と防災未来センター長 The Great Hanshin-Awaji Earthquake Memorial - Executive Director, Disaster Reduction and Human Renovation Institution (DRI)
委員 Member	小林郁雄 Ikuo KOBAYASHI	世界災害語り継ぎネットワーク（テルネット）代表、2020 世界災害語り継ぎフォーラム実行委員長 Representative, International Network of Telling Live Lessons from Disasters (TeLL-Net); Chairman, Implementing Committee

- 主催・実施：2020 世界災害語り継ぎフォーラム実行委員会

  Organization and implementation: Implementing Committee of International Forum on Telling Live Lesson from Disasters

役職等 Title	氏名 Name	所属等 Affiliation
委員長 Chairman	小林郁雄 Ikuo KOBAYASHI	世界災害語り継ぎネットワーク代表 Representative, International Network of Telling Live Lessons from Disasters
委員 Member	林勲男 Isao HAYASHI	人間文化研究機構　国立民族学博物館 超域フィールド科学研究部　教授 Professor, Department of Cross-Field Research, National Museum of Ethnology

委員 Member	牧紀男 Norio MAKI	京都大学防災研究所教授 Professor, Disaster Prevention Research Institute, Kyoto University
委員 Member	小野裕一 Yuichi ONO	東北大学災害科学国際研究所教授 Professor, International Research Institute of Disaster Science, Tohoku University
委員 Member	永松伸吾 Shingo NAGAMATSU	関西大学社会安全学部教授 Professor, Faculty of Societal Safety Sciences, Kansai University
委員 Member	田中尚人 Naoto TANAKA	熊本大学熊本創生推進機構准教授 Associate Professor, Kumamoto Innovative Development Organization (KIDO), Kumamoto University
委員 Member	平井邦彦 Kunihiko HIRAI	公益社団法人　中越防災安全推進機構顧問 Advisor, Chuetsu Organization for Safe and Secure Society
委員 Member	西博義 Hiroyoshi NISHI	稲むらの火の館 名誉館長 Honorable President, Inamura-no-Hi no Yakata
委員 Member	坂戸勝 Masaru SAKATO	元国際交流基金理事 Former Board Member, The Japan Foundation
委員 Member	西野恭子 Yasuko NISHINO	独立行政法人国際協力機構関西センター（JICA 関西）所長 Director, JICA Kansai Center, Japan International Cooperation Agency
委員 Member	鈴木弘二 Koji SUZUKI	アジア防災センター所長 Executive Director, Asia Disaster Reduction Center
委員 Member	藤原由成 Yoshinari FUJIWARA	ひょうご震災記念 21 世紀研究機構副理事長 Vice President, Hyogo Earthquake Memorial - 21 Century Research Institute
委員 Member	吉椿雅道 Masamichi YOSHITSUBAKI	CODE 海外災害援助市民センター事務局長 Secretary-General, Citizens towards Overseas Disaster Emergency (CODE)
委員 Member	西海恵都子 Etsuko NISHIUMI	神戸新聞社編集局長 Editorial Director, Kobe Shimbun
委員 Member	伊藤綱太郎 Tsunataro ITO	NHK 神戸放送局長 Director of Kobe Station, Japan Broadcasting Corporation (NHK)
委員 Member	森田克彦 Katsuhiko MORITA	兵庫県企画県民部防災企画局長 Director-General Disaster Management & Planning Bureau, Hyogo Prefectural Government
委員 Member	馬場栄二 Eiji BABA	神戸市危機管理室長 Director, Crisis Management Office, Kobe City
委員 Member	深澤良信 Yoshinobu FUKASAWA	人と防災未来センター特別研究調査員（テルネット担当） （西日本鉄道（株）勤務） Research Fellow in charge of TeLL-Net, DRI (Nish-Nippon Railroad Co. Ltd.)

協力委員 Cooperating Member	伊藤亜都子 Atsuko ITO	神戸学院大学現代社会学部准教授 Associate Professor, Faculty of Contemporary Social Studies, Kobe Gakuin University
協力委員 Cooperating Member	船木伸江 Nobue FUNAKI	神戸学院大学現代社会学部准教授 Associate Professor, Faculty of Contemporary Social Studies, Kobe Gakuin University
協力委員 Cooperating Member	水本有香 Yuka MIZUMOTO	神戸学院大学現代社会学部准教授 Associate Professor, Faculty of Contemporary Social Studies, Kobe Gakuin University
協力委員 Cooperating Member	阪本真由美 Mayumi SAKAMOTO	兵庫県立大学大学院減災復興政策研究科准教授 Associate Professor, Graduate School of Disaster Resilience and Governance, University of Hyogo
協力委員 Cooperating Member	マリー・エリザベス Elizabeth MALY	東北大学災害科学国際研究所准教授 Associate Professor, International Research Institute of Disaster Science, Tohoku University
協力委員 Cooperating Member	佐藤翔輔 Shosuke SATO	東北大学災害科学国際研究所准教授 Associate Professor, International Research Institute of Disaster Science, Tohoku University
協力委員 Cooperating Member	澤田雅浩 Masahiro SAWADA	兵庫県立大学大学院減災復興政策研究科准教授 Associate Professor, Graduate School of Disaster Resilience and Governance, University of Hyogo
協力委員 Cooperating Member	渡辺祥弘 Yoshihiro WATANABE	神戸市住宅都市局建築指導部耐震推進課推進担当係長 Team Leader for Policy Promotion, Retrofitting Promotion Division, Building Guidance Department, Housing and City Bureau, Kobe City
協力委員 Cooperating Member	宮崎智己 Tomomi MIYAZAKI	一般社団法人神戸すまいまちづくり公社住環境再生支援課 Living Environment Revitalization Support Division, Kobe Housing & Urban Development Corporation, General Incorporated Association
協力委員 Cooperating Member	大牟田智佐子 Chisako OMUTA	毎日放送報道局クロスメディア部 News Division Deputy Manager, Mainichi Broadcasting System, Inc.
協力委員 Cooperating Member	アンドゥルーミッチェル Andrew Mitchell	熊本大学特別研究員 Special Researcher, Kumamoto University
事務局長 Secretariat Head	池田亨 Toru IKEDA	人と防災未来センター副センター長（総括担当） Deputy Executive Disaster, Disaster Reduction and Human Renovation Institution (DRI)
事務局員 Secretariat	坂本誠人 Makoto SAKAMOTO	人と防災未来センター副センター長（運営担当） Deputy Executive Disaster, Disaster Reduction and Human Renovation Institution (DRI)
事務局員 Secretariat	多治比寛 Hiroshi TAJIHI	人と防災未来センター研究部長 Director, Department of Research, Disaster Reduction and Human Renovation Institution (DRI)

事務局員 Secretariat	今井隆介 Ryusuke IMAI	人と防災未来センター事業部長 Director, Project Department, Disaster Reduction and Human Renovation Institution (DRI)
事務局員 Secretariat	松川杏寧 Anna MATSUKAWA	人と防災未来センター主任研究員 Researcher, Disaster Reduction and Human Renovation Institution (DRI)
事務局員 Secretariat	楊梓 Zi YANG	人と防災未来センター主任研究員 Researcher, Disaster Reduction and Human Renovation Institution (DRI)
事務局員 Secretariat	青谷厚子 Atsuko AOTANI	人と防災未来センター研究補助員 Research assistant, Disaster Reduction and Human Renovation Institution (DRI)
事務局員 Secretariat	天川佳美 Yoshimi AMAKAWA	有限会社きんもくせい代表取締役 President,Community/Communication/Co-operative Space
事務局員 Secretariat	村田昌彦 Masahiko MURATA	関西国際大学経営学部教授 Professor, Faculty of Management, Kansai University of International Studies
事務局員 Secretariat	深澤良信 Yoshinobu FUKASAWA	人と防災未来センター特別研究調査員（テルネット担当） （西日本鉄道（株）勤務） Research Fellow in charge of TeLL-Net, DRI (Nish-Nippon Railroad Co. Ltd.)

- 事務局：2020 世界災害語り継ぎフォーラム実行委員会事務局

  Secretariat: Secretariat: Secretariat of 2020 International Forum on Telling Live Lessons from Disasters

- 共催：ひょうご震災記念 21 世紀研究機構、人と防災未来センター、兵庫県、神戸市、神戸すまいまちづくり公社、こうべまちづくり会館、日本学術振興会科学研究助成事業（基盤研究 A）「大規模災害に関する集合的記憶の物象化・物語化と防災教育」（課題番号：18H03595）

  Co-organizers: Hyogo Earthquake Memorial, 21 Century Research Institute, Disaster Reduction and Human Renovation Institution (DRI), Hyogo Prefecture, Kobe City, Kobe Housing & Urban Development Corporation, Kobe Machizukuri Hall, JSPS Grants-in-Aid for Scientific Research(A) 'Materializing and Narrating Collective Memories of Calamities and Education for Disaster Reduction'(Grant No. 18H03595)

- 協力：国際防災・人道支援協議会（会長：五百旗頭真公益財団法人ひょうご震災記念 21 世紀研究機構理事長 / メンバー：アジア太平洋地球変動研究ネットワーク（ＡＰＮ）、アジア防災センター、神戸地方気象台、神戸赤十字病院、国際エメックスセンター、国際協力機構（ＪＩＣＡ）関西国際センター、国際復興支援プラットフォーム（IRP）、国連国際防災戦略事務局（UNISDR）駐日事務所、国連人道問題調整事務所（OCHA）神戸事務所、世界保健機関健康開発総合研究センター（ＷＨＯ神戸センター）、地球環境戦略研究機関（ＩＧＥＳ）関西研究センター、日本

赤十字社兵庫県支部、人と防災未来センター、兵庫県こころのケアセンター、兵庫県災害医療センター、兵庫県立大学大学院減災復興政策研究科、兵庫県立大学防災教育研究センター、ひょうご震災記念 21 世紀研究機構、兵庫耐震工学研究センター）

- Cooperation: Disaster Reduction Alliance (Chairman: Makoto IOKIBE, President, Hyogo Earthquake Memorial 21th Century Research Institute / members: Asian Disaster Reduction Center, Asia-Pacific Network for Global Change Research, Disaster Reduction and Human Renovation Institution, Education and Research Center for Disaster Reduction (ERCDR), University of Hyogo, Graduate School of Disaster Resilience and Governance, University of Hyogo, Hyogo Earthquake Engineering Research Center, Hyogo Earthquake Memorial 21th Century Research Institute, Hyogo Emergency Medical Center, Hyogo Institute for Traumatic Stress, International EMECS Center, Institute for Global Environmental Strategies, International Recovery Platform (IRP), Japan International Cooperation Agency Kansai international Center, Japanese Red Cross Hyogo Chapter, Japanese Red Cross Kobe Hospital, Kobe Local Meteorological Office, United Nations International Strategy for Disaster Reduction (UNISDR) Office in Japan, United Nations Office for the Coordination of Humanitarian Affairs (OCHA) Kobe Office, World Health Organization Centre for Health Development (WHO Kobe Centre))

- 助成：国際交流基金アジアセンター アジア・文化創造協働助成

  Grant : The Japan Foundation Asia Center, Grant Program for Promotion of Cultural Collaboration

- 協賛企業：日本たばこ産業株式会社、大和リース株式会社、AIG 総合研究所、西日本鉄道株式会社、阪急電鉄株式会社、西日本旅客鉄道株式会社、松岡不動産株式会社、森本倉庫株式会社、株式会社 神明

  Funding from private companies: Japan Tobacco Inc., NHK Promotions Inc., Daiwa Lease Co., Ltd., AIG Institute, Nishi-Nippon Railroad Co., Ltd., Hankyu Corporation, West Japan Railway Company, Matsuoka Realty Co., Ltd., Morimoto Warehouse Co. Ltd., SHINMEI Co., LTD.

- 協力企業:株式会社NHKプロモーション、特定非営利活動法人 日本ジオパークネットワーク、有限会社 ジャーマン ホーム ベーカリー H フロインドリーブ

  Other cooperation from private companies: NHK Promotions Inc., Japan Geopark Committee, Freundleave

- 後援：独立行政法人国際協力機構関西センター、国立民族学博物館、国連人間居住計画（ハビタット）福岡本部（アジア太平洋担当）、外務省、内閣府政策統括官（防災担当）

  Supported: Japan International Cooperation Agency Kansai Center, National Museum of Ethnology, Ministries, United Nations Human Settlement Program (UN-Habitat) Regional Office for Asia and the Pacific, Ministry of Foreign Affairs, Cabinet Office (Director General for Disaster Management)

おわりに

私は 2002 年から 2005 年まで人と防災未来センターで初代副センター長として勤務した時、初めて「災害体験の語り継ぎ」というものと出会った。語り部の方々の語りを聴くと被災時の恐ろしさなどを追体験して心が揺さぶられる。破壊された家や街並みの写真などの展示物には短いメモが添えられていて、それに目を通すと写真を撮った人の気持ちが強く伝わってくる。私は当初 800 点に及ぶ展示物に圧倒されそれをどう理解したら良いのか途方に暮れていたが、暫くしてそのうちの何点かを丁寧に見た時、発災から復興までの被災地の人々の心の動きを痛いほど感じ、それが訴える力の強さにびっくりした。

そして、語り継ぎのもつ大きなパワーが個人や社会にどのように作用するのかもっと考えてみたい、語り継ぎの大切さを国内外に広く伝えたいと思い、センター勤務が終わった後もこれを続けてみようと思った。語り継ぎは語り手自身にとってどのような意味を持つのか。被災地の一般市民にとってはどうか。被災地の復興に向けた力を取り戻す一助になるのか。被災地外の人々や将来世代にとっても防災の知識を実践に移す原動力になるか。効果的な展示にするにはどうしたら良いのか。パワーはあるが個別断片的な語り継ぎの情報と、複雑で多面的な災害プロセス全体との関係はどう考えたらよいのか・・・。

今回のフォーラムでは、多くの防災研究者の協力の下、分科会のテーマとして「語り継ぎとミュージアムの役割」「語り継ぎとツーリズム」「語り継ぎとローカルコミュニティ」「ジオパークと語り継ぎ」「災害遺構と記憶の継承」「語り継ぎと交流」が設定され、大変充実した討議が行われた。人と防災未来センターの河田センター長からは災害を語り継ぐ絵本の刊行という提案もあった。次につながる大切な動きである。

このフォーラムをきっかけとして「語り継ぎ」の意義や方法などを学術的に論じる論文集が日英 2 か国語で刊行されることともなっている。本フォーラムでは、「語り継ぎ」と言われる行為は、災害時のつらい体験やその中で抱いた感情などにあえて価値を見出し、それを意図的に記憶し折に触れて思い起こすとともに、しばしば他者とも積極的に共有していく行為であるとしている。それは単に教訓や知識を情報として伝達することにとどまるのではなく、災害経験を伝える者に対して、それを受けとめる者が心情的に深い共感を覚えることが特徴的である。話し言葉で語られるだけでなく石碑や事物、芸術作品など媒体とした語り継ぎも同様の効果をもたらすことも多い。このように、日本語でいう「語り継ぎ」の概念を端的に表現することは容易ではない。外国語ではおそらくそれ以上であろう。上述の論文集では、このような「語り継ぎ」といわれる行為や活動を、あえて英語で体系的に概念化し世界に提起しようとする極めて意欲的な試みである。

本フォーラムは、「世界災害語り継ぎネットワーク（テルネット）」を改めて活性化させ強化する重要なきっかけともなった。テルネットは、世界各地で語り継ぎに取り組む人々や組織が国を越えて交流し学び合う場である。フォーラムで加速されたこのような動きをさらに大きく育てていくことにも力を注ぎたいと思う。各国の語り継ぎ活動をネットワーク全体で支援するような動きなどにも繋がっていけば幸いである。このようなことに向けてこれからも多くの関係者のご協力をお願いしたい。

最後に、2020 世界災害語り継ぎフォーラムにご参加いただき多くの貴重な報告を行って頂いた全参加者の皆さん、開催準備からパネリストとの招聘、当日の運営に尽力頂き、その後のとりまとめにもご協力頂いた座長各位、2020 世界災害語り継ぎフォーラム支援委員会と実行委員会の委員各位、本事業の意義にご賛同頂き資金面も含めて強力なご支援・ご協力を行って頂いた国際交流基金及び多くの協賛企業と協力企業の方々、共催者である兵庫県及び神戸市を始めとする関係団体各位、内閣府政策統括官（防災担当）を始めとする様々な後援団体各位、フォーラム開催から報告書作成に至るまでに生じた膨大な事務をこなしてくれた事務局の仲間たち、そして私がこの事業に取り組むことを支援してくれた私

の勤務先である西日本鉄道株式会社に深く感謝いたします。

2020 年 12 月

2020 世界災害語り継ぎフォーラム実行委員
世界災害語り継ぎネットワーク事務局長
人と防災未来センター 特別研究調査員
西日本鉄道株式会社海外展開室長
深澤良信

Afterword

I came to know the issue of "storytelling" for the first time when I worked as Deputy Executive Director of Disaster Reduction and Human Institution (DRI) in Kobe from 2002 to 2005. In DRI, the storytellers tell their stories which strike our hearts very strongly. Photos of collapsed houses and devastated streets are exhibited with some brief memos which explain the background of the photos, which actually conveys the deep feelings and emotions of the person who took such photos. There are over 800 exhibition items. In the beginning, I was overwhelmed by the amount of information. I was completely lost as to how I should understand it. Later, when I had some time to study several items closely and carefully, I painfully empathized with the minds and hearts of the people who went through the disaster process from the onset of the disaster through the reconstruction phase, and I was shocked with the greatly strong impact that storytelling produces.

Then I began to think that I would like to deliberate more on how the strong power of storytelling influences individuals and society, inform the significance of storytelling widely to in and out of the country, and continue this quest even after the completion of my assignment in DRI. How significant is the storytelling to storytellers themselves? How significant is it to ordinary citizens in disaster-hit areas? Can it be of any help in regaining motivation and energy towards reconstruction? Can it be a driving force to put the knowledge of disaster risk reduction into practice for the next generations or even for the people who have not experienced a disaster in other areas? How can the exhibition be made more effective in conveying messages? How should we deal with individual storytelling activities which carry very strong power but are subjective and fragmented by nature as opposed to the complex and multifaceted disaster process which must be understood comprehensively?

In this time-around Forum, thanks to the valuable cooperation by many researchers of disaster risk reduction area, 6 breakout sessions, namely, Role of Museums in Telling Live Lessons, Disaster Tourism: a Tool for Telling Live Lessons, Telling Live Lessons and Community, Geopark and Telling Live Lessons, Disaster Remains and Passing-on of Memories, and Inter-regional Disaster Cooperation: Keeping Memories Alive, were organized and the discussions were very fruitful. The proposal by Prof. Kawata, Executive Director of DRI to publish picture books for telling stories of disasters is another achievement that can grow as a larger movement in the future.

This Forum has also triggered an important move towards publication of a special edition of an academic journal in English and its Japanese version in parallel which discuss various key aspects of storytelling such as its significance, methodologies, etc. In this Forum, storytelling is perceived as something whereby one dares to value the painful experiences and/or emotions during disasters, intentionally remembers such things, recollects those once in a while, and often proactively shares stories with others. It is not only about informing lessons and knowledge as mere information, but it is about something whereby the receivers of storytelling profoundly empathize with those who tell stories. It is not only by oral communication but also often by monuments, artifacts, artworks, etc. Thus, it is not easy to explain the concept of storytelling concisely in Japanese. It may be even more so in other languages. The above-mentioned special edition of the journal intends to systematically conceptualize the conducts of storytelling and to ambitiously launch the result of the study globally.

This Forum was also a good opportunity to further vitalize and strengthen the International Forum on Telling Live Lessons from Disasters (TeLL-Net). TeLL-Net is a venue where those individuals and organizations who are engaged in preserving and passing on live experiences and memories of disasters i.e. telling live lessons or storytelling, exchange and learn from each other beyond borders. I hope to continue my effort to further augment the momentum that was given during the Forum. I will also be happy to see that this network begins to even support various storytelling activities in different countries. With this respect, continued support by many partners would be much appreciated.

Last but not least, I would like to express my sincere gratitude to all the participants of 2020 International Forum on Telling Live Lessons from Disasters who delivered many valuable presentations and inputs, all the session chairs who kindly spared valuable time to plan, prepare and coordinate the sessions, mobilize participants and manage the sessions as well as to cooperate on the compilation of the report, all the members of the Supporting Committee and the Implementing Committee, The Japan Foundation Asia Center and many other private companies that generously extended powerful support / cooperation to this initiative, Hyogo Prefecture and Kobe City as well as several other organizations as co-organizers, Cabinet Office (Director General for Disaster Management) and several other supporting organizations, the friends and colleagues of the secretariat who took trouble of processing enormous amount of logistical works, and my employer Nishi-Nippon Railway Co., Ltd. which supported me in working on this initiative throughout the whole process.

December 2020

Yoshinobu Fukasawa
Committee Member, Implementing Committee of 2020 TeLL-Net Forum
Secretary, International Network of Telling Live Lessons (TeLL-Net)
Research Fellow in charge of TeLL-Net, DRI
Overseas Business Department Director, Nishi-Nippon Railroad Co., Ltd.

分科会
Breakout Sessions

分科会参加者プロフィルと発表資料
Participants' Profiles and Presentations

2020年1月25日

25 January 2020

分科会参加者プロフィル / Breakout Session Participants - Profiles

分科会統括
General Management of Breakout Session
永松伸吾(統括座長) / Shingo Nagamatsu (General Managing Chair) 1

分科会 A: 語り継ぎとミュージアムの役割
Session A: Role of Museums in Telling Live Lessons
小野裕一（座長) / Yuichi Ono (Session Chair) 1
マーレーン ムリー（共同座長) / Marlene Murray (Session Co-chair) 2
坂本誠人 / Makoto Sakamoto 3
佐藤公 / Hiroshi Sato 4
ポルンタム タムウィモル / Pornthum Thamwimol 4
ラチャニーコーン ソンティップ / Ratchaneekorn Thongthip 5

分科会 B: 語り継ぎとツーリズム
Session B: Disaster Tourism: A Tool for Telling Live Lessons
田中尚人（座長）/ Naoto Tanaka (Session Chair) 5
イカプトラ（共同座長）/ Ikaputra（Session Co-chair) 6
草野悟 / Satoru Kusano 7
山崎麻里子 / Mariko Yamazaki 7
松本和夫 / Kazuo Matsumoto 8

分科会 C: 語り継ぎとローカルコミュニティ
Session C: Telling Live Lessons and Local Community
阪本真由美（座長）/ Mayumi Sakamoto (Session Chair) 9
ギュルム タヌルジャン（共同座長）/ Gülüm Tanircan (Session Co-chair) 10
ファウスティト A. オーレ / Faustito A. Aure 11
松井敬代 / Takayo Matsui 12
松井憲 / Ken Matsui 13
山住勝利 / Katsutoshi Yamazumi 14
チョン カイリン / Chong Khai Lin 14

分科会 D: ジオパークと語り継ぎ
Session D: Geopark and Telling Live Lessons
中川和之（座長）/ Kazuyuki Nakagawa（Session Chair) 15
イブラヒム コモオ（共同座長）/ Ibrahim Komoo（Session Co-chair) 16
ナンシー アグダ / Nancy Aguda 17
西谷香奈 / Kana Nishitani 18
柴田伊廣 / Takahiro Shibata 18

分科会 E: 災害遺構と記憶の継承
Session E: Disaster Remains and Passing-on of Memories
石原凌河（座長）/ Ryoga Ishihara (Session Chair) 19
ポール ミラー（共同座長）/ Paul Millar（Session Co-chair) 20
杉本伸一 / Shinichi Sugimoto 21
関俊明 / Toshiaki Seki 21
蒋正興 / Chiang Cheng-Shing 22
坂口奈央 / Nao Sakaguchi 22

分科会 F: 語り継ぎと交流
Session F: Interregional Disaster Cooperation: Keeping Memories Alive
坂戸勝（座長）/ Masaru Sakato（Session Chair) 23
エコ アグス プラウォト(共同座長)/Eko Agus Prawoto(Session Co-chair) 23
吉椿雅道 / Masamichi Yoshitsubaki 25
張国遠 / Zhang Guoyuan 25
J. デイヴィッド ワッゴナー三世 / J. David Waggonner III 26

分科会統括 / General Management of Breakout Sessions

永松伸吾（関西大学社会安全学部・大学院社会安全研究科 教授）（統括座長）

Email: nagamatu@kansai-u.ac.jp

関西大学社会安全学部教授。専門は災害経済学・公共政策（防災・減災・危機管理）。大阪大学大学院国際公共政策研究科博士後期課程中退。同研究科助手。大阪大学より博士（国際公共政策）神戸・人と防災未来センター研究員、独立行政法人防災科学技術研究所などを経て現職。主著に『減災政策論入門』（弘文堂）『キャッシュ・フォー・ワーク』（岩波ブックレット）など。2008 年日本計画行政学会奨励賞、2009 年日本公共政策学会著作賞、2010 年村尾育英会学術奨励賞受賞。2015 年南カリフォルニア大学プライス公共政策大学院客員研究員として災害復興に関する研究に従事。2019 年 4 月より国立研究開発法人防災科学技術研究所災害過程研究部門長を併任。

Shingo Nagamatsu, (Professor, Kansai University) (General Managing Chair)

Email: nagamatu@kansai-u.ac.jp

Shingo Nagamatsu is a professor of risk and disaster economics and on the faculty of Societal Safety Sciences at Kansai University in Japan. His research concern is disaster management and recovery policy analysis. He was awarded a prize from the Public Policy Studies Association of Japan in 2010 for his publication on disaster management policy. His recent publications include *Return Migration and Decontamination After the 2011 Fukushima Nuclear Power Plant Disaster. (co-authored with A. Rose and J. Eyer) Risk Analysis, 2019.* He was a visiting scholar at Sol Price School of Public Policy of the University of Southern California from August 2015 to September 2016. He has been appointed as a Manager of Disaster Resilience Research Division at National Research Institute for Earth Science and Disaster Resilience (NIED), Tsukuba, Japan since April 2019.

A. 語り継ぎとミュージアムの役割 / Role of Museums in Telling Live Lessons

小野裕一（東北大学災害科学研究所 教授）（座長）

Email: yono@irides.tohoku.ac.jp

オハイオ州のケントステイと大学で地理学の博士号を取得。専門は気候学、風力関連の災害リスク軽減、国際防災政策。ジュネーブの世界気象機関（WMO）、ジュネーブとボンの国連国際防災戦略事務局（UNISDR・現 UNDRR）、バンコクの国連アジア太平洋経済社会理事会（ESCAP）の 3 つの国連機関で国際防災政策の立案に携わる。国連における主な業績は、早期警報システムに関する兵庫行動枠組の起草、ISDR 科学技術委員会の設置と運営、インド洋津波早期警報システムの開発、アジア太平洋災害報告書の編集を支援したことである。2012 年 11 月、東北大学災害

科学国際研究所教授に就任。そこでは、UNDP と富士通の共同イニシアティブである災害統計グローバル・センターの所長を務める。このセンターは、各国がエビデンスに基づいた防災政策立案をするために、各国の災害損失・被害統計システムの作成を支援し、SDG と連携した仙台グローバル・ターゲットのモニタリングを支援するもの。また世界防災フォーラムの創設者兼代表理事を務める。世界防災フォーラムは、被災地で 2 年に 1 度開催される防災のためのソリューションを共有するマルチステークホルダーフォーラム。さらに、風工学の分野での国際風関連防災グループの議長も兼任。

Yuichi Ono (Professor, International Research Institute of Disaster Science, Tohoku University) (Session Chair)

Email: yono@irides.tohoku.ac.jp

Yuichi Ono received a Ph.D. in Geography from Kent State University in Ohio. He is specialized in climatology, wind-related disaster risk reduction, and international disaster risk reduction policy making. He worked for three UN organizations, including the World Meteorological Organization in Geneva, the UNISDR in Geneva and Bonn, and ESCAP in Bangkok. His major achievements in the UN were to help draft the Hyogo Framework for Action in the parts of Early Warning System, develop and manage the ISDR Scientific and Technical Committee, develop the Indian Ocean Tsunami Early Warning System, and edit the Asia Pacific Disaster Reports. In November, 2012, he became a professor of the International Research Institute of Disaster Science at Tohoku University, located in Sendai, Japan. There, he serves as a Director of the Global Centre for Disaster Statistics, a joint initiative with UNDP and Fujitsu to help generate national disaster loss and damage statistics for evidence-based policy making and to help monitor the Sendai Global Targets which are linked with SDGs. He is a founder and CEO of the World Bosai Forum Foundation. The World Bosai Forum is a multi-stakeholder forum to share solutions in disaster risk reduction, held in Sendai every two years. He also serves as a chair of the International Group for Wind-Related Disaster Risk Reduction.

マーレーン ムリー（太平洋津波博物館 館長）（共同座長）

Email: director@tsunami.org

マーレーン・ムリーは、2013 年から太平洋津波博物館の事務局長を務めている。その前は、ハワイ州津波教育カリキュラムプログラムの米国教育省助成金の主任研究員だった。博物館のための連邦、州、郡の補助金からいくつかのプロジェクトを運営している。ヒロのハワイ大学の経営学学士号を取得し、ホノルルの New Otani Kaimana Beach ホテルで 8 年間に営業や予約のディレクターとしてのビジター業界で幅広いキャリアを積んでいた。

Marlene Murray (Executive Director, Pacific Tsunami Museum) (Session Co-chair)

Email: director@tsunami.org

Marlene Murray has been the Executive Director at the Pacific Tsunami Museum since 2013. Prior to that she was the Principal Investigator for the U.S. Department of Education, grant, Hawaii Tsunami Education Curriculum Program. She manages several projects from federal, state, and county grants for the museum, as well as day to day operations. Marlene holds a B.A. in Business Administration from the University of Hawaii at Hilo and had an extensive career in the visitor industry, including eight years at the New Otani Kaimana Beach Hotel in Honolulu, as the Director of Sales and Reservations.

坂本誠人（人と防災未来センター 副センター長）

Email: sakamoto2@dri.ne.jp

1981 年４月、兵庫県庁入庁。阪神・淡路大震災直後の 1995 年３月に創設した兵庫県阪神・淡路大震災復興本部総括部総務課で、国会議員等の被災地視察の行程立案、随行。1997 年４月から、総理府（当時）阪神・淡路復興対策本部事務局調査員として出向。被災者生活再建支援法の成立や人と防災未来センターの創設に携わった。2000 年４月に兵庫県庁に復帰後は、生活復興対策として、被災者復興支援会議事務局や NPO 関連事業を担当。2003 年 10 月からは、兵庫県防災局に異動。災害対策課長、防災企画課長、防災企画局長を歴任。2004 年２月の高病原性鳥インフルエンザ対応、10 月の台風第 23 号災害対応、2005 年４月の JR 福知山線脱線事故対応、2009 年５月の新型インフルエンザ対応、８月の台風第９号災害対応、2011 年３月の東日本大震災対応、2013 年４月の淡路島地震対応を経験。このほか、2016 年４月の熊本地震での益城町、2018 年７月の西日本豪雨での倉敷市で被災地支援を経験。2018 年３月に定年退職後、４月から現職。

Makoto Sakamoto (Deputy Executive Disaster, Disaster Reduction and Human Renovation Institution (DRI))

Email: sakamoto2@dri.ne.jp

Since joining the Hyogo Prefectural Government (HPG) in 1981, he held various posts in and out of the HPG and has been involved throughout all phases of reconstruction efforts after the Great Hanshin-Awaji Earthquake, from organizing visits for Diet members to the disaster stricken areas during the immediate aftermath to contributing to the enactment of the legal framework for the recovery of the people's livelihood. He is also involved in the establishment of the Great Hanshin-Awaji Earthquake Memorial Disaster Reduction and Human Renovation Institution where he now serves as the Deputy Executive Director since 2018. During the course of his career at the HPG, he assumed the posts of Directors and Director-General in emergency responses, as well as disaster management project planning where his responsibilities were not limited to earthquake reconstruction but were much more extensive - emergency and relief efforts for the prefecture, including the outbreak of both the swine and avian influenza as well as providing support to other areas affected by natural disasters across the nation, such as the Great East Japan Earthquake (2011), Kumamoto Earthquake (2016) and Kurashiki Torrential Rain (2018).

佐藤公（梯山噴火記念館 館長）

Email: sato@bandaimuse.jp

1956 年福島県生まれ、日本で火山防災について研究、火山教育に力をいれている。日本火山学会の学校教育委員会委員。ＮＨＫの番組「ブラタモリ」の案内人。

Hiroshi Sato (Director, Museum of the Mount Bandai Eruption)

Email: sato@bandaimuse.jp

Hiroshi Sato, born 1956 in Fukushima Pref., is Director of Mt. Bandai Museum and researching on volcano disaster prevention in Japan, and focusing on volcano education. Member of school board of education of Volcanic Society of Japan. Guide of NHK's program "Buratamori"

ポルンタム タムウィモル（タイ王国文化省美術局上席景観設計専門官）

Email: thumwimo@icloud.com

学歴

- 建築学博士（パリ第三大学）
- 景観建築学名誉博士（タマサート大学）

ポジション

- タイ王国文化省美術局上席景観設計専門官
- 建築物保存委員会委員長（2014－2016）
- 建築家会議委員（社会科学分科会）（2015－2018）

Pornthum Thamwimol (Senior Professional Landscape Architect, Fine Arts Department, Ministry of Culture)

Email: thumwimo@icloud.com

Education:

- octor of Architecture, University of PARIS VIII (Excellent honors with compliments from the Très Honest avec félicitations committee) from the University of PARIS VIII, the Office of Doctorate Education, City and Environment, and the Research Institute. 2004 (French Government Scholarship Students)
- Doctor of Landscape Architecture, Honorary Doctorate Degree, Thammasat University Thailand

Position:

- Senior Professional Landscape Architect Fine Arts Department, Ministry of Culture
- Chairman of the Committee for the Architect Conservation, The Association of Siamese Architects under Royal Patronage 2014 – 2016
- Subcommittee on Social Science, Member of the Council of Architects 2015 – 2018

ラチャニーコーン ソンティップ（国際津波ミュージアム館長、NPO 法人 教育文化機構）

Email: ratchaneekorn.thongthip@gmail.com

チュラロンコン大学で政治学の学士号と修士号を取得し、ラムカムヘン大学政治学科課程修了。2006 年より国際津波ミュージアム館長、パンガー県津波記念館長。また、教育文化研究所(NPO)の学長として務めている。

Ratchaneekorn Thongthip (Director, International Tsunami Museum, Institute for Education and Culture, NPO, Thailand)

Email: ratchaneekorn.thongthip@gmail.com

Received B.Ed. and M.A. in Political Science from Chulalongkorn University, and B.A. in Political Science, Ramkhamhaeng University. Working as Director of International Tsunami Museum and Director of Tsunami Memorial Museum, Phang-nga Province since 2006. Also working as President of Institute for Education and Culture (NPO)

B. 語り継ぎとツーリズム / Disaster Tourism: a Tool for Telling Live Lessons

田中尚人（熊本大学熊本創生推進機構 准教授）（座長）

Email: naotot@kumamoto-u.ac.jp

熊本大学熊本創生推進機構准教授．専門は都市地域計画，土木史，景観論．京都大学大学院工学研究科博士後期課程中退．同研究科助手．京都大学より博士（工学）を取得．岐阜大学工学部講師, 熊本大学大学院自然科学研究科准教授を経て現職. 2009 年度フランス国立工芸学院(CNAM)研究員を務め，2012 年に客員教授として招聘された．2018 年 12 月に開催された土木学会デザインコンペ「22 世紀の国づくり－ありたい姿と未来へのタスク」部門Ａにて，風景デザイン研究会チームとして最優秀賞を受賞．著書に『土木と景観－風景のためのデザインとマネジメント』(学芸出版)『風景のとらえ方・つくり方 -九州実践編-』(共立出版) など．2018 年 7 月に 12 年関わってきた熊本県天草市河浦町崎津集落の文化的景観が，ユネスコ世界文化遺産「長崎と天草地方の潜伏キリシタン関連遺産」の構成資産に登録された．

Naoto TANAKA (Associate Professor, Kumamoto University) (Session Chair)

Email: naotot@kumamoto-u.ac.jp

Naoto TANAKA is an associate professor of the Kumamoto Innovative Development Organization at Kumamoto University in Japan. His research concern is regional and city planning, history of civil

engineering and landscape management. He was a visiting scholar at Conservatoire national des arts et métiers in France from April 2009 to March 2010 and invited as a visiting professor on June and July 2012. He was awarded a grand Prix prize from the Design Competition of Japan Society of Civil Engineering in 2018 for their presentation as the association of Fukei-design team. His recent publications "Doboku to Keikan – design and management for Fukei" from Gakugei Shuppan Co., Ltd (2007), "How to observe and design Fukei -Practical case study in Kyushu-" from Kyoritsu Shuppan Co., Ltd (2008). A cultural landscape of the Sakitsu village in Kawaura-machi, Amakusa-shi, Kumamoto prefecture, which he has concerned for 12 years, was registered in UNESCO World Cultural Heritage the "Kakure Christian related legacy in Nagasaki and Amakusa area" as composition property in July, 2018.

イカプトラ（ガジャマダ大学 教授）（共同座長）

Email: ikaputra_2001@yahoo.com

ガジャマダ大学（インドネシア、ジョグジャカルタ）工学部建築計画学科准教授、博士。現在、同学科で建築と計画の修士プログラムの責任者である。建築と都市デザインの歴史、理論及び保存の研究室にも所属している。ボランティアの建築家としても活動している。建築家、都市デザイナーあるいは講師という職業としての活動だけでなく、神戸地震（1995 年）、ジャワ地震（2006 年）及びメラピ山噴火（2010 年）を生き抜いた生存者としての活動である。まず 1995 年の神戸地震の後、迅速な建物被害評価を行う大阪大学の小さな学生のチームの一員としてボランティア活動に加わり、2005 年の津波後のアチェで住民による自発的な集落形成の支援に加わり、2006 年の地震後のジャワではコミュニティを基本におく住宅再建を支援し、メラピ山噴火後は仮の集落に関する政策の実行を支援した。2016 年のピディエジャヤ地震や 2018 年のロンボク島地震の後にも様々な活動に加わった。

Ikaputra (Professor, University of Gadjah Mada) (Session Co-chair)

Email: ikaputra_2001@yahoo.com

Ph.D., Associate Professor at the Department of Architecture & Planning, Faculty of Engineering, Universitas Gadjah Mada, Yogyakarta, Indonesia. Currently, Ikaputra is the Head of Master Program on Architecture and Urban Design at his Department. He also belongs to Laboratory of HTC-AUD (History, Theory and Conservation of Architecture and Urban Design). Ikaputra has also been working as a volunteer architect, not only because of his profession as an architect, urban designer or lecturer, but also as a “survivor” of Kobe Earthquake (1995), Java Earthquake (2006) and Mount Merapi’s Eruption (2010). He started to get involved with a small team of students of Osaka University to do building damage rapid assessment in 1995; involved in providing spontaneous settlement in post-tsunami Aceh (2005); worked for community based House Reconstruction in post-earthquake Java (2006); supported the policy and implementation of a transitional settlements in post Merapi’s eruption; and other involvements of post-Pidie Jaya Earthquake (2016), and post-Lombok’s Earthquake (2018).

草野悟（三陸鉄道株式会社　総合企画アドバイザー）
Email: kusano@sanrikutetsudou.com

私は 1985 年の岩手県大規模イベント以来、三陸海の博覧会、宮沢賢治生誕 100 年事業、全国菓子大博覧会(岩手大会)などの総合プロデューサーを担当してきた経緯から、広告代理店を退職後、岩手県のコーディネーター、三陸鉄道のアドバイザーとして現在に至っている。生まれは福島県いわき市、家族の生活圏は仙台市であるが、自分にとっては故郷ともいえる岩手県で生涯を過ごすことを夢見ている。

Satoru Kusano (Adviser, Sanriku Railway)
Email: kusano@sanrikutetsudou.com

Following my career as Chief Producer of Sanriku Sea Exhibition, Commemoration of the 100th Anniversary of the birth of Kenji Miyazawa, National Confectionary Grand Exhibition (Iwate Exhibition) and other large-scale events in Iwate Prefecture in 1985, I retired from an advertising agent and I have taken the position of Coordinator of Iwate Prefecture and Advisor to Sanriku Railway. While I was born in Iwaki City, Fukushima Prefecture and my family live in Sendai City, I hope to complete my life in Iwate Prefecture which is now my home town.

山崎麻里子（一般財団法人 3.11 伝承ロード推進機構、中越メモリアル回廊アンバサダー）
Email: myamazaki@311densho.or.jp

新潟県長岡市出身。社団法人北陸建設弘済会（現北陸地域づくり協会），NPO 法人中越防災フロンティアを経て，2010 年より公益社団法人中越防災安全推進機構。中越地震の震災伝承、復興に向けた地域づくりを支援する「中越メモリアル回廊」の拠点施設「長岡震災アーカイブセンターきおくみらい」の整備・運営に携わる。神戸，東日本，熊本，丹波など様々な自然災害を経験した地域と連携を図りながら地域づくり活動を続ける。現在は、宮城県仙台市に移り、東北の震災伝承施設のネットワーク化と地域復興を推進するため活動中。

中越地震で大きな被害を受けた旧山古志村（現長岡市）に誕生した NPO 法人に出向したことをきっかけに被災地と関わり始め、廃止となった路線バスの代わりとなるコミュニティバスの運行や、山古志地域の視察案内、雪かきボランティア育成などの事業を通して、山古志の歴史や伝統、震災経験から復興に向けた歩みを伝える活動に携わる。

「中越メモリアル回廊」の整備が本格化する中で、中越全体で震災を語り継いでいくため、長岡震災アーカイブセンターの施設運営、視察コーディネートなどを担当。2013 年、人と防災未来センターで開催された「災害ミュージアム研究塾」にて中越メモリアル回廊の取り組みを紹介し、それをきっかけに他地域での災害の語り継ぎにも関心を持った。

Mariko Yamazaki (General Incorporated Foundation 3.11 Densho Road Promotion Organization, Ambassador for Public Interest Incorporated Association - Chuetsu Organization for Safe and Secure Society)
Email: myamazaki@311densho.or.jp

Born in Nagaoka City, Niigata Prefecture. Joined Chuetsu Organization for Safe and Secure Society in 2010. Engaged in operation of the core facility of Chuetsu Earthquake Memorial Corridor i.e. Nagaoka Earthquake Archive Center Kiokumirai supporting storytelling activities of Chuetsu earthquake and reginal revitalization towards reconstruction, in partnership with Kobe, East Japan, Kumamoto, Tanba and other areas which experienced various natural disasters. Shifted to Sendai City, Miyagi Prefecture; and currently engaged in networking various facilities for preserving and passing down stories of earthquake in Tohoku Area and promoting regional revitalization. Other engagements in the past include operation of community bus in place of abolished regular bus service, guide of site study tours to earthquake-hit area of Yamakoshi, Training of show-removing volunteers and thus informing Yamakoshi's history and tradition and steps towards reconstruction from earthquake experience. Presented the initiative of Chuetsu Earthquake Memorial Corridor in DRI's workshop in 2013 and began interested in storytelling activities of other disasters in other areas.

松本和夫（熊本県知事公室）
Email: matsumoto-k-de@pref.kumamoto.lg.jp

○自己紹介

- 1974 年　熊本県熊本市出身
- 民間企業、横浜市役所を経て、2011 年 4 月に熊本県庁に入庁
- 横浜市役所在籍時には、2007 年の中越沖地震で被災した新潟県刈羽村において給水支援活動を実施。また 2011 年には東日本大震災を経験した。
- 熊本県庁入庁後は交通政策課、菊池保健所、危機管理防災課で勤務。現在は知事公室において「熊本地震震災ミュージアム」の実現に向けた取組みを進めている。

○自身と災害、語り継ぎとの関係について

- 2016 年 4 月の熊本地震発生後の同年 6 月に危機管理防災課に配属となった。余震が続く中での災害対応の傍ら、熊本地震の対応に関する検証報告書の策定に携るとともに、熊本地震に関する写真や映像等を保存、公開するウェブサイト「熊本地震デジタルアーカイブ」を立ち上げた。
- 現在は、地表地震断層等の震災遺構や熊本地震の情報を発信する拠点をつなぎ巡る回廊型の「熊本地震震災ミュージアム」の実現に向けた取組を進めている。「熊本地震震災ミュージアム」では、熊本地震の経験を語る「語り部」等の方々の記録映像の作成、一般旅行者や視察者等を対象とした震災遺構等をバスで巡る「震災ミュージアムモニターツアー事業」を実施

し、その中で「語り部」の方々に活動の場を提供している。

Kazuo Matsumoto (Governor's Office, Kumamoto Prefecture)

Email: matsumoto-k-de@pref.kumamoto.lg.jp

○Self-Introduction

- I was born in 1974 in Kumamoto City, Kumamoto Prefecture.
- I began working for the Kumamoto Prefectural Government in April 2011 after spending time working at a private company and for Yokohama City Hall.
- I was dispatched and assisted with water supply support activities in Kariwa Village in Niigata Prefecture after the Chuetsu Earthquake in 2007 when I was working at Yokohama City Hall. I also experienced the Great East Japan Earthquake in 2011.
- While working for the Kumamoto Prefectural Government, I have spent time in the Transportation Policy Division, Kikuchi Public Health Center, and the Disaster and Crisis Management Administration Division. Now, I am working with the Governor's Office to create the "Kumamoto Earthquake Museum".

○Sharing Earthquake Experiences

- I was assigned to Disaster and Crisis Management Administration Division in June 2016, just two months after the Kumamoto Earthquake. While working there, I was involved in the development of a verification report about the response to the Kumamoto Earthquake. I was also involved in launching a website called the "Digital Archive of the 2016 Kumamoto Earthquake" which stores and publishes photos and videos related to the Kumamoto Earthquake that were taken during the initial response to the disaster, while aftershocks were still regularly occurring.
- I am currently working on the realization of a corridor-type "Kumamoto Earthquake Museum" which will connect remnants of the earthquake such as earthquake faults with bases that share information about the Kumamoto Earthquake.
- We have created a video recording of people talking about their experience of the Kumamoto Earthquake which will be on display in the museum. We have also been hosting an "Earthquake Museum Monitor Tour" in which tourists can visit the sites affected by the disaster and they can learn about what happened by listening to people talk about their own experiences of the earthquake.

C. 語り継ぎとローカルコミュニティ / Telling Live Lessons and Local Community

阪本真由美（兵庫県立大学大学院減災復興政策研究科准教授）（座長）

Email: sakamoto@drg.u-hyogo.ac.jp

専門は、防災教育、リスク・コミュニケーション、防災教育、国際防災協力など。地域防災、地区防災計画の策定支援、避難所対応など災害に強い地域づくりに取組んでいる。在エルサルバドル日本大使館専門調査員、国際協力機構（JICA）を経て京都大学大学院情報学研究科博士後期課程修了。博士（情報学）。人と防災未来センター主任研究員、名古屋大学減災連携研究センター特任准教授を経て 2017 年 4 月より現職。著書に「災害ミュージアムという記憶文化装置―震災の想起を促すメディア」(山名淳他編『災害と厄災の記憶を伝える』勁草書房)、『わかる！取り組む！災害と防災 1 地震』（共著，帝国書院）など。

Mayumi Sakamoto (Associate Professor, Graduate School of Disaster Resilience and Governance, University of Hyogo) (Session Co-chair)

Email: sakamoto@drg.u-hyogo.ac.jp

After working in Embassy of Japan in El Salvador, Central America (1994-1997) and Japan International Cooperation Agency (JICA) (1997-2006), Sakamoto completed the Doctoral Program of the Graduate school of Informatics at Kyoto University in 2010. In 2010, she took a position as a Chief Research Scientist at the Disaster Reduction and Human Renovation Institute (DRI). In 2014, she took a position as an Associate Professor at Disaster Mitigation Research Center, Nagoya University, before obtaining present post. She specializes in Disaster Education, Risk Communication, Disaster Management and International Cooperation for Disaster Risk Reduction.

ギュルム タヌルジャン（ボスフォラス大学 准教授）（共同座長）

Email: gulum.tanircan@gmail.com

ボスフォラス大学 准教授。博士（強震度地震学、京都大学）。2004 年からボガジチ大学カンディリ地震観測所地震工学部門勤務。スイス連邦工科大学チューリッヒ校、国際理論物理学センター（イタリア）、京都大学防災研究所で客員研究員。専門である地震学の立場から数々の都市災害のリスク評価プロジェクトに参画。カンディリ地震観測所防災教育ユニットリーダー（2010～2018）、地震公園の改修等に従事。JICA による日トルコ国際協力事業にも防災教育の側面から尽力。

Gülüm TANIRCAN (Associate Professor, Bogazici University, Kandilli Observatory and Earthquake Research Institute (KOERI)) (Session Co-chair)

Email: gulum.tanircan@gmail.com

Gülüm Tanircan has a PhD Degree in Strong Motion Seismology from Kyoto University-Japan. She has been teaching/supervising graduate level lectures/theses at Earthquake Engineering Department at Boğaziçi University, Kandilli Observatory and Earthquake Research Institute, (BU-KOERI) since 2004. She worked

as a visiting scientist at ETH- Switzerland, ICTP- Italy and DPRI-Japan. As a specialist on seismic hazards assessment, simulation of design basis ground motion, earthquake source process as well as estimation of site effects for use in ground motion modelling she has participated several research project focused on Urban Hazard and Risk Assessments including IDNDR, RADIUS, GSHAP, NATO SfP, SATREPS-MarDIM, EU-FP7 MarSITE EU-H2020 STORM and SERA Projects. She served as a vice-director of the KOERI for a year. As the leader of the Disaster Education Unit of KOERI between 2010-2018, she worked for updating the content of the training, creating new training modules and increasing the number of trainings offered by the Unit. Earthquake Park has been renovated and enriched with new hi-tech materials/simulators during her coordination period. She contributed to a Turkish-Japanese cooperation project SATREPS-MarDIM project between 2013-2018. She led the workgroup activities of "Disaster education enriched with scientific research results" from Turkish side. She personally took part in the development of new educational materials, preparation of booklets, organization of regional seminars, and promotion of the project in national and international media. She is the first author of Tsunami Information booklet prepared during the project. Today, content of the booklet has been offered as an open course by Bogazici University.

ファウスティト A. オーレ（東ビサヤ国立大学 教授）
Email: tito_eventsmastyer@yahoo.com

フィリピン東ビサヤ国立大学教授（以前はレイテ工科大学）。31 年間学部及び大学院で各種の社会科学と農村開発分野の教育に従事。各種の開発プロジェクトにトレーナー、コンサルタント、イベント企画の立場で参画。多くの NGO、財団、市民団体、人道支援機関にもボランティア、理事等の立場で従事。フィリピン大学タクロバン校からコミュニティ開発部門の学士、東ビサヤ国立大学から農村開発で修士。友人たちからは「ティト」と呼ばれている。第 19 回東南アジア青年の船（日本政府主催、1992 年）にアセアン各国への親善大使として参加。ティトはプロの人形劇師であり語り部でもある。2000 年には第 1 回「フィリピン全国語り継ぎ大会」で銅賞を受賞。1990 年代から人形劇と語り継ぎは開発のための有効なツールであるとして数限りなく上演。彼は台風ヨランダの被災者でもある。東北大学主導の被災コミュニティの移住に関するプロジェクトに参画。台風ヨランダからの生存者として被災者としての体験を語り継ぐことが使命。

Faustito Amador Aure (Eastern Visayas State University, Tacloban City, Leyte, Philippines)
Email: tito_eventsmastyer@yahoo.com

Faustito has been teaching at the Eastern Visayas State University formerly Leyte Institute of Technology for the past 31 years. He has taught both in the undergraduate and graduate levels in various social science and rural development subjects. For the past 3 decades, he has been deeply involved in various development undertakings as trainer, consultant, event organizer and has served in many NGOs, Foundations, civic associations and humanitarian organizations in various capacity from volunteer, member to Board of Director.

He is fondly known to his friends and close acquaintances as "Sir Tito". He is a graduate of Bachelor of Science in Community Development at the University of the Philippines, Tacloban College. He received his Master in Rural Development degree at the Eastern Visayas State University. He has been blessed to have attended quite a number of opportunities in studying abroad which has helped hone his talents and skills namely: Middle Managers Course at the International Institute for Rural Reconstruction (IIRR) International Headquarters in Salang, Cavite, Philippines (1990); Rural Regional Development Planning at the Development Study Center in Rehovot (1991), as MASHAV Scholar of the State of Israel ; He was also an MA Candidate in Master In International Development and Social Change at Clark University, Massachusetts, USA in 1996-1997 (USAID), Thesis Title: "Rural Tourism Opportunities in the Emek Hefer Region of Israel";

Sir Tito was an Ambassador of Goodwill to all ASEAN Countries and Japan in 1992 in the 19th Ship for Southeast Asian Youth Program generously sponsored by the Government of Japan. In 2018, together with 29 academic scholars from Higher Education institutions (HEIs) in the Philippines, he attended a 2-week intensive training in Toronto, Canada in Adult Education: Meeting the Emerging Needs of Adult Learning Professionals" sponsored by the Canadian Bureau for International Education (CBIE).

Sir Tito is a professional puppeteer and storyteller. In 2000, he was the bronze awardee in the first National Storytelling Competition in the Philippines sponsored by the National Book Development Board. Since 1990s, he has conducted countless trainings in puppetry and storytelling as a potent tool in development work and has been commissioned by many international development agencies to develop puppet shows on various development themes, namely: Eradication of Measles, Gender Sensitivity in Philippine rural areas, Promotion of Children's Rights, etc.

Sir Tito is a survivor of Yolanda/Haiyan, known to be the strongest typhoon ever hit landfall. As a result of his recovery and rehabilitation collaboration with international aid volunteers and academic researchers in Post-Haiayan Tacloban City, he became part of 2 research projects led by Professors from the Tohoku University, Sendai, Japan entitled: An investigation of reality of community building in post- Yolanda relocation areas in Tacloban City, Philippines and Voices from the communities relocated to the Tacloban North after Typhoon Yolanda/Haiyan.

He is a survivor of Yolanda/Haiyan, known to be the strongest typhoon ever recorded in human history and is committed to tell his story as a victim and now a victor as he crusades for environmental protection and preservation and resiliency of humanity.

松井敬代（豊岡まちなみ連盟事務局次長、豊岡まち塾副塾長）
Email: takayo_matsui@me.com

兵庫県豊岡市出身。2015 年 3 月まで、豊岡市教育委員会で文化財担当職員として勤務。在職中は、考古学をはじめ、建造物、美術工芸品、天然記念物、民俗文化財など、幅広く担当していた。退職後は、地元のまちづくりの市民団体を立ち上げ、活動を始める。主に豊岡中心市街地、城崎温泉街の町並みなどを紹介するガイドや保全活動を展開するかたわら、現在の町並みに大きく関

わる 1925 年 5 月 23 日に発生した震災「北但大震災（北但馬地震）」の研究もしている。また、地域に残る伝統芸能や年中行事などについての調査研究も進めている。NPO 法人全国町並み保存連盟会員、ひょうごヘリテージ機構 H2O 但馬会員、京都市文化財マネージャー、城崎温泉観光協会城崎案内人、但馬民俗芸能応援隊代表幹事、日本考古学協会会員。

Takayo Matsuil (Deputy Secretary-Genaral of Toyooka Machi-Nami Alliance/ Vice-principal of Toyooka Machi-Juku (Townscape Society))
Email: takayo_matsui@me.com

Born in Toyooka, Hyogo. Staff of Toyooka Municipal Education Board until 2015, in charge of wide range of fields as archeology, buildings, crafts, natural monuments and folk cultural assets. Established a civil society for local town planning after retirement and began to do activities. Studies Hokutan Earthquake on May 23 1925 which influences greatly on actual townscape while guiding the central area of Toyooka and Kinosaki and developping conservation activities, also studies traditional performing arts and annual events that remain in the region. Member of The Japanese Association for Machi-Nami Conservation and Regeneration, member of Hyogo Heritage Organization (H2O) Tajima, Traditional Asset Manager of Kyoto city, Guide to Kinosaki of Kinosaki Tourist Information Center, manager of Supporting Team of Folk Performing Arts in Tajima, member of The Japanese Archeological Association.

松井豪（復興交流館モンドラゴン事務局長）
Email: matsui@mondragon.jp

1952 年生まれ。2011 年まで一般企業で人事、新入社員から経営幹部までの教育トレーナー、経理責任者、マーケティング、新規事業開発、経営管理等を担当。
2014 年 8 月 20 日、広島豪雨災害で被災。自宅は 10 日間土砂に埋まる。
2016 年 4 月、被災住民で復興と防災の啓蒙を目的として「復興交流館　モンドラゴン」を開設。被災者の心の復興、災害資料の収集展示、当時の状況の語り伝えなどの語り継ぎを行っている。事務局長を務める。
2017 年、「防災士」資格を取得。災害伝承、防災アドバイザーなどの活動をしている。
地域の人たちと語り継ぎや防災学習の公的拠点施設の建設に取り組んでいる。
広島県自主防災アドバイザー、広島市地域防災リーダー他

Ken Matsui (Secretary General, Reconstruction and Interaction House Mondragon)
Email: matsui@mondragon.jp

Born in 1952. Until 2011, charge of human resources, employee and executive training, accountant, marketing, new business development, and business management at general company.

On August 20, 2014, the disaster was damaged by the 8.20 Torrential Rain Disaster in Hiroshima City. The house was buried in the sand for ten days.

In April 2016, we established the "Reconstruction and Interaction House Mondragon" with the aim of raising awareness of reconstruction and disaster prevention with the affected residents.
Recover victims' hearts, collect and display disaster materials, and tell the story at the time as a narrator. Acts as secretary general.

In 2017, obtained the "Disaster Prevention Expert" qualification and has been engaged in activities such as reconstruction town development, disaster transmission, and disaster prevention advisors.
Together with local residents, we are working on the construction of a public base facility that carries out disaster prevention learning and telling live lessons from disasters.

Hiroshima Prefecture Voluntary Disaster Prevention Advisor, Hiroshima City Regional Disaster Prevention Leader, etc.

山住勝利（ふたば学舎　震災学習ラボ室長）
Email: yamazumi@futabasyo.jp

私は生まれも育ちも神戸である。阪神・淡路大震災が起こったのは 27 歳の時で、神戸市須磨区の自宅で被災した。現在、ふたば学舎で阪神・淡路大震災の記憶と教訓を次世代に伝える震災学習を担当している。

Katsutoshi Yamazumi (Chief, Earthquake Disaster Experience Learning Lab. Futaba Gakusha)
Email: yamazumi@futabasyo.jp

I was born and raised in Kobe. I experienced the Great Hanshin Awaji Earthquake at my home in Suma Ward, Kobe City when I was 27 years old. I'm in charge of the Futaba Gakusha's earthquake disaster experiential learning programs for passing on to the next generation the recollections and lessons of the Great Hanshin Awaji Earthquake.

チョン カイリン（北マレーシア大学 UUM ビジネス校技術管理及びロジスティック学科災害管理機構研究員）
Email: klchong@uum.edu.my

2012 年からビジネス校技術管理及びロジスティクス学科災害管理機構上席講師兼研究員。2017 年京都大学にて博士号（水文学）取得。修士号と学士号は環境工学（水管理）で取得。基本的な学術的関心は、科学的知識をそのユーザーやコミュニティに容易に理解できる実用的な手法に変換することである。現在の研究の焦点は、洪水モデルを構築し洪水の予測を行うことを通じて、災害後の再建や都市計画、住宅移転などに役立つ洪水ハザードマップを作成することである。
現在、マレーシアのペナンにあるユネスコ世界遺産の洪水リスク分析にも取り組んでいる。また、若い世代が国にとって最も大切な資源であるとの信念の下、マレーシアのケランタンで多くの防

災教育の取組に従事するとともに、ユネスコ国際水文学計画 マレーシア若手リーダー水観測プログラム（UNESCO-IHP Malaysia Water Watch Programme for Young Leaders (WWP4YL)）に参画している。防災教育プロジェクトは学生・生徒を対象としたもので、地元のコミュニティや小学校生徒の災害への関心を高めるため、特に農山村地域の学校での教育に当たっている。これと並行して、水観測プログラムにも参画して、国家的な水資源の保全・保護についてのマレーシアの若い世代の関心を高めることを目指している。

Chong Khai Lin (Research Fellow, Disaster Management Institute, School of Technology Management & Logistics, UUM College of Business, University Utara Malaysia)
Email: klchong@uum.edu.my

Dr Chong Khai Lin is a senior lecturer and research fellow at the Disaster Management Institute, School of Technology Management and Logistic which she joined in 2012. She received her Doctoral Degree from Kyoto University in 2017 in hydrology. Her master and bachelor's degree are both in environmental engineering which major in water management. Her primary interest is converting scientific knowledge into a non-scientific method that can easily be understood by the user and communities. Her current research focuses on modeling and forecasting of flood inundation and developing flood hazard map, which can be utilized for post-disaster reconstruction, town planning and shelter relocation.

Currently, Dr. Chong and her team members are working on the flood risk analysis on UNESCO Heritage Site in Penang Malaysia. Also, as an academician, she has always believed that the young generation is the most important resource for a country. Therefore, she is actively involved with numerous disaster education projects in Kelantan, Malaysia and the UNESCO-IHP Malaysia Water Watch Programme for Young Leaders (WWP4YL). The Disaster Education projects are designed for school students; in which Dr. Chong provides training in the schools that are in the rural areas to increase the awareness of local community and primary school students towards disaster. In parallel to this, Dr. Chong is also involved in the Water Watch Programme is to increase the awareness on preservation and conservation of the national water resources among the youth in Malaysia.

D. ジオパークと語り継ぎ / Geopark and Telling Live Lessons

中川和之（時事通信社解説委員）（座長）
Email: n-kazmail@nifty.com

時事通信社解説委員。静岡大学防災総合センター客員教授。専門は防災教育、災害救援。日本大学芸術学部卒。時事通信社で事件や科学を取材。気象庁担当などを通じて地震や火山、災害対応を学ぶ。出身地での阪神大震災をきっかけに、記者としてだけでなく、市民の立場から災害対

策のあるべき姿を模索し、中央防災会議や内閣府、文部科学省、厚生労働省などの各種委員会の委員を務める。1999 年に日本地震学会で災害と自然の恵みの両方を次世代に伝える「地震火山こどもサマースクール」の活動を続け、2008 年から日本ジオパーク委員会に地震学会推薦で委員として参画。2013 年 7 月から現職。2019 年防災功労者防災担当大臣表彰を受賞。

Kazuyuki Nakagawa (Commentator, Jiji Press) (Session Chair)
Email: n-kazmail@nifty.com

Commentator, Jiji Press. Visiting professor at Shizuoka University Center for Integrated Research and Education of Natural Hazards. His research concern is disaster education and disaster relief. Graduated from Nihon University College of Art. He joined Jiji Press and reported on the incident and science as a reporter. Current position since July 2013. As a reporter, he has long been in charge of the Meteorological Agency and learned about earthquakes, volcanoes and disaster response. Not only as a reporter, but also from a citizen's perspective, seek the ideal disaster countermeasures in the wake of the Great Hanshin Earthquake in his hometown. Since 2008, he has been a member of the Japan Geopark Committee on the recommendation of the Japan Seismological Society. He Receives 2019 Disaster Prevention Achievement Award from Minister of State for Disaster Management.

イブラヒム コモオ（アジア太平洋ジオパークネットワーク コーディネーター）（共同座長）
Email: ikomoo@yahoo.com

国連ユネスコ グローバルジオパーク国際専門委員、アジア太平洋ジオパークネットワーク コーディネーター、グローバルジオパーク ネットワーク協会副理事長。地質工学、保全地質学、持続可能性科学を専門とする地球科学者、名誉教授。全国教授会議環境・天然資源クラスター代表。地質院フェロー、マレーシア科学会議フェロー。環境保全での貢献によりランカウイ賞、国際地質科学連合優秀科学賞受賞。元マレーシア トレンガヌ大学副学長、元マレーシア国民大学研究副部長代行、元東南アジア防災研究所初代所長、元環境開発院 院長、元マレーシア地質学会会長、元マレーシア地質学院副理事長、元国際地質工学協会副会長。

Ibrahim Komoo (Coordinator, Asia Pacific Geoparks Network) (Session Co-chair)
Email: ikomoo@yahoo.com

International Expert to the UNESCO Global Geopark, Coordinator to Asia Pacific Geoparks Network (APGN) and Vice-President of Global Geoparks Network Association (GGNA). Professor Emeritus, a scholar in the fields of Earth Science specialized in Engineering Geology, Conservation Geology and Sustainability Science. Head of Environment and Natural Resources Cluster, National Council of Professors. Fellow of the Institute of Geology and Fellow of the Academy of Sciences in Malaysia. Recipient of the Langkawi Award and IUGS Science Excellence Award for Environmental Management. Formerly served as

the Vice Chancellor of Universiti Malaysia Terengganu, Deputy Vice Chancellor of Research in Universiti Kebangsaan Malaysia (UKM), Founding Director of Southeast Asia Disaster Prevention Research Institute (SEADPRI), Director for Institute for Environment and Development (LESTARI), President of the Geological Society of Malaysia, Vice-President of the Institute of Geology Malaysia and Vice-President of International Association of Engineering Geology (IAEG).

ナンシー アグダ（フィリピン大学国立地質科学研究所）

Email: nancyraguda@yahoo.com

フィリピン大学国立地質科学研究所にて修士号取得（地質化学）。フィリピン近隣研究センター事務局長。フィリピン大学都市・地域計画学科博士課程及び同学国立地質科学研究所所属。各種の環境・コミュニティ復興事業、防災・減災事業、海岸及び高地のコミュニティでの地質災害対策などに従事。現在、ボホール州においてフィリピンで最初の UNESCO グローバルジオパークの認定を受けるべく支援中。

Nancy Aguda (National Institute of Geological Sciences, University of the Philippines)

Email: nancyraguda@yahoo.com

Nancy R. Aguda is the Corporate Secretary of the Centre for Neighborhood Studies, Philippines and currently a PhD student of UP School of Urban and Regional Planning.

A licensed geologist, Ms Aguda specializes in various technical fields which involve the application of geosciences. She graduated with a degree of B. S. Geology at the National Institute of Geological Sciences, UP Diliman. After earning her Master's Degree on Geology with specialization on geochemistry, chemical procedures and environmental monitoring schemes for heavy metal pollution of surface and groundwater resources from the same unit, she has been actively involved in various professional and voluntary works on disaster management related to development and implementation of environmental and community rehabilitation programs, disaster risk reduction, bioengineering measures, geohazards assessments and mitigations in various coastal and upland communities in the country.

She has also been active in several international initiatives where application of basic and advance geosciences is relevant. Significant part of her body of work included maritime boundary issues, specifically the scientific and technical applications of Article 76 of UNCLOS. She has also assisted the Philippine government at ICSID, World Bank as part of the technical team of experts. Together with her adviser Dr. Mario Delos Reyes, she is presently helping Bohol Province in its bid to become the first UNESCO Global Geopark in the Philippines.

Ms Aguda is presently involved in various academic researches in the fields of geochemistry, mining, engineering geology and other applied scientific fields. Her most recent work is the setting up of an international concrete petrography laboratory and an accompanying research program that involves assessment of Philippines' lifeline structures to improve construction industry standards and practices.

Together with relevant stakeholders from public and private sectors, the pioneering application of this technology aims to establish safe and sustainable infrastructures to complement the Build, Build, Build program of the Philippines.

西谷香奈（伊豆大島ジオパーク推進委員会委員・グローバルネイチャークラブ）

Email: gon-kana@amber.plala.or.jp

1957 年東京生まれ。看護師歴 10 年、1988 年に伊豆大島に移住。1989 年（株）グローバルスポーツクラブ入社。先代より会社を引き継ぎ、ダイビングガイドを 20 年継続。大島町のネイチャーガイド養成に関わったことをきっかけに会社内にエコツアー部門を設立し、2009 年 4 月から陸域のツアーを開始した。2010 年に伊豆大島が日本ジオパークに認定された後は、地球、人、生き物のつながりを楽しむジオツアーを年間 160 日前後実施。火山学者たちから学んだ過去の災害や現在の防災対策、ジオパークを通して学んだ 1986 年噴火体験者の生の声、地球の活動や災害後に再生する生命のたくましさなどを、ツアーを通して伝えている。

Kana Nishitani (Izu Oshima Geopark Promotion Committee Member, Global Nature Club)

Email: gon-kana@amber.plala.or.jp

Ms. Kana Nishitani was born in Tokyo in 1957. After working as a nurse for 10 years, she moved to Izu Oshima and joined the Global Sports Club in 1989. She took over a small company from the former president and has been a diving guide for 20 years. She participated in the training of Nature Guide hosted by Oshima Town, and then set up the Eco Tour Division within the company and started the tour in 2009. Since then, she has been on tour for about 160 days a year. Izu Oshima, which erupted in 1986 and evacuated all residents of the island, was recognized as a Japanese Geopark in 2010. She learned a lot from experts and residents through the Geopark. She tells her customers about past natural disasters, today's disaster prevention measures, and some stories of residents who experienced the eruption. She also tells the story of Earth's activity and the strength of life to regenerate after a disaster.

柴田伊廣（文化庁文化財第二課天然記念物部門）

Email: inazone220@gmail.com

文化庁文化財第二課で天然記念物を担当する文部科学技官。専門は地質学。高知大学大学院博士後期課程卒業後、2009 年に博士学位取得。国士舘大学非常勤講師、神奈川県立生命の星・地球博物館外来研究員。2010 年から室戸ジオパーク推進協議会にて地質専門員として、地質遺産の保全やガイド育成などを担当し、住民とともに価値を伝え保存する取り組みに従事。2014 年より、現職。

Shibata Tadahiro (The Unit of Natural Monuments, Cultural Properties Second Division, Agency for Cultural Affairs-Japan)

Email: inazone220@gmail.com

Shibata is in charge of administration of natural monuments at the Agency for Cultural Affairs, Cultural Properties Second Division. His specialties are geology. After graduating from Kochi University's doctoral program, he has Ph.D. in 2009. After that, he was a part-time lecturer at Kokushikan University and an outpatient researcher at the Kanagawa Prefectural Life Science Museum. Since 2010, as a geological expert at the Muroto Geopark Promotion Committee, he has been in charge of preserving geological heritage and fostering guides, and has been engaged in efforts to convey and preserve the value with residents. Incumbent since 2014.

E. 災害遺構と記憶の継承 / Disaster Remains and Passing-on of Memories

石原凌河（龍谷大学政策学部・大学院政策学研究科 准教授）（座長）

Email: ryoga@policyr.ryukokou.ac.jp

龍谷大学政策学部准教授。専門は地域レジリエンス（地域防災、災害復興、持続可能な都市・地域への再生）。1987 年京都府宇治市生まれ。2010 年関西学院大学総合政策学部卒業、2012 年大阪大学大学院工学研究科博士前期課程修了、2014 年同博士後期課程修了。 大阪府立大学、人と防災未来センターを経て現職。博士（工学）。2015 年 5 月に日本都市計画学会論文奨励賞を受賞。災害の記憶継承や地域防災をテーマに研究や実践に取り組んでいる。

Ryoga Ishihara (Engineering) (Associate Professor, Ryukoku University) (Session Chair)

Email: ryoga@policy.ryukou.ac.jp

Ryoga Ishihara is an associate professor on the faculty of Policy Science at Ryukoku University in Japan. His research concern is disaster resilience, (including fields of community disaster mitigation, disaster recovery, and urban and local revitalization). He graduated from school of policy studies at Kwansei-Gakuin University, he completed doctoral course at graduate school of engineering at Osaka University. He was awarded a prize from The City Planning Institute of Japan（CPIJ） in 2015 for his doctoral thesis. He will be a visiting scholar at University of Canterbury from September 2020 to September 2021.

ポール・ミラー（カンタベリー大学 教授）（共同座長）

Email: paul.millar@canterbury.ac.nz

カンタベリー大学芸術学部教授・副学長。ニュージーランドおよび太平洋の文学、伝記の分野で幅広く出版しており、2011 年には「ニュージーランド・ブックアワード」のファイナリストに選出される。2011 年に「CEISMIC カンタベリー地震デジタルアーカイブ（www.ceismic.org.nz）」を開発し、2010 年及び 2011 年に発生したカンタベリー地震に関する画像、被災経験談、メディアを、記念、教育、研究のためのアーカイブに携わっている。カンタベリー大学ではニュージーランドで初となる「デジタルヒューマニティーズ（情報人文学）教育プログラム」を設立し、現在は共同設立した「College of Arts Digital Lab」の共同ディレクターを務めている。「オーストラリア・デジタルヒューマニティーズ協会（aaDH）」の会長も務めている。2012 年から、カンタベリー地震後に収集された 700 件を超えるインタビューに基づいて、災害後の物語の長期的研究を展開する大規模な 3 年間のプロジェクトの主任研究者を務めた。2019 年 3 月のクライストチャーチモスクでの銃撃事件以来、複数の研究機関と連携し、都市の自然災害や人間の悲劇の経験から学び、回復と幸福を促進する方法を見つけるための研究プラットフォームの開発に従事している。

Paul Millar (Professor, University of Canterbury, Christchurch, New Zealand) (Session Co-chair)

Email: paul.millar@canterbury.ac.nz

Paul Millar is a professor of English Literature and Digital Humanities in the College of Arts at the University of Canterbury / Te Whare Wānanga o Waitaha in Christchurch, New Zealand. Millar is also the Deputy Pro-Vice-Chancellor of the College of Arts, with responsibility for the College's research activities. He has published extensively in the fields of New Zealand and Pacific literature, and literary biography, and was a finalist in the 2011 New Zealand Books Awards. In 2011 he also founded the CEISMIC Canterbury Earthquakes Digital Archive (www.ceismic.org.nz) to collect images, stories and media about the Canterbury earthquakes of 2010 and 2011, for the purposes of commemoration, teaching and research. The story of that project is told in 'The Challenge, the Project, and the Politics: Lessons from Six Years of the UC CEISMIC Canterbury Earthquakes Digital Archive', in Bouterey S; Marceau LE (Ed.), Crisis and Disaster in Japan and New Zealand (Singapore: Palgrave Macmillan, 2019). Millar established New Zealand's first Digital Humanities teaching programme at UC, and is now a co-director of the College of Arts Digital Lab, which he co-founded. He is the president of the Australasian Association of Digital Humanities (aaDH), and principle investigator on a large three year project to develop a longitudinal study of post-disaster narratives based on over 700 interviews collected in 2012 following the Canterbury earthquakes. Since the Christchurch mosque shootings of March 2019, Millar has been part of a multi-agency initiative to develop a research platform to enable learning from the city's experiences of natural disasters and human tragedy, and find ways to promote recovery and wellbeing.

杉本伸一（三陸ジオパーク推進協議会 コーディネーター）

Email: shinichi.sugimoto0313@gmail.com

三陸ジオパーク推進協議会コーディネーター。内閣府火山防災エキスパート。岩手県立大学客員教授。島原市役所職員、第 5 回火山都市国際会議事務局長、第 5 回ユネスコ世界ジオパーク国際会議事務局長、雲仙岳災害記念館副館長を経て現職。2011 年度日本自然災害学会功績賞。

Shinichi Sugimot (Sanriku Geopark promotion office coordinator)

Email: shinichi.sugimoto0313@gmail.com

Sanriku Geopark promotion office coordinator. Cabinet Office volcano disaster prevention expert. Iwate Prefectural College guest professor. Incumbent through Shimabara city official, the fifth volcano city international conference secretary general, the fifth UNESCO world Geopark international conference secretary general, the Unzendake disaster Memorial vice-director. Prize for 2011 Japan natural disaster society achievement.

関俊明（公益財団法人群馬県埋蔵文化財調査事業団 上席調査研究員）

Email: woodytoo@po.wind.ne.jp

天明三（1783）年の浅間山噴火災害遺跡の発掘調査に携わる中で、歴史災害語り継ぎのテーマに出会う。考古学・博物館学。群馬大学教育学部卒業。國學院大學大学院 文学研究科史学専攻博士課程後期修了。博士(歴史学)。公益財団法人群馬県埋蔵文化財調査事業団勤務。東京農業大学学術情報課程 非常勤講師。2004～2005 年内閣府中央防災会議「災害教訓の継承に関する専門調査会」小委員会委員。

Toshiaki Seki (Gunma Archaeological Research Foundation)

Email: woodytoo@po.wind.ne.jp

Toshiaki Seki works at Gunma Archaeological Research Foundation in Japan. His research concern is Archeology and Museology. He conducted excavations at the site of the 1783 Asama eruption disaster, then he has been engaged in research on the storytelling of historical disasters. He graduated from faculty of education, Gunma University, and he completed doctor's degree at majoring in history, graduate school of letters, Kokugakuin University. He published the book at the title of "Asama-yama Great Eruption, and Tenmei 3rd year Asama Disaster Remains" in 2010.

蔣正興（921 地震博物館 学芸員）

Email: wind@mail.nmns.edu.tw

蔣正興（Chiang Cheng-Shing）准研究員は自然科学博物館の 921 地震教育園区の教員。1998 年に台湾大学海洋研究所から博士号を取得。研究分野は地質学と地球物理学であり、2018 年に米国「Marquis Who's Who in the World」に掲載された。最近、発表した論文は以下の通り。

- Insights from heterogeneous structures of the 1999 Mw 7.6 Chi-Chi earthquake thrust termination in and near Chushan excavation site, Central Taiwan（Journal of Geophysical Research：Solid Earth, Vol.121, 339-364
- The modern Kaoping transient fan offshore SW Taiwan: Morphotectonics and development（Geomorphology, Vol.300, 151-163）。（Dr.Noda、Mr.Tuzino との共著）

Chiang Cheng-Shing (Curator, 921 Earthquake Museum)

Email: wind@mail.nmns.edu.tw

Chiang Cheng-Shing is an associate research fellow and on the faculty of 921 Earthquake Museum of Taiwan at National Museum of Natural Science in Taiwan. He received his Ph. D. from Institute of Oceanography, Taiwan University in 1998. His research concerns are with geology and geophysics. He was listed in the Marquis Who's Who in the World in 2018. His recent publications include Insights from heterogeneous structures of the 1999 Mw 7.6 Chi-Chi earthquake thrust termination in and near Chushan excavation site, Central Taiwan (Journal of Geophysical Research: Solid Earth, Vol.121, 339–364), and "The modern Kaoping transient fan offshore SW Taiwan: Morphotectonics and development (Geomorphology, Vol.300, 151-163)". He co-authored paper with Dr. Noda-san and Tujino-san while visiting the Geological Survey of Japan (2012-2019).

坂口奈央(東北大学大学院文学研究科 博士後期課程所属、日本学術振興会特別研究員)

Email: nao.pikapika.1070@gmail.com

専門は、災害社会学。民間放送局に勤めていた時に東日本大震災を経験する。被災地での取材を契機に、災害復興に関する専門性を高めるため大学院に進学。現在は、災害遺構をめぐる漁村の論理について研究を進めている。

Nao SAKAGUCHI (Doctoral Course, Graduate School of Arts and Letters, Tohoku University; Research Fellow, Japan Society for the Promotion of Science)

Email: nao.pikapika.1070@gmail.com

Specializes in disaster sociology. Experienced the Great East Japan Earthquake and Tsunami while working for a commercial broadcasting station. Taking the opportunity of interviews in the affected areas,

she went on to graduate school to deepen her expertise in disaster recovery. Her current research is on the logic of fishing villages on preservation of disaster remains.

F. 語り継ぎと交流 / Interregional Disaster Cooperation: Keeping Memories Alive

坂戸勝（元独立行政法人国際交流基金 理事）（座長）

Email: masarusakato@msn.com

1948 年神戸市に生まれる。京都大学文学部卒業。1972 年財団法人国際文化振興会職員を経て特殊法人国際交流基金職員。タイ及びドイツなどでの勤務を経て、1999～2002 年在ドイツ日本大使館公使兼ケルン日本文化会館館長。帰国後、国際交流基金企画部長等を経て 2005～2007 年在ニューオリンズ日本国総領事館総領事。2005 年 8 月のハリケーン・カトリーナによる災害をニューオリンズで経験。2006 年ドイツ連邦共和国功労十字章小綬章受章。2008～2011 年独立行政法人国際交流基金参与を経て理事。2010 年世界災害語り継ぎフォーラムにパネリストとして参加。2012～2017 年ドイツ財団法人ベルリン日独センター副事務総長。

Masaru Sakato (Former Executive Vice President, The Japan Foundation) (Session Chair)

Email: masarusakato@msn.com

Born in Kobe in 1948. Graduated from Kyoto University and joined the Japan Foundation in 1972. During his service at the Japan Foundation for over 30 years, engaged in promoting international cultural exchange and also gained extensive administrative experience. After having served the Director of the Japan Cultural Institute in Cologne, Germany from 1999 to 2002 and Consul General of Japan in New Orleans (U.S.A.) from 2005 through 2007, Executive Vice President of the Japan Foundation from 2009 to 2011. From 2012 to 2017 served Deputy Secretary General of the Japanese-German Center Berlin in Germany. In 2006 awarded the Cross of the Order of Merit of the Federal Republic of Germany due to his contribution to Japanese-German relations He experienced Hurricane Katrina in New Orleans in 2005 and joined the 2010 International Forum on Telling Live Lessons from Disasters as a panelist.

エコ アグス プラウォト（ドゥタ ワカナ キリスト教大学 教授）（共同座長）

Email: ekoprawoto@yahoo.com

1958 年 8 月 13 日インドネシアのプルオレジョ(Purworejo)生。1982 年ガジャマダ大学工学部入学、1993 年アムステルダムのベルラーヘ・インスティテュート修士課程へ留学。現在、ドゥータ・ワカナキリスト教大学建築デザイン学部講師兼エコ・プラウォト建築ワークショップ主任建築士。地域の知識を現代建築に結び付ける建築士兼教育者。インドネシア伝来の竹に通じ、地域社会のためのインスタレーションや芸術プロジェクトで著名。

インスタレーション作品としては、2003 年イタリアのアラルテ芸術祭のポエジア・ディ・パリア、2003 年越後妻有アート・トリエンナーレの「母なる自然の神社」他多数。建築プロジェクトとして、ジョクジャカルタのセメティ芸術の家（2002 年 IAI 賞受章）他多数。2006 年のジョクジャカルタ地域での地震の後、村落の建物修復に従事。

Eko Agus Prawoto (Duta Wacana Christian University) (Session Co-chair)

Email: ekoprawoto@yahoo.com

Eko Prawoto was born in Purworejo, Indonesia August 13 th, 1958. In 1982 he went to Yogyakarta to study in the Engineering Faculty of Gadjah Mada University and continued to pursue his master degree at the Berlage Institute Amsterdam in 1993. Currently He is a Lecturer at the Faculty of Architecture and Design of Duta Wacana Christian University which is located at Jln. Dr. Wahidin Sudirohusodo 5-19 Yogyakarta (1958- present) and Chief Architect at Eko Prawoto Architecture Workshop (2000-present). He is an Indonesian architect and educator who combines contemporary design with local knowledge. Eko is known for his expertise in the Indonesian bamboo tradition and also for the art installations and projects that he makes for the community.

The art installations: Poesia di Paglia, The arte all' Arte, Italy 2003, Shrine For Mother Nature, The Echigo-Tsumari Art Triennale , Japan 2003, Bamboo Shrine, Anyang Public Art Project, South Korea 2005, Toki no Hashi, Kamikatsu Art Festival, Japan 2007, Lake Entrance Common Ground, Australia 2007, Lung, Asia on The Edge, Singapore 2008, The Bamboo Temple, Tapestry of The Sacred Music, Singapore 2010, Zero Project, Tasmania Art Festival, Australia 2010, Bamboo Temple, Espace Culturel Louis Vuitton, France 2011, Murbazaar, Murau Austria 2012, Garbha, Jendela Esplanade, Singapore 2012, Wormhole, Commisioned work for Singapore Biennale 2013, Shells at The Sea, Holbaek, Denmark 2016, Bamburst, Trans-action Sonsbeek 2016, Arnhem Netherland 2016, Bale Kambang" Europalia 2017, Antwerp, Belgium, Time Traveller, ILight Singapore 2018.

Architecture Project: House for NinditYo-Mella, Yogyakarta , Church in Sokaraja, Central Java (1994), Cemeti Art House , Yogyakarta (IAI Award 2002) (1998), House for Butet Kertarejasa, Yogyakarta, House for Maria Hartiningsih, Yogyakarta (2002), House for Jeanny-Lantip, Yogyakarta (2003), House for Djaduk Ferianto, Yogyakarta, Art Gallery Nasirun, Yogyakarta (2004), Extension of Padepokan Bagong Kussudihardjo, Yogyakarta , Community Learning Center at Lempong Pucung, Cilacap, Community Learning Center, and offce for 'Grupo Naroman' Bucoli, Timor Leste (2005), House for Sitok Srengenge,Yogyakarta, Reconstruction of the village after the earthquake in Ngibikan, Bantul, Yogyakarta, Reconstruction of the village after the earthquake in Botokenceng, Bantul, Yogyakarta (2006), House for Santi-Miko, Yogyakarta, House for Eko Nugroho, Yogyakarta (2010), Café and Gallery for Unesco, Magelang, Padusan, Sendangsono, Kulonprogo, Yogyakarta (2013).

吉椿雅道（CODE 海外災害援助市民センター 事務局長）

Email: info@code-jp.org；yadao18@hotmail.com

1968 年福岡生まれ。中国武術と東洋医学を学んだ後、NGO 活動を始める。1990 年北米の先住民やタイの山岳民族を支援する活動に従事。1995 年の阪神淡路大震災では被災者のために足湯活動を始め、その活動を中越地震、能登半島地震の被災者を支援する学生へ伝える。災害被災地を訪ね、「いのちをまもる智恵」を執筆。2004 年から CODE 海外災害援助市民センター職員としてインドネシア・パキスタン・中国（四川省）・ハイチ・フィリピン・ネパールの災害被災地で支援活動に従事。2013 年同センター事務局長。2016 年 3 月には NHK テレビの「プロフェショナル　仕事の流儀」で紹介される。2017 年（特活）関西 NGO 協議会理事就任。現在、神戸大学・神戸学院大学・兵庫県立大学・龍谷大学・大阪大学・神戸女学院大学・神戸女子大学・兵庫県立舞子高校の非常勤講師、関西 NGO 協議会常任理事及び中国四川省の新安世紀教育安全科技研究院顧問。2019 年第 4 回「貝原俊民美しい兵庫づくり賞」受賞。

Masamichi Yoshitsubaki (CODE (Citizens for Overseas Disaster Emergency))

Email: info@code-jp.org；yadao18@hotmail.com

Born in Fukuoka in 1968. After learning Chinese martial arts and oriental medicine, began working for NGOs. Joined NGO activities to support indigenous people in North America and hill tribes in Thailand in 1990. Started the "foot bath" voluntary action for the victims of the 1995 Hanshin-Awaji Earthquake and passed the activity on to the students working for the victims of the disasters in Chuetsu and the Noto Peninsula. Wrote and published "Inochi wo Mamoru Chie" (Wisdoms for Protecting Lives) in 2006 after visiting stricken areas in Japan in search of disaster mitigation wisdoms. Active in stricken areas of Indonesia, Pakistan and Sichuan (CHINA), Haiti, the Philippines and Nepal as staff member of CODE since 2004. Assumed office as Secretary General of CODE in 2013. Featured in a NHK-TV program "Professional Work Style" in March 2016. In 2017, he became Director of the Kansai NGO Council. Served as Chair of the 2018 Kansai SDGs Citizen Agenda Subcommittee. Currently serving as a part-time lecturer at Kobe University, Kobe Gakuin University, Hyogo Prefectural University, Ryukoku University, Osaka University, Kobe Jogakuin University, Kobe Women's University, and Hyogo Maiko High School. Received the 4th Toshitami Kaihara “Beautiful Hyogo Making Award” in 2019. He currently serves as Executive Director of the Kansai NGO Council and Advisor to the New Century Institute of Education Safety Science and Technology, Sichuan, China.

張国遠（新安世紀教育安全科技研究院）

Email: 13402848000@126.com

中華人民共和国教育省政策法規局学校安全危険防止管理政策評価及び実験研究副課長兼室長。2008 年以来災害対応及び学校防災の理論的研究及び実践に従事。近年は、北京城市学院社会活動

実践研究センター副所長、新安世紀教育安全科技研究院院長兼主任研究員、NGO 防災センター代表及び中国教育発展戦略学会理事も務める。

過去に四川省社会科学院社会発展及び公共政策研究センター副事務局長、四川大学国家社会活動人材育成基地副所長、攀枝花コミュニティー発展研究センター所長を歴任。中華人民共和国民政省から雅安コミュニティー災害危険管理プログラムの研修指導者、国連開発計画アジアコミュニティー総合減災協力プロジェクト専門家にも任命される。攀枝花十大優秀青年及び四川省十大優秀青年ボランティアとして顕彰される。

Zhang Guoyuan (President & Associate Professor, New Century Institute of Education and Safety Science and Technology)

Email: 13402848000@126.com

Mr. Zhang Guoyuan is deputy head and office director of School Safety Risk Prevention and Control Policy Evaluation & Experimental Research, Policy and Regulation Department of the Ministry of Education of the People's Republic of China. Since 2008, Mr. Zhang has been engaging in both theoretical research and practice on disaster management and school safety risk management for over one decade. Currently, his multiple positions also include associate professor and deputy director of Social Work Practice Research Center of the Beijing City University, dean and chief researcher of New Century Institute of Education Safety Science and Technology, chairperson of NGO Disaster Preparedness Center, and board member of Chinese Society of Educational Development Strategy.

Mr. Zhang was previously deputy secretary-general of Social Development and Public Policy Research Center of Sichuan Academy of Social Sciences, deputy director of National Social Worker Training Base at Sichuan University, and director of Panzhihua Community Development Research Center. He was assigned by the Ministry of Civil Affairs of the People's Republic of China as trainer for Ya’an Community Disaster Risk Management Program and used to be hired by the United Nations Development Program as expert consultant in Asian Community Integrated Disaster Reduction Cooperation Project. Mr. Zhang Guoyuan was honored as one of both the "Ten Outstanding Youths in Panzhihua City" and the "First Ten Outstanding Young Volunteers of Sichuan Province".

J.デイビッド・ワゴナー三世（ワッゴナー&ボール建築環境事務所 創立者・代表）

Email: david@wbae.com

ニューオリンズ所在の国際的建築・環境事務所ワゴナー&ボールの創立者で代表。イェール大学建築大学院卒。2010 年アメリカ建築家協会(AIA)会員。2016 年 AIA ルイジアナ栄誉メダルを授与される。国内外の建築保存や近代建築から都市計画まで、質の高さと革新を特徴とする。「自らの居るところを知る」という心得を通じ場所への理解と時代に対する厳しい認識を兼ね備える。

ハリケーン・カトリーナ被災後、ニューオリンズをその生命線である水を包摂した環境にやさしい町として再創造する機会を見出す。歴史、土壌、生物多様性、インフラのネットワーク、都

市部と住居を水の力を含めて見直すことを提唱。これらの要素の組み合わせがデザインの総合的な基礎となるものであり、これはオランダとの対話に始まり、ニューオリンズ大地域都市と水計画で発展を見、現在はニューオリンズ市の全国災害回復力競技(NDRC)への登録を含め様々なプロジェクトで実践されている。ワゴナーの「デザインによる復興」はコネチカット州ブリッジポートやルイジアナ・コネチカット・バージニア州に NDRC の各種の賞をもたらした。

J. David Waggonner III (Founding Principal, Waggonner & Ball Architecture / Environment)
Email: david@wbae.com

David is the founding principal of Waggonner & Ball, an internationally active architecture and environment practice based in New Orleans. He is a graduate of the Yale School of Architecture, and in 2010 was elevated to the position of Fellow in the American Institute of Architects (FAIA). In 2016, David was awarded the AIA Louisiana Medal of Honor. From preservation to modern architecture to urban design, locally and internationally, quality and innovation are hallmarks of his work. His maxim, “know where you are,” imparts both an understanding of place and a critical awareness of time.

In the aftermath of Hurricane Katrina, David saw an opportunity for New Orleans to reinvent itself as a sustainable city that embraces its lifeblood: water. He championed a process that examines history, soils, biodiversity, infrastructure networks, urban space and habitation, along with the forces of water. This combination serves as a holistic foundation for design, initiated during the Dutch Dialogues, developed through the Greater New Orleans Urban Water Plan, and now being implemented in multiple projects including the city’s winning National Disaster Resilience Competition (NDRC) entry. Related processes and efforts have produced Rebuild by Design and other NDRC awards for Bridgeport, Connecticut, and the States of Louisiana, Connecticut, and Virginia.

分科会発表資料 / Breakout Session Presentations

分科会 A: 語り継ぎとミュージアムの役割

Session A: Role of Museums in Telling Live Lessons

小野裕一（座長）/ Yuichi Ono (Session Chair)

マーレーン ムリー（共同座長）/ Marlene Murray (Session Co-chair) 1

坂本誠人 / Makoto Sakamoto 9

佐藤公 / Hiroshi Sato 13

ポルンタム タムウィモル / Pornthum Thamwimol 15

ラチャニーコーン ソンティップ / Ratchaneekorn Thongthip 23

分科会 B: 語り継ぎとツーリズム

Session B: Disaster Tourism: A Tool for Telling Live Lessons

田中尚人（座長）/ Naoto Tanaka (Session Chair) 27

イカプトラ（共同座長）/ Ikaputra（Session Co-chair） 28

草野悟 / Satoru Kusano 32

山崎麻里子 / Mariko Yamazaki 37

松本和夫 / Kazuo Matsumoto 39

分科会 C: 語り継ぎとローカルコミュニティ

Session C: Telling Live Lessons and Local Community

阪本真由美（座長）/ Mayumi Sakamoto (Session Chair)

ギュルム タヌルジャン（共同座長）/ Gülüm Tanircan (Session Co-chair) 42

ファウスティト A. オーレ / Faustito A. Aure 45

松井敬代 / Takayo Matsui 47

松井憲 / Ken Matsui 49

山住勝利 / Katsutoshi Yamazumi 58

チョン カイリン / Chong Khai Lin 61

分科会 D: ジオパークと語り継ぎ

Session D: Geopark and Telling Live Lessons

中川和之（座長）/ Kazuyuki Nakagawa（Session Chair） 64

イブラヒム コモオ（共同座長）/ Ibrahim Komoo（Session Co-chair） 67

ナンシー アグダ / Nancy Aguda 70

西谷香奈 / Kana Nishitani 74

柴田伊廣 / Takahiro Shibata 78

分科会 E: 災害遺構と記憶の継承

Session E: Disaster Remains and Passing-on of Memories

石原凌河（座長）/ Ryoga Ishihara (Session Chair)

ポール ミラー（共同座長）/ Paul Millar（Session Co-chair） 81

杉本伸一 / Shinichi Sugimoto 84

関俊明 / Toshiaki Seki 86

蒋正興 / Chiang Cheng-Shing 89

坂口奈央 / Nao Sakaguchi 92

分科会 F: 語り継ぎと交流

Session F: Interregional Disaster Cooperation: Keeping Memories Alive

坂戸勝（座長）/ Masaru Sakato（Session Chair）

エコ アグス プラウォト(共同座長)/Eko Agus Prawoto(Session Co-chair) 95

吉椿雅道 / Masamichi Yoshitsubaki 97

張国遠 / Zhang Guoyuan 100

J. デイヴィッド ワッゴナー三世 / J. David Waggonner III 103

マーレーン ムリー
Marlene Murray

SHARING STORIES:

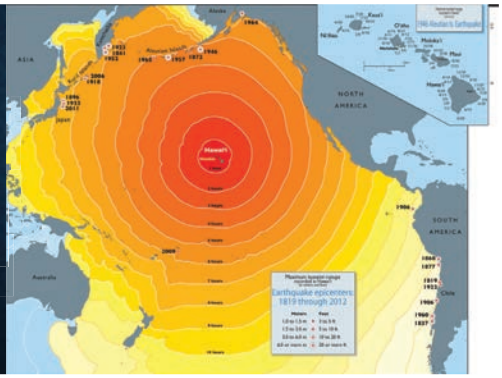
How The Pacific Tsunami Museum Keeps Tsunami Memories Alive

Executive Director - Marlene Murray

PACIFIC TSUNAMI MUSEUM
HILO · HAWAII

HAWAII

...MIDDLE OF THE RING OF FIRE



DEADLY TSUNAMIS TO STRIKE HAWAII ISLAND

Year	Source	Area Hit	Deaths
1837	Chile	**Hilo**	14
1868	Hawaii	Kau	46
1877	Chile	**Hilo**	5
1923	Kamchatka	**Hilo**	1
1946	Aleutians	**Hilo**	**96**
		Laupahoehoe	24
		Rest of Hawaiian Islands	39
1960	Chile	**Hilo**	**61**
1975	Hawaii	Halape	2

KEY QUESTIONS:

- How do we learn from the disaster experience?
- How do we tell the stories?
- How do we honor those who have lost their lives?
- How do we remind people of the danger that exists?
- How do we prepare for the next event?

OUR MISSION

Through education and awareness, we believe that no one should die due to a tsunami.

The goals of the Museum are to promote public tsunami education and to preserve history.

The Museum serves as a living memorial to those who lost their lives in past tsunami events.





HOW THE PACIFIC TSUNAMI MUSEUM ACHIEVES ITS MISSION

- Museum Displays
- Outreach
- School Curriculum and Preparedness
- Scientific Research
- Support Emergency Management Agencies



OVER 5,000 IMAGES



OVER 500 TSUNAMI INTERVIEWS



WE CREATE POWERFUL EXHIBITS






Tsunami Changes a Community
Lessons Learned the Hard Way
THE 1960 TSUNAMI


Amazing Rescues


The Indian Ocean
THE INDIAN OCEAN TSUNAMI OF 2004


The Great Eastern Japan Earthquake and Tsunami
津波
EXIT
THE GREAT EASTERN JAPAN EARTHQUAKE AND TSUNAMI


The Story of Himeka Suzuki


TSUNAMI STORIES EXHIBITS


Survivors of
the Savage Sea
TSUNAMI STORY VIDEOS


THE STORY OF KAZU AND DAVID


THE DRAMATIC RESCUE


THE HEARTWARMING REUNION
The museum reunited the two almost 60 years after the event.


PROPAGATION
SCIENCE ROOM


The Wave Machine
Energy of Moving Water
INTERACTIVE EXHIBITS



SAFETY EXHIBIT



VIDEO PRESENTATION

A 25-minute video is shown in the vault theater throughout the day.

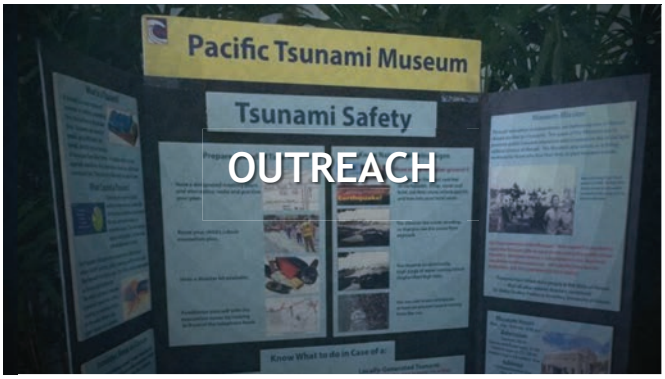


THE VALUE OF A DOCENT

Nothing is better than having an actual tsunami survivor talk to visitors.



SCHOOL GROUPS



OUTREACH





TSUNAMI AWARENESS MONTH



TSUNAMI EXPERTS



CHILDREN'S DAY



MEDIA OUTREACH



HOST BUSINESS AFTER HOURS EVENTS



SCHOOL PRESENTATIONS



CONSULT WITH SCHOOL OFFICIALS ON EVACUATION PLANS

EDUCATION IN SCHOOLS: PROJECT HITEC

HAWAII TSUNAMI EDUCATION CURRICULUM PROGRAM

The museum received a two million-dollar U.S. Department of Education to develop curriculum and train teachers on tsunami education. The three-year project enjoyed collaboration with the University of Alaska at Fairbanks and the Pacific American Foundation.











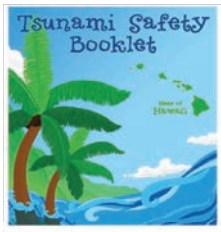


OUTREACH IN THE COMMUNITY

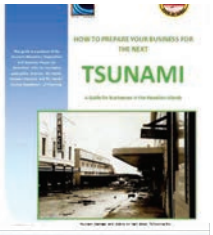
TSUNAMI MEMORIAL CEREMONIES



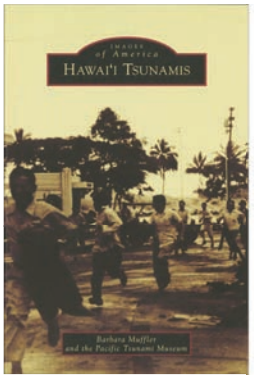








TSUNAMI PUBLICATIONS



Hawaii Tsunamis was published in 2015 and features more than 200 photos from the museum's archives.





INTERNATIONAL OUTREACH

CHALLENGES

It is increasingly more difficult to collect tsunami survivor stories in Hawaii since many are passing on.

Some survivors find that talking about the experience is just too painful.

Some people choose not to come to the museum because they believe that tsunamis are depressing.

There is a general feeling of complacency since a major tsunami has not affected the Hawaiian Islands in 60 years.

"IT'S NOT A MATTER OF *IF*, BUT *WHEN* THE NEXT TSUNAMI WILL STRIKE"...

MAHALO!



Marlene Murray
Executive Director
(808) 935-0926
director@tsunami.org

坂本誠人
Makoto Sakamoto

2020 The international Forum on
Telling Live Lessons from Disasters
Date：2020年1月25日(土)
Venue：Kobe Machizukuri Center

Disaster Reduction and Human Renovation Institution

Deputy Executive Director of
Disaster Reduction and
Human Renovation Istitution
Mr. Makoto Sakamoto

1 Outline of the Great Hanshin-Awaji EQ

Fire in the urban Area



Collapsed houses





Damaged railway



Damaged office buildings

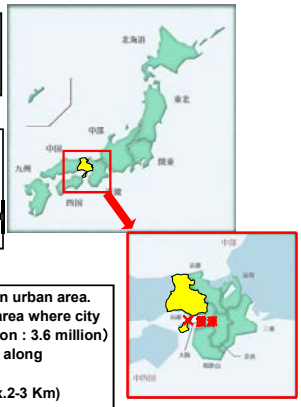


Collapsed viaducts of expressway

1 Outline of the Great Hanshin-Awaji EQ

Outline of the earthquake

【Date & Time】January 17, 1995 5:46 a.m,
【Epicenter】Northern Awaji Island at depth of approx. 16Km
【Magnitude】7.3 on the Richter scale



Outline of the damages

Dead： 6,434 persons
Damaged Houses (completely /partially)： 249,180 houses
Evacuated (at the peak): 320,000 persons
Amount of direct damage : approx.10 trillion yen (approx. 2 % of the G.N.P)

Characteristics of the Disaster

- The Earthquake occurred directly underneath an urban area.
- The Earthquake strucked a densely populated area where city functions were concentrated (Suffering population : 3.6 million)
- The Earthquake caused damage in a zonal area along a fault line.
(East - West approx. 30Km, North - South approx.2-3 Km)
- The Earthquake strucked an aging society.

2 Disaster Reduction and Human Renovation institution



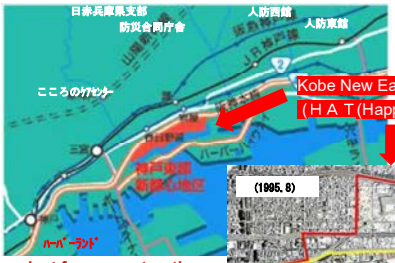
Design concept for the West Building

○The design of glass cubes floating on the basin symbolizes the lessons of the great earthquake disaster that caused water shortage. The entire building is a memorial monument of the earthquake disaster.
○The design covering the four sides with glass and capturing the surrounding scenery expresses the importance of helping together.
○The design where the glass surface is stepped from the center to the outside expresses the continued transmission of knowlege.

2 Disaster Reduction and Human Renovation institution

(1) The location of our Institution

Location：Kobe New Eastern City Center(H A T (Happy Active Town)KOBE)





Symbol project for reconstruction from the Disaster.

Kobe City：Infrastructure Development(Land readjustment project)
Hyogo Pref.：Establishment and attraction of the facilities in the center area.
Houses：approx. 7,000 houses
Reconstruction Public Housing approx..3,550 houses

2 Disaster Reduction and Human Renovation institution

(2) Mission of the Institution

Established：By Hyogo Prefecture in April 2002 with cooperation with the central government（the construction cost and running cost have been subsidized by the central government for the West Building）

Executive Director ： Dr. Yoshiaki Kawata Ph.D
Professor Emeritus, Kyoto University,
Faculty of Safety Science and Graduate School of Safety, Kansai University Executive Director and Chair Professor

■ Mission

By Sharing the experiences of the Great Hanshin-Awaji Earthquake and applying the lessons to the better future

Cultivating a disaster resilient culture

Reducing social risk and vulnerability

Supporting for development of policies for disaster reduction

Contribution for realizing
a safer and more secure civil society

■ Six Function



(3) Six Function of DRI

① Museum Exhibits

■ **West Building**(Sharing the experiences of the Great Hanshin-Awaji Earthquake and applying the lessons to the better future)

4F : ・Reproduction video of the moment of the Great Hanshin-Awaji Earthquake,
・Drama video that introducing the process of recovery and reconstruction from just after the earthquake

3F : ・Exhibition of materials that share the disaster situation, experiences and lessons learned from the earthquake
・Storyteller's Corner

2F : ・Disaster Reduction learning through experiments and games
・Special Exhibition for Disaster Reduction

■ **East Building** (Learnning about threats of wind and water related disasters and tsunami)

3F : Tsunami Evacuation Experience Corner, Possible Nankai trough earthquake's Tsunami height banner etc.

1F : Documentary 3D video of recovery process in areas affected by the Great East Japan Earthquake

West Building

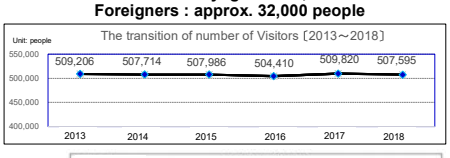


East Building



☐ Visitors

Visitors since opening (as July 2018) : 8 million
Visitors in FY 2018 : 507,595 people
Characteristic : Group Visitors : approx. 70%;
Elementary, Junior & Senior high school students: 60% ,
Visitors from Hyogo : 20% ,
Foreigners : approx. 32,000 people





国別順位	2015		2016		2017		2018	
1 位	VIETNAM	8, 948	VIETNAM	7, 056	KOREA	7, 887	VIETNAM	8, 336
2 位	KOREA	3, 479	KOREA	3, 780	VIETNAM	7, 042	KOREA	7, 034
3 位	CHINA	2, 666	CHINA	2, 471	Malaysia	2, 904	CHINA	3, 199

☐ Operational Voluntary Staff

135 people(as of April 2020) 15～25 People/ 1 day

Operational types

- ○Exhibit Explainers and guides
- ○Story Tellers about his/her disaster experience
- ○ Exhibit Explainers in Foreign languages

Number of registered by gender and age (gender/age ratio %) As of April 1 ,2019

gender	30 Under	30S	40S	50S	60S	70S	80 Over	total
male	0	1	1	5	17	35	27	86
female	0	1	2	5	13	18	10	49
total	0	2	3	10	30	53	37	135

○The most registered are in their 70s. 53 people(39.3%). This is followed by 37 people(27.4%) over the age of 80. There are 30 people (22.2%) in their 60s. There are 120 people over the age of 60, accounting for 88.9% of the total.

○The overall average age was 71.7, the average age for male was 74.1 years, and the average age for female was 69.3 years.

2 Disaster Reduction and Human Renovation institution

② Collection and Preservation of source documents and materials



■ Number of collected & observed materials

○Started since October 1995

○Donated by citizens of Hyogo Prefecture

Primary Materials：Approx. 190.000 items

"Live" materials such as leaflets, flyers, notes, memos, photos, and items used in shelters

Secondary Materials: Approx. 40,000 items

Books, magazines and other publications, videos, audio-visual materials such as DVDs, etc.





■ Library (West Building)

○ Viewing Materials

Primary Materials: You can search them by using computers in the library or online search system

Secondary Materials: Please feel free to read through materials in the open stack library

13

2 Disaster Reduction and Human Renovation institution

③ Practical Research on DR & Development of DR Professionals

■ Fostering Researchers

○Candidates with Ph.D. degree are eligible for employment for 3-5 years as a researcher. (9 Researchers, as of November 11, 2019)

○Under the guidance of Senior Researchers, who are leading Disaster Reduction Specialists in Japan, all researchers conduct not only individual research but also group research, as well as research that is themed by all members.

○After their term of office, they made use of their experience at the center and continued research at universities nationwide.

■ Characteristics as a research institution

○Practical research that can be used for disaster response that the government performs mainly in the event of a disaster, which cannot be done by academic research institutions such as universities

Research Fields：①Government Disaster management, ②Emergency evacuation measures, ③Search and Rescuer measures, ④Secondary disaster measures, ⑤Resources, ⑥Information measures, ⑦Volunteers, ⑧Infrastructure, ⑨Care for victims, ⑩Local economy

14

2 Disaster Reduction and Human Renovation institution

④Training of Disaster management Practitioners

■ Character of training

○ Targets are disaster management officers of local governments nationwide

○ Practical training based on lessons from the Great Hanshin-Awaji Earthquake

○ Systematically covering matters necessary for major disaster countermeasures

○ 10,090 participants (as of December 2019) (★ Disaster Management)

Courses		Target	Period	Capacity (People)	Objective
Top Forum		Governor Mayor	Half a day (3 Pref / year)	——	Fostering roles and leadership required for local government leaders
Manag ement Course	Advanced	Senior local Government official(★)	2 days (Spring)	20	Improve the ability of those who assist local government leaders
	Expert A	local Government official (★)	4 days (Spring・Fall)	20	Improve disaster response capabilities through case studies and exercises
	Expert B			20	
	Basic	local Government official with less experience(★)	3 days (Spring)	70	Acquisition of basic knowledge and techniques related to disaster countermeasures
Intensive Course		local Government official	1～2 days	——	Map training, mental care, media research on disaster reduction , etc.

15

2 Disaster Reduction and Human Renovation institution

⑤ Headquarter Survey / Assistance in disaster Response

○ In the event of a large-scale disaster, the DRI can , upon request by the stricken prefectures, dispatch researchers in disaster risk reduction to disaster management headquarters in the prefectures.

○ Investigation of the current situation and challenges in the area. & Advise disaster countermeasures for proactive decision making.

○ Dispatched 58 times in Japan and overseas (43 in Japan, 15 overseas)

Main Example

In Japan

2004 The Chuetsu Earthquake
2011 The Great East Japan Earthquake
2016 The Kumamoto Earthquake
2018 The Osaka Earthquake, The Heavy Rain Event of July, The Hokkaido Eastern Iburi Earthquake
2019 Typhoon No. 19 disaster

Overseas

2003 The Bam Earthquake
2004 The Indian Ocean Earthquake and tsunami
2008 The Great Sichuan Earthquake
2015 The Nepal Earthquake



16

2 Disaster Reduction and Human Renovation institution

⑥ Exchange and Networking

● There are many international organizations related to disaster reduction, medical care, health care, environment, etc. in the East building and the Kobe new eastern Center (19 international organizations consists the Disaster Reduction Alliance (DRA)).

● A network is formed with administrative practitioners and researchers who have attended training in order to implement a coordinated response in the event of a disaster.

●Conducted disaster drills in cooperation with HAT Kobe community organizations, schools, and related organizations.



● WHO Kobe Centre

● Kansai International Center, Japan International Cooperation Agency (JICA)

● United Nations Disaster Risk Reduction (UNDRR) Office in Japan
● International Recovery Platform (IRP)
● Asia Disaster Reduction Center (ADRC)
● United Nations Office for the Coordination of Humanitarian Affairs (OCHA) Kobe Office
● Asia-Pacific Network for Global Change Research (APN)
● International EMECS Center
● Institute for Global Environmental Strategies (IGES)
■ Hyogo Earthquake Memorial 21st Century Research Institute
■ Education and Research Center for Disaster Reduction, University of Hyogo

■ Hyogo Emergency Medical Center
■ Hyogo Chapter, Japanese Red Cross Society
■ Hyogo Institute for Traumatic Stress
■ Kobe Red Cross Hospital

★ Disaster Reduction and Human Renovation Institution

■Kobe Local Meteorological Observatory (in Kobe National Government Building for Disaster Prevention)

●Hyogo Earthquake Engineering Research Center (Miki City)

● International organizations
■ Base facilities for Reconstruction from the disaster

17

2 Disaster Reduction and Human Renovation institution

⑥ Exchange and Networking

□ Disaster memory action KOBE

In order to cultivate human resources who can make use of the lessons learned through disaster risk reduction activities, students enter areas affected by the Great Hanshin-Awaji Earthquake with the theme of "Kobe words" and plan interviews, questionnaires, etc.





□ "Bosai Koshien" 1.17 Disaster Risk Reduction for the Future Award

Awarded for advanced disaster risk reduction education and disaster risk reduction activities that children and students are actively working in schools and communities to help create a safer and more secure society for the future.





18

2 Disaster Reduction and Human Renovation institution

⑥ Exchange and Networking

Disaster Reduction Alliance (DRA) Forum

Organizing international forums for the realization of a safer and more secure disaster resilient society in collaboration with international disaster risk reduction organizations gathering in HAT Kobe.





Storyteller Forum telling about the Great Hanshin-Awaji Earthquake

Looking back on those who are active in the field of corporate activities and story-telling activities, reviewing the history of reconstruction so far, thinking about how to use and communicate the experiences and lessons learned from the earthquake, and how to prevent the earthquake from weathering Holding a forum.

Date ：13:00～17:00 February 3, 2020 (Monday)

Venue：Hyogo House, Main conference Room

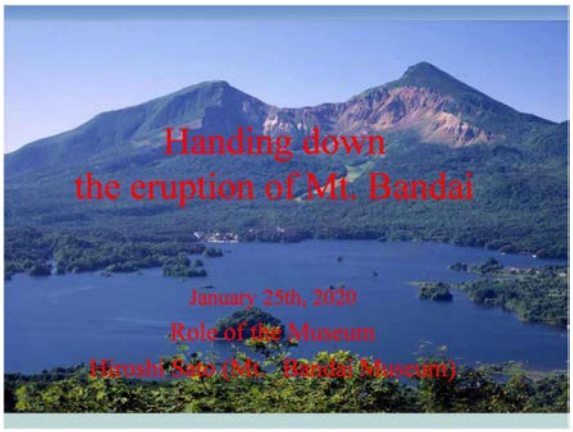
19

Thank you for your attention

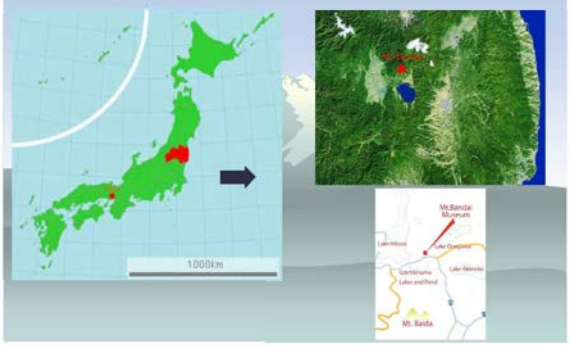
DRI

20

佐藤公
Hiroshi Sato



Location of Mt. Bandai



Debris avalanche eruption phenomenon

- It occurs about once in 100 years
- in Japan.
- Type
- a. The sticky magma rises and cracks in the mountain
- b. Crack in mountain due to steam eruption
- c. he shaking of the earthquake triggers the collapse of the mountain.

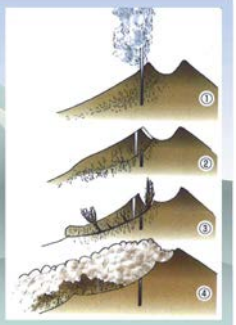


A debris avalanche and Flow mounds

- Suddenly the mountain collapses, making it difficult to learn disasters

The eruption of 1888

- **1.** Eruption precursor
- Daily ringing (earthquake) has occurred since July 8.
- **2.** Scene from the day of the eruption (July 15)
- ▪**7:00** Small earthquake
- ▪**7:30** Big earthquake
- ▪**7:45**
- The top of Mt. Ko-Bandai exploded.
- Black smoke rises 1500m Explodes 15 to 20 times



Damage from the 1888 eruption





- 1. Eruption size
- Small Bandai collapsed deposit:
- 1.2 billion cubic meters
- Eruption damage
- Number of deaths: 477
- (Japan's largest volcanic disaster since the Meiji era)

An annual memorial festival





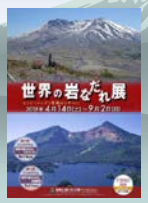
In order to prevent the eruption disaster from fading away

two temples in Inawashiro hold memorial services alternately.

In Kita-shiobara Village, the cemetery is being continued

Mt. Bandai Museum





- It was opened in 1988 to commemorate the 100 year anniversary of the eruption.
- Nobody knows about the eruption of Mt. Bandai anymore
- Mission to pass on the eruption of Mt. Bandai to future generations
- More than 500 lectures on volcano delivery
- A total of 3 million people visited the museum.

Excavation of past disaster data





- National Science Museum, Imperial Household
- Calligraphy Department, etc.
- From various places to the eruption of 1888
- Collect related materials
- They use those materials
- to tell their stories.

Disaster prevention class at Urabandai Junior High School







- Disaster prevention classes continued since 2001
- Students think not only in lectures Incorporates classes

Field class







- Continued since 2002
- Teaching at the site of the eruption will advance understanding of the volcano
- Other schools have started offering field classes.

Bandai-san Geopark





- In 2008, curators from the Fukushima Prefectural Museum and I joined the project to found the "Executive Committee to turn Mt. Bandai into a geopark“
- 2009 Created and distributed guide book
- 2010 Council established
- 2011 Japan Geopark Certification

Disaster Geo Tour

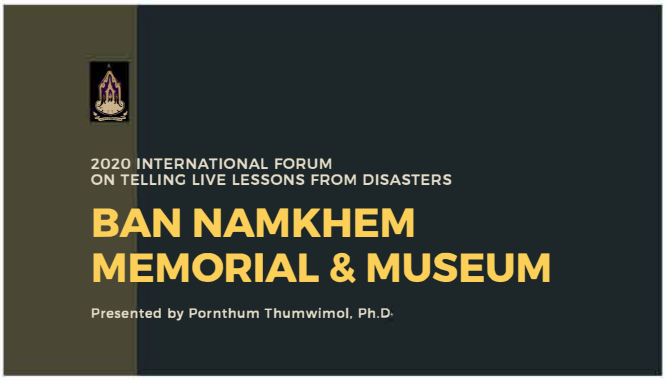


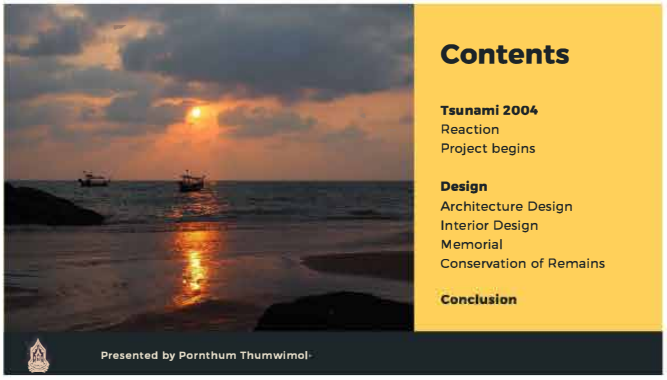




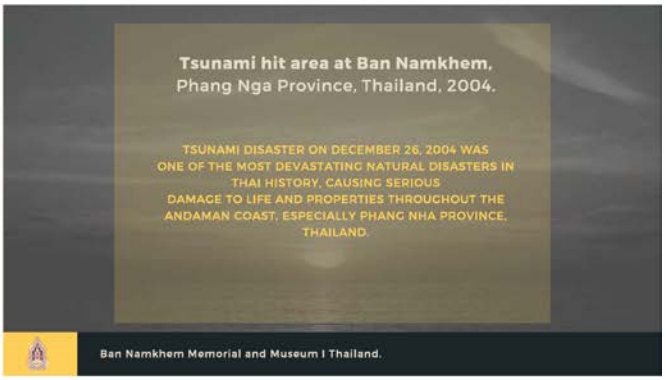
- Since 2010, the area damaged by the eruption of Mt. Bandai Start "Disaster Geo Tour" to visit
- Recently, local residents talk about past disasters

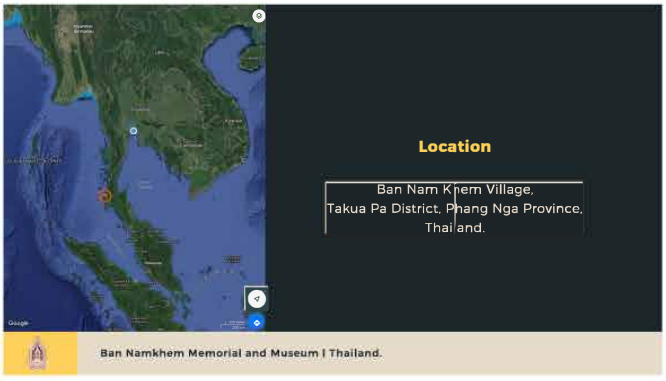
ポルンタム タムウィモル
Pornthum Thamwimol

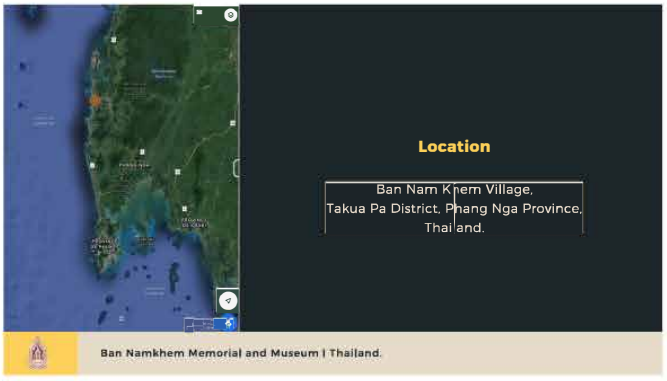


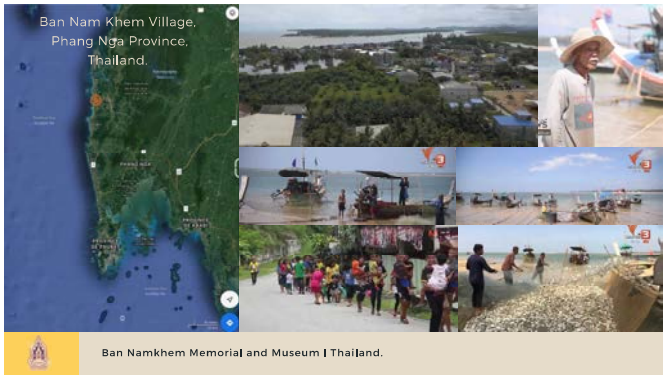











Ban Nam Khem Village,
Phang Nga Province,
Thailand.
Ban Namkhem Memorial and Museum | Thailand.


Remaining
Objects 2004
2 Fishing Vessels
Ban Namkhem Memorial and Museum | Thailand.


Tsunami Hitted area 2004


Tsunami Hit area 2004


Tsunami disaster
Learning Center,
Museum and
Memorial
The Current Location
Area app. 8,000 square metres
2 Fishing Vessels
Ban Namkhem Memorial and Museum | Thailand.


The Ministry of Culture is aware of the necessary
to note the circumstance and provide knowledge about the tsunami disaster.
Along with the restoration the life of communities affected by disaster, the project to establish an outdoor
museum and tsunami disaster learning center in the area that has been badly damaged. Ban Nam Khem
village, therefore occurred.



The construction begins in 2016

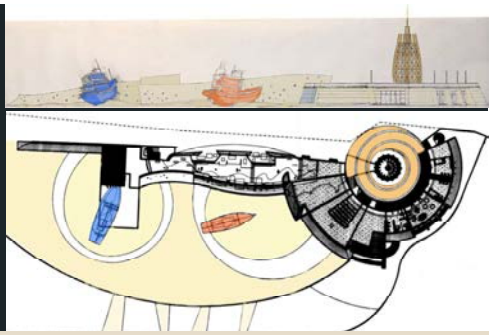
with the conservation of two vessels

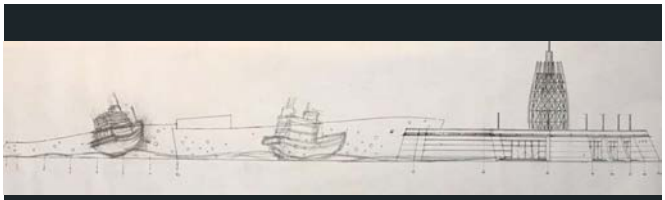




SITE PLANNING & ARCHITECTURE

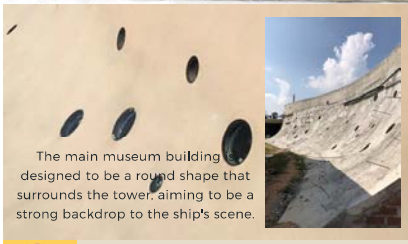
The main museum building is designed to be a round shape that surrounds the tower, aiming to be a strong backdrop to the ship's scene.





The ships and wrecks founded in the disaster are displayed on the sand ground in the open-air for simulation.





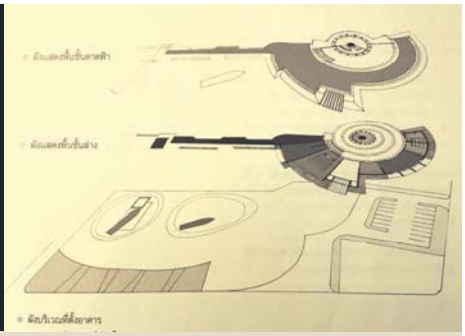
The main museum building is designed to be a round shape that surrounds the tower, aiming to be a strong backdrop to the ship's scene.

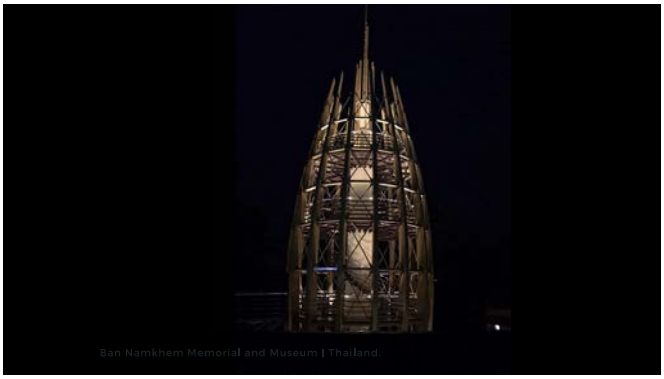




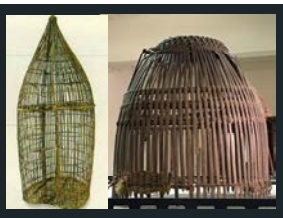
ARCHITECTURE

In addition to the information center, indoor exhibition space and conference rooms, there is also an important section that serves as a disaster warning center and emergency shelter.









The 3-story observation deck, 12 meters high, has been designed with steel structures. The architectural style of tower was inspired by the local fishermen's fishing tool.

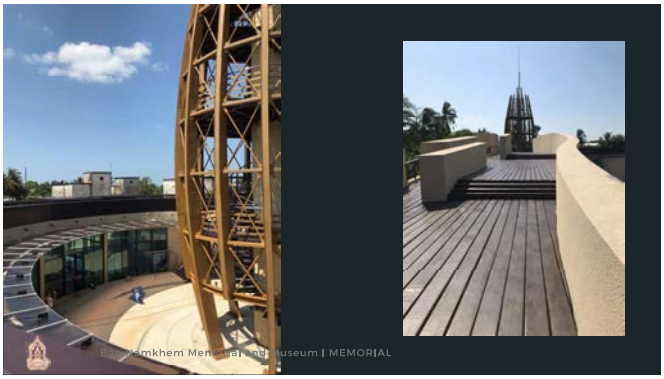




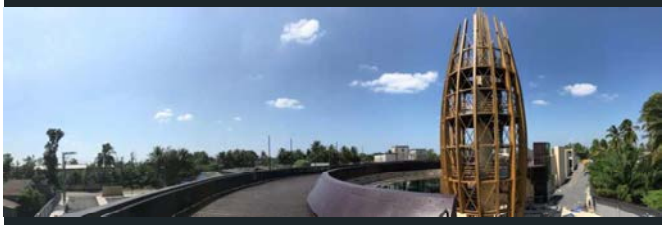


The open top floor of the museum building, the semicircle space around the observation tower is placed a remembrance area dedicated to the victims of the tsunami at Ban Nam Khem, approximately 2000 peoples.

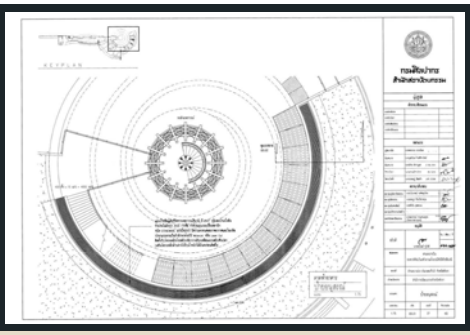
Ban Namkhem Memorial and Museum | MEMORIAL



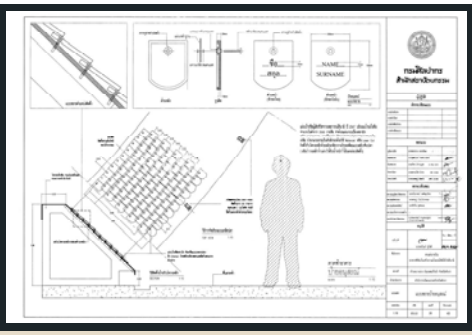
Ban Namkhem Memorial and Museum | MEMORIAL



Ban Namkhem Memorial and Museum | MEMORIAL



Ban Namkhem Memorial and Museum | MEMORIAL



Ban Namkhem Memorial and Museum | MEMORIAL

The architectural design uses the local art, the landscape and vegetation are unique, calming and respect for the place to convey the lives of local fishermen as well as the cultural landscape and history of natural disasters by recognizing the potential of community development and sustainable tourism.



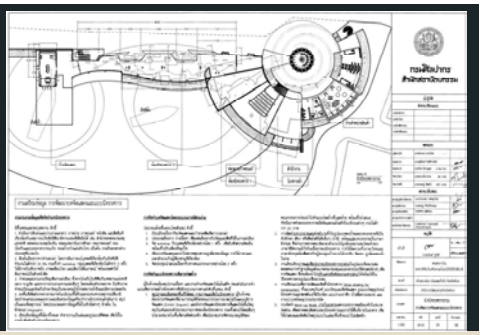
Ban Namkhem Memorial and Museum | ARCHITECTURE

INTEROIOR DESIGN & EXHIBITION

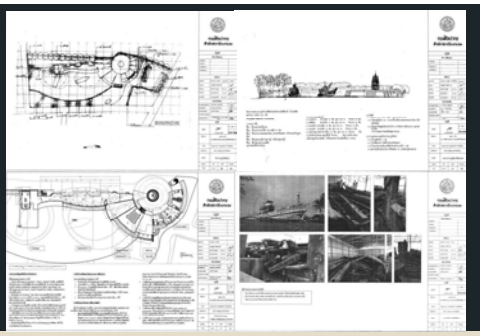
UNDER CONSTRUCTION



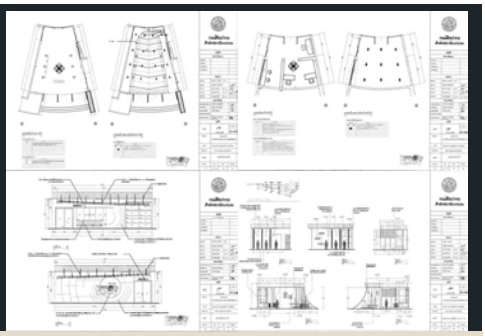
Ban Namkhem Memorial and Museum I INTERIOR



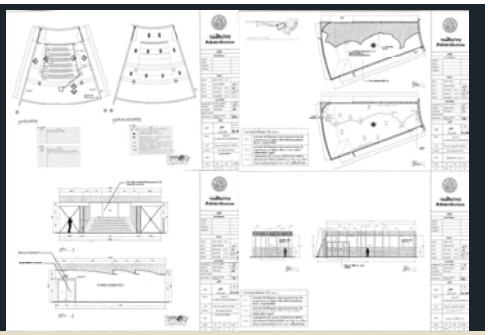
Ban Namkhem Memorial and Museum I INTERIOR



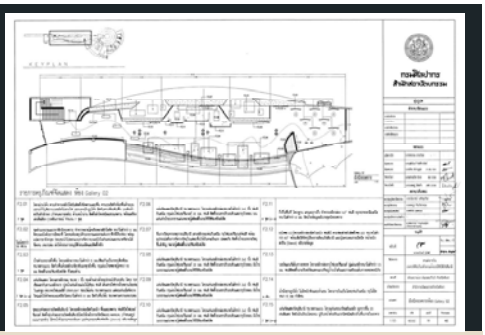
Ban Namkhem Memorial and Museum I INTERIOR



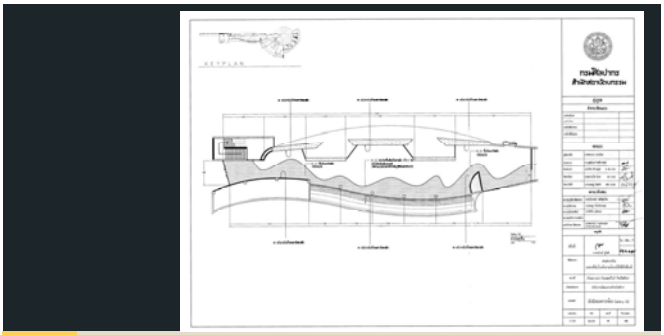
Ban Namkhem Memorial and Museum I INTERIOR



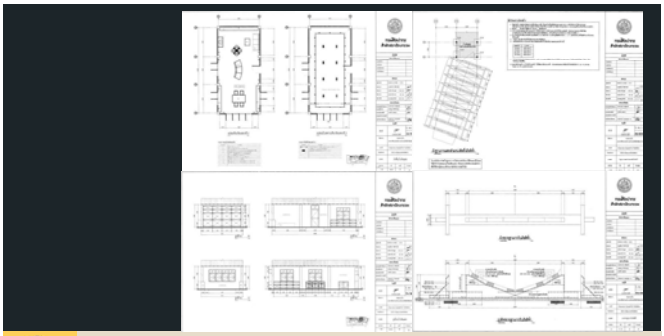
Ban Namkhem Memorial and Museum I INTERIOR



Ban Namkhem Memorial and Museum I INTERIOR



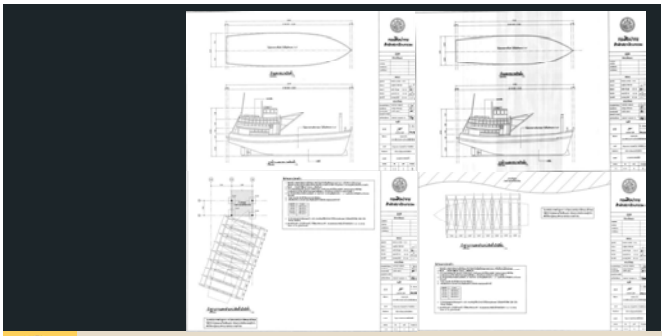
Ban Namkhem Memorial and Museum I INTERIOR



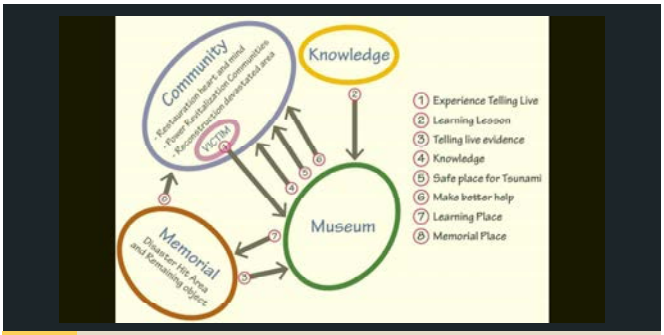
Ban Namkhem Memorial and Museum I INTERIOR



Ban Namkhem Memorial and Museum I CONSERVATION OF VESSELS



Ban Namkhem Memorial and Museum I CONSERVATION OF VESSELS



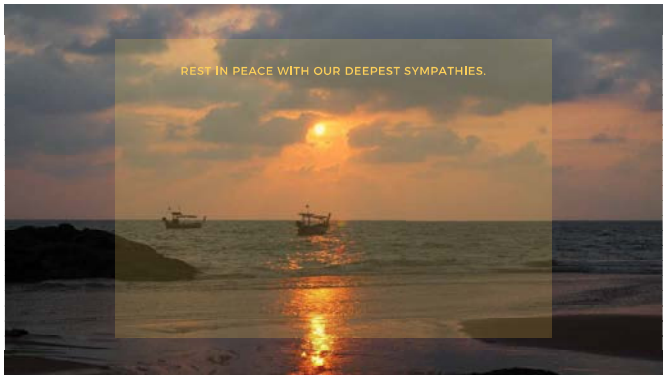
Ban Namkhem Memorial and Museum I CONCLUSION

From real experience...

My wife and I are one of the victims who survived the tsunami in 2004.

Source :
Daily News Newspaper, 10 Jan. 2005.




REST IN PEACE WITH OUR DEEPEST SYMPATHIES.

ラチャニーコーン　ソンティップ
Ratchaneekorn Thongthip



INTERNATIONAL TSUNAMI MUSEUM



TSUNAMI MEMORIAL MUSEUM

Khao Lak, THAILAND



On 26 December 2004, Thailand was hit by the greatest natural disaster in its history. A massive earthquake measuring magnitude 9.3 occurred off the west coast of Northern Sumatra, creating giant tsunami waves that devastated the shores of 14 countries around the Indian Ocean. The waves ravaged the Andaman Coast of Thailand causing unprecedented death and destruction in six coastal provinces.

About the museum

- The Museum was founded on 19 July, 2006
- The purpose of the museum are
1. To increase awareness and knowledge of tsunamis and natural disasters
2. To help and support the local children
- The museum is operated by the Institute for Education and Culture (a non-profit organization)
- The museum runs by the only organization's implementing and the kind donation support from the museum visitors without any fund from any other units since its inception of the museum until the present time.



Tsunami museums in Thailand operating in two sites in Phang-Nga Province the most affected area in Thailand. The International Tsunami Museum and Tsunami Memorial Museum were formed by student leaders who were strongly committed to social work supporting tsunami-related events.

Opening its doors in 2006, the museum's purpose is to increase awareness about tsunamis and other natural hazards.

Institute for Education and Culture

The Institute for Education and Culture, a non-profit organization operates the International Tsunami Museum and Tsunami Memorial Museum, which have recognized for its outstanding social contributions at the province level. The Institute for Education and Culture was awarded by the board of National Social Welfare and the Ministry of Social Development and Human Security as well as the National Council on Social Welfare of Thailand.







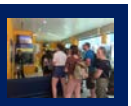


Open daily during 9:00-21:00 all year round, both museums receive no direct funding from other organizations. The museum management is administered by a committee comprised of a number of academic lectures and the Director Ms. Ratchaneekorn Thongthip. Small personal contributions allowed the hiring of an officer to take care of the museum. Most generously, entrance to the museum is entirely free for the local residents, children and school, and donation are used for supporting the local children. The museum shows the exhibits which include animations and videos of the cause of tsunami, tsunami warning sign, the impact of the tsunami on the environment, tsunami survivor stories, early warning systems , sand sheets of Phra Thong Island providing tangible evidence that the 2004 tsunami was not the first of its kind. The visitor of the museums include ambassadors, international university study tours and notable celebrities.

Open 9.00 a.m. – 9.00 p.m. Every Day

- EXHIBITIONS, ANIMATIONS, PHOTOS
- TSUNAMI VIDEOS
- The Indian Ocean Tsunami 2004
- Tsunami Survivor Stories
- How to Survive a Tsunami
- Tsunami Warning Signs
- Tsunami Warning System










MUSEUM AND COMMUNITY



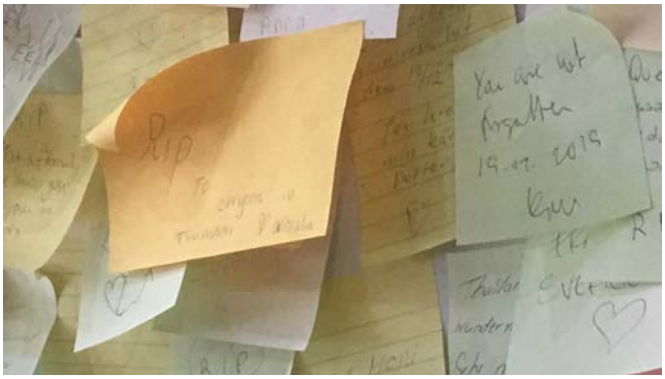












TSUNAMI EVACUATION DRILL



Disaster Tour : Tsunami storytelling from a museum

In 2019, the museum starts the Disaster Tour to show the knowledge and information about the tsunami, travel to the tsunami affected area, storytelling, telling live lessons and geopark. The Role of the Tsunami Museums as centers for knowledge transmission, passing-on the memories and prepare for the future.







The Important of Strong Network and Technical Assistance



By an introduction of Japan Embassy in Thailand, JICA invited the museum director to attend the World Tsunami Museum Conference in 2017 which the museum director got chance to meet Assoc. Prof. Anawat Suppasri, International Research Institute of Disaster Science at Tohoku University.

He keeps supporting the technical assistance and is now one of the museum advisors.

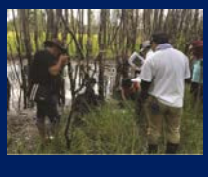


Phra Thong Island Research Project







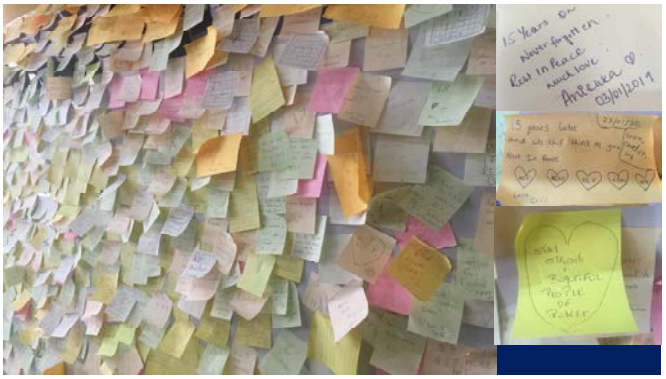


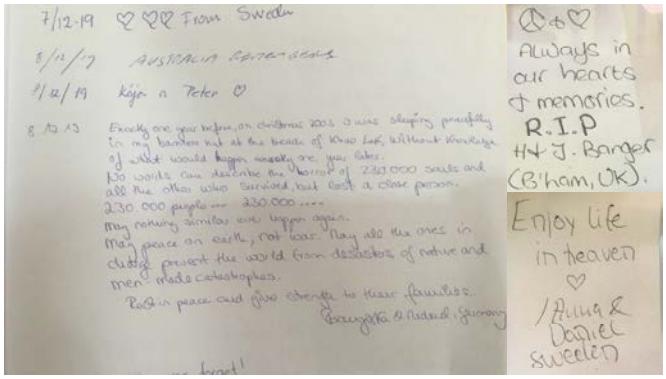


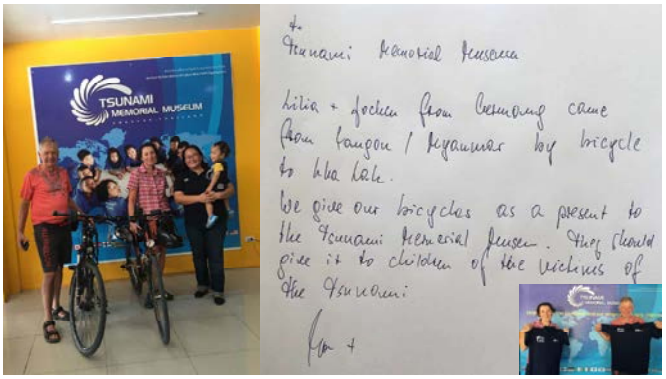
Narration and Sustainable Operation of the museum











Ms. Ratchaneekorn Thongthip
Director
International Tsunami Museum
THAILAND

E-mail : ratchaneekorn.thongthip@gmail.com
Mobile Phone : (+66) 081 442 5660

International Tsunami Museum
9/60 M.6 Khuakhak, Takuapa, Phang-nga 82220
THAILAND



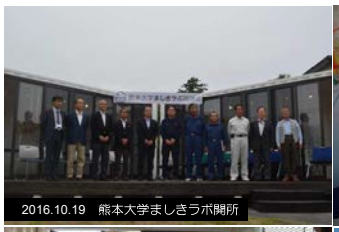
田中尚人
Naoto Tanaka

b　語り継ぎとツーリズム分科会
（Telling live lessons and tourism）分科会
◆セッションの運営方針
　３つの「つなぐ」をテーマにセッションを運営します。
１．災害後と災害前をつなぐ
　：日常と非日常，五感の風景を基盤とした語り継ぎ
２．地域住民と来訪者をつなぐ
：着地型観光やオルタナティブツーリズム
３．被災地と未災地をつなぐ
　：観光が引っ張る復興，あるものを活かす「地域らしさ」
　３つの「つなぐ」を，「知る，考える，伝える」という学びのあり方，先生徒という学ぶ姿勢に結び付けて話し合う。

ワークショップの約束：**他人を否定しない，人の話をちゃんと聞く，自分の言葉でかたる**



2017.8.27（日）13:30　「みんなの熊本城プロジェクト」ワークショップ



2016.10.19　熊本大学ましきラボ開所



2016.11.5



2016.11.20



2017.12.11

熊本大学ましきラボの活動「オープンラボ」



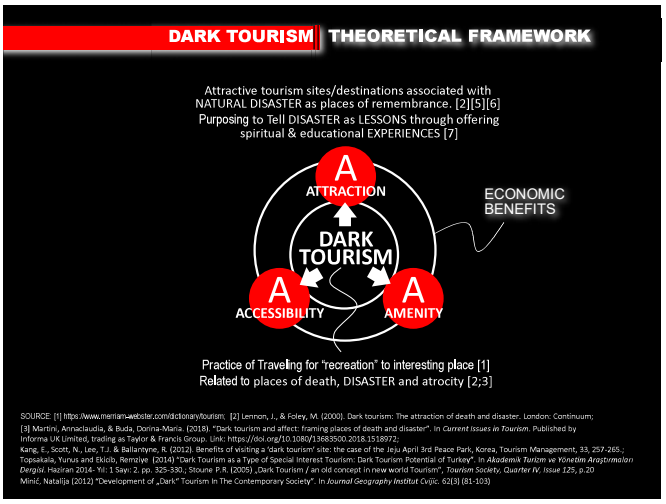




2018.7.15（日）故郷復興熊本会議@健軍文化ホール

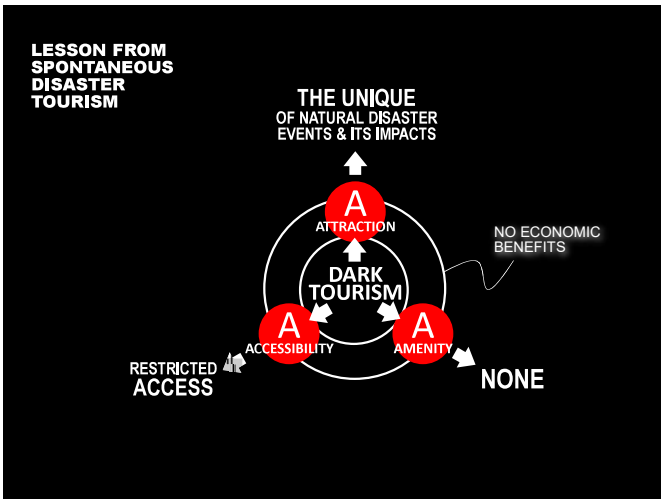
イカプトラ
Ikaputra





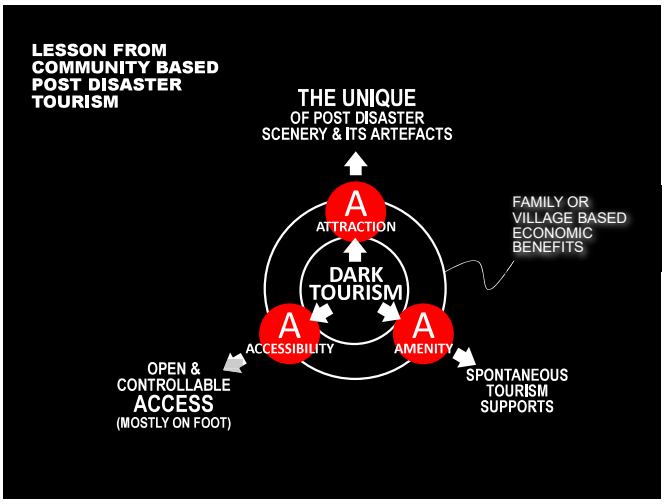


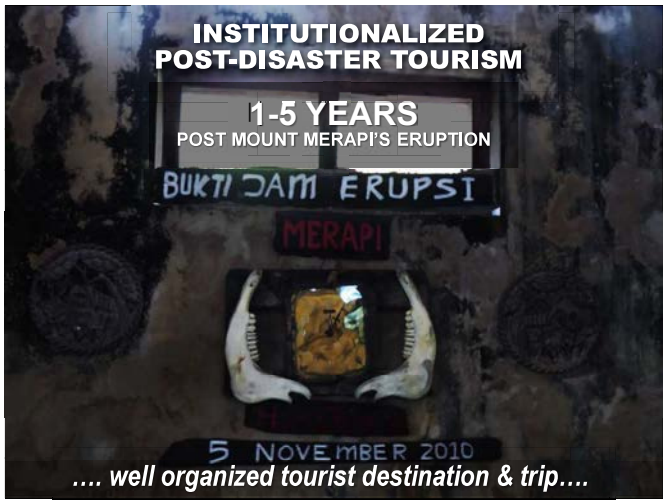




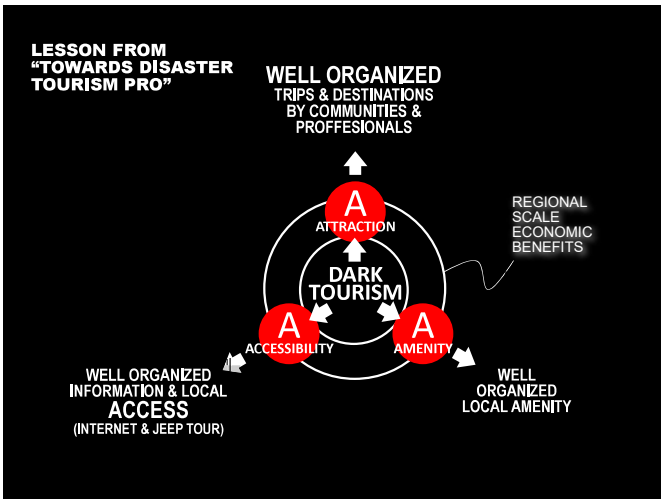



COMMUNITY BASED POST-DISASTER TOURISM
Creating Memory with Merapi Post Eruption
1-6 MONTHS
THE UNIQUE OF POST DISASTER SCENERY & ITS ARTEFACTS
POST ERUPTION
"ENJOY & LONG STAY"

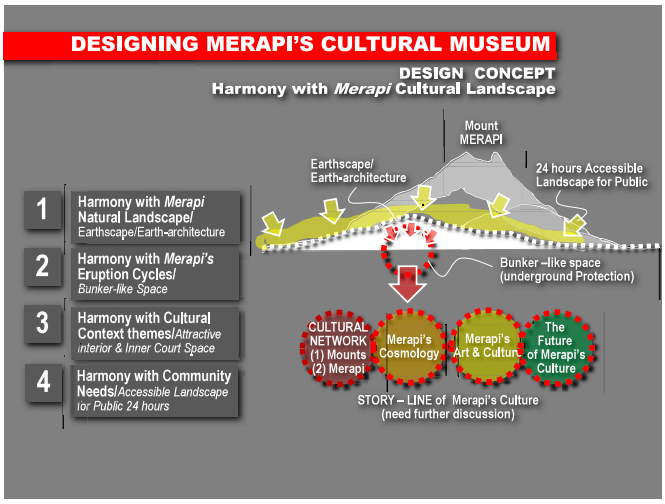

LESSON FROM COMMUNITY BASED POST DISASTER TOURISM
THE UNIQUE
OF POST DISASTER SCENERY & ITS ARTEFACTS
A ATTRACTION
DARK TOURISM
A ACCESSIBILITY
A AMENITY
FAMILY OR VILLAGE BASED ECONOMIC BENEFITS
OPEN & CONTROLLABLE ACCESS
(MOSTLY ON FOOT)
SPONTANEOUS TOURISM SUPPORTS


INSTITUTIONALIZED POST-DISASTER TOURISM
1-5 YEARS
POST MOUNT MERAPI'S ERUPTION
BUKTI DAM ERUPSI
MERAPI
5 NOVEMBER 2010
.... well organized tourist destination & trip....

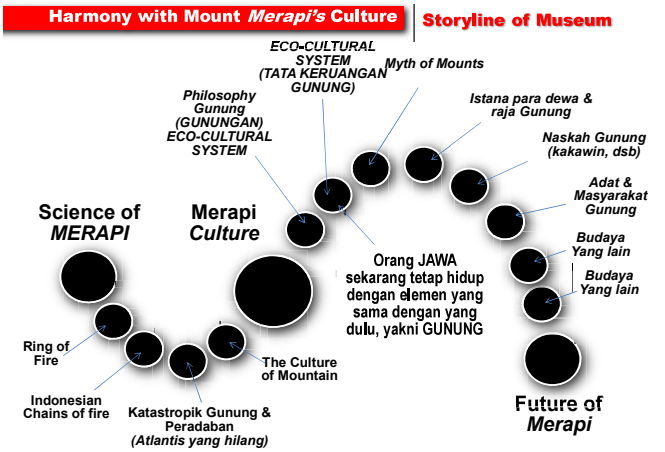

INSTITUTIONALIZING POST-DISASTER TOURISM
Well organized Community Amenity (Local Souvenirs)
1-5 YEARS
THE WELL DEVELOPED POST DISASTER TOURIST TRIP & DESTINATION
TOWARD TOURISM PRO
COMMUNITY BUSINESS


LESSON FROM "TOWARDS DISASTER TOURISM PRO"
WELL ORGANIZED
TRIPS & DESTINATIONS BY COMMUNITIES & PROFFESIONALS
A ATTRACTION
DARK TOURISM
A ACCESSIBILITY
A AMENITY
REGIONAL SCALE ECONOMIC BENEFITS
WELL ORGANIZED INFORMATION & LOCAL ACCESS
(INTERNET & JEEP TOUR)
WELL ORGANIZED LOCAL AMENITY


CULTURE OF LIVING IN HARMONY WITH MERAPI
1-10 YEARS
MEMORIAL MUSEUM/PARK FOR MERAPI'S LIVING CULTURE
.... Formatting Lessons from Merapi for future....

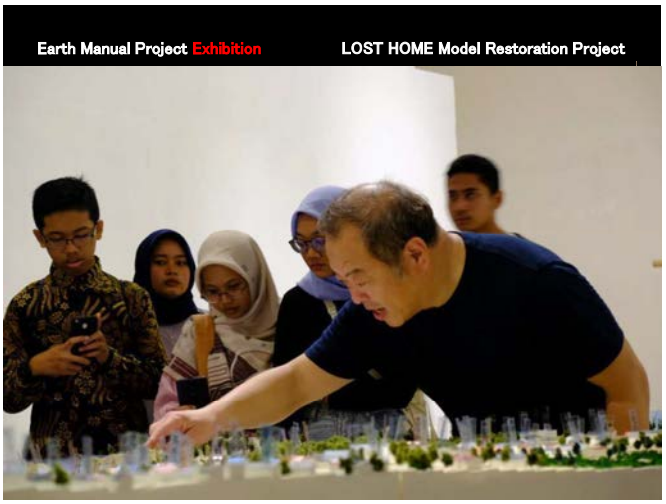

DESIGNING MERAPI'S CULTURAL MUSEUM
DESIGN CONCEPT
Harmony with Merapi Cultural Landscape
1 Harmony with Merapi Natural Landscape/ Earthscape/Earth-architecture
2 Harmony with Merapi's Eruption Cycles/ Bunker-like Space
3 Harmony with Cultural Context themes/Attractive interior & Inner Court Space
4 Harmony with Community Needs/Accessible Landscape for Public 24 hours
Mount MERAPI
Earthscape/ Earth-architecture
24 hours Accessible Landscape for Public
Bunker –like space (underground Protection)
CULTURAL NETWORK (1) Mounts (2) Merapi
Merapi's Cosmology
Merapi's Art & Cultur
The Future of Merapi's Culture
STORY – LINE of Merapi's Culture (need further discussion)


Harmony with Mount Merapi
Harmony with Merapi's Eruption
(Bunker Like Museum)
MERAPI CULTURAL MUSEUM


Harmony with Mount Merapi's Culture
Storyline of Museum
ECO-CULTURAL SYSTEM (TATA KERUANGAN GUNUNG)
Myth of Mounts
Philosophy Gunung (GUNUNGAN) ECO-CULTURAL SYSTEM
Istana para dewa & raja Gunung
Naskah Gunung (kakawin, dsb)
Adat & Masyarakat Gunung
Budaya Yang lain
Budaya Yang lain
Science of MERAPI
Merapi Culture
Orang JAWA sekarang tetap hidup dengan elemen yang sama dengan yang dulu, yakni GUNUNG
Ring of Fire
The Culture of Mountain
Indonesian Chains of fire
Katastropik Gunung & Peradaban (Atlantis yang hilang)
Future of Merapi


Harmony with Mount Merapi's Culture
Storyline of Museum
Framing the Mount for Future Culture
Indoor-Outdoor


FORMATTING LESSONS FROM MERAPI FOR FUTURE
LOST HOME
Inspiring & Working with Prof Osamu Tsukihasi
> 9 YEARS
CULTURE OF LIVING IN HARMONY WITH MERAPI
MEMORY OF THE LOST
COMMUNITY HISTORY


Earth Manual Project Exhibition
LOST HOME Model Restoration Project

Earth Manual Project Exhibition LOST HOME Model Restoration Project

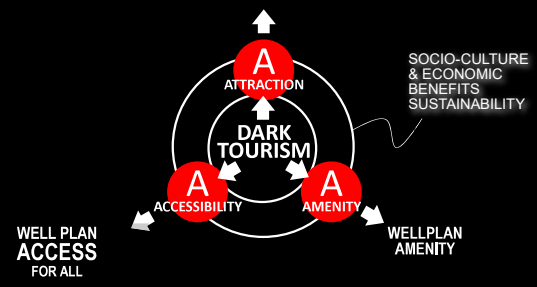
FORMATTING LESSONS FROM MERAPI FOR FUTURE



Bakalan's LOST HOMES PROJECT TEAM (Kobe-U & UGM)

LESSON FROM CULTURE OF LIVING IN HARMONY WITH MERAPI

Formatting Lessons from Merapi for future
(Profesional/Community Version)



THANK YOU VERY MUCH

草野悟
Satoru Kusano

SANRIKU RAILWAY
corporate slogan

笑顔をつなぐ‥ずっと

Connecting smiles...all the time



Economic Ripple Effect on the Area by Sanriku Railway

「つなぐ」が地方の衰退を止める

公益財団法人 さんりく基金 総括コーディネーター
Public Interest Incorporated foundation SANRIKU FUND General advisor
三陸鉄道株式会社 総合アドバイザー
SANRIKU RAILWAY inc General advisor

草野 悟
SATORU KUSANO

三陸鉄道【略称:三鉄】の概要



◎三陸鉄道㈱は、岩手県の陸中海岸を縦貫する路線を持つ、第三セクター方式の鉄道会社

◎国鉄再建法により「特定地方交通線」に指定された旧国鉄盛線(盛～吉浜)・宮古線(宮古～田老)・久慈線(普代～久慈)、及び旧日本鉄道建設公団で建設中だった吉浜～釜石・田老～普代を引き受け、**昭和59年4月1日に全国で最初の特定地方交通線転換の第三セクターとして開業**

◎運行区間
・北リアス線：宮古～久慈駅 71.0km
・南リアス線：盛～釜石駅 36.6km

◎資本金 3億円(県、沿線市町村等が株主)

◎本社 宮古市(運行部は久慈市と大船渡市)

◎開業から10年間は黒字、以後はずっと赤字







荒川橋梁

神戸はじめ関西、四国、九州ほか全国からの温かい支援に心より感謝しています

苦難の復旧活動の結果
5年後、全線の復活と
なりました。

沿岸各都市の復旧活動の
中では、いち早い復旧と
なりました。







第三セクター鉄道として日本最長のローカル線　三陸鉄道リアス線

平成31年　3月23日　一貫鉄道全通



盛駅　‥‥　久慈駅　163キロ

昭和５９年４月１日開業
災害復旧　平成26年4月1日
南北リアス線　全線開通

北リアス線　71‥0キロ
旧山田線　55‥4キロ
南リアス線　36‥6キロ

北リアス線　旧ＪＲ山田線　南リアス線
久慈駅　田野畑駅・普代駅　宮古駅　鵜住居駅・大槌駅　釜石駅　吉浜駅・三陸駅　盛駅



再び重大な危機に　2019‥10. 13　台風19号





Economic Ripple Effect on the Area by Sanriku Railway

三鉄の地域への貢献は

三陸沿岸の経済に大きな波及効果
三陸鉄道の収入の**20倍以上**の恩恵



三陸鉄道は、観光客一人あたりの収入は＠８００円
その一人が、地元にもたらす金は、＠１６，０００円以上

2015年、旅行代理店1社(C社)の送客数20万人を基準に計算すると

三陸鉄道の収益は
２０万人乗車 ×８００円 → 1億6千万円

三鉄による経済波及効果
沿岸には、＠１６，０００円 → **32億円**

視察団体の例



宿泊、買い物、飲食など15，000から 20，000円以上を消費

三陸鉄道の経営方針は、

現場、現実、現状は、被災現場にある。正しく伝えていくことで、防災、減災、意識の向上につながる

東日本大震災の経験と教訓を残し続けていく
震災学習列車・三鉄フロントライン研修・全社員が語り部

地域の活力向上に共に取り組み、活動を続けていく
駅-１グルメ　三陸の食の魅力を応援・全社員無償奉仕

Media effect (Population decline due to disaster news impact
話題発信の中心を担うことで、三陸の認知向上に寄与する
三鉄だけが有名になるのではなく、地域と共にある

社員が特定被災地(要望)のガイド

Sanriku railway disaster Frontline Training
三陸鉄道フロントライン研修



車両が無い中
運転士が被災地
ガイドとなって
収入を得る
努力を続けた

約　１1,５００人を案内



Earthquake learning train (tourism for students)

震災学習列車

２０１４年より本格スタート

２０１９年末現在
61，000人
1345団体



Sanriku railway disaster Frontline Training (Intensive, category-specific tourism)

震災遺構巡礼（ダークツーリズム）常時コース等検討



大槌町旧庁舎

2019年 解体



エキイチ
駅−1グルメ
毎号 ５万部 発行

2019年12月 第14号発行
累計発行部数 63万部

八戸から気仙沼までの三陸沿岸
特色のある飲食店400店舗紹介

被災したお店も、駅-1で復活多数

企画は、次々と報道にリリース、常に「話題」を提供



２０１０年３０万人 →２０１９年 ２４万人

被災地を救えるのは

定住者増 ⇦ 交流人口 ⇨

Sanriku Railway is the tow of regional symbolic reconstruction

三陸鉄道が牽引車

訪れてくれる仕組みを常に考え、それを実行する

一般観光客
支援の県内企業
教育旅行
ビジネス巡回
工事関係者
大学教授、研究者
商業、流通支援者
ボランティア
NPO、NGO
政府、行政関係者
被災地視察者
親せき、知人

半面、「負」の部分も伝えなければならない

Expecting actors over advocates and critics

１００の評論より、一人の実行者がいることがとても大事

大型公共工事は着々と完成に向かっている一方

戸建住宅、災害公営集合住宅、ライフラインの整備

三陸沿岸道、釜石道、中心市街地整備道路の整備

港湾、堤防、漁業設備等の復旧、高規格化ほぼ完成

三陸鉄道の一貫鉄道化(163キロ) 完成

宮古一室蘭定期フェリー航路運航中 3月で停止決定

巨大防潮堤工事、水門工事 進行中完成間近

震災伝承館施設各地で完成

復興スタジアムほか沿岸各地にスポーツ施設完成

駅中心の街づくり進行中

VS

にぎわい感減少中

住民生活者の困窮
震災以前より苦しくなっているが６割超え

産業の衰退(人手不足)
賃金上昇・有効求人倍数上昇中・水産業停滞

人口減少の顕著化
高校生等若年層減少・高齢化率上昇

被災者健康問題浮上
新居での孤独感増幅

復興プロジェクトの結果判断は　５０：５０

マイナス	プラス
高速交通網　→ストロー現象 素通り減少で売り上げ減少・住民の流出増	物流強化、販路拡大 観光客誘致・交流人口拡大も効果的・住民生活に利便性
人手不足　→沿岸産業衰退 地場企業不利・三鉄定期券に影響	空前の高就職率・売り手市場 新卒層は有利、大企業は有利
巨大防潮堤　→原風景破壊 盛り土、切り崩しで故郷色半減・風景損傷で観光面不利	津波体験者は安心 ※当初賛成者が完成後反対に回るケース増
漁獲量激減　→高齢化と意欲低減 生産量減少はモチベーションに影響	価格高騰で一部収益増 品薄で価格高騰　組合　卸は有利
グループ補助金返還　→　経営難 ホテル、旅館等　客足減少	淘汰によって生き残り 同業者減少で経営有利
住宅　→　引き渡し拒否 公営住宅移転　最初は喜び、その後孤独感　コミュニティ形成できず	高台移転で安心 中心市街地に近い移転は生活有利

工事バブルの収束

大型工事車両渋滞が解消と同時に各地で景況感低迷

公共工事の完成で工事関係者激減　‥飲食店にも影響

高規格道の完成が相次ぎ、素通り減少多発　‥小売業など客数激減

大船渡から宮古エリアの民宿の廃業相次ぐ‥‥観光産業に影響



２０１９年までの課題

補助金、交付金、低利借入　→　多額の累積借入

立派な工場　グループ補助

大型宿泊施設

民宿の閉鎖

コンビニ、スーパー等の商店衰退(高速道・通過影響)

水産業の水揚げ減少　(主力魚種の漁獲大幅減少・養殖不振)

食品加工事業所　原材料高騰、不足、労働力減少　(人手不足)

外国人ばかりでなく日本人も「福島」を敬遠

風評



福島原発事故汚染水タンク

外国では福島と三陸の区別が難しい

6月来日のフランス人シェフの言葉

岩手県でも数多くのものが販売停止中

宮城県「ホヤ」は韓国より完全シャットアウト

沿岸景気は→「風化」が売り上げに影響

風化

住民は
あまり意識
していない

生きる喜びが欲しい

楽しい毎日をおくりたい

街の元気、活気が欲しい

個人は　とまどい
「大変でしたね」と今言われても　‥‥‥

日常に戻ろうと一生懸命

地域が連携してこそ、震災ツーリズムが成立する

Earthquake-related tourism can only be realized through regional cooperation



笑顔をつなぐ、ずっと‥

掲載の写真、資料は
転用や使用はできません。

資料
岩手県復興局
福島県原発被災資料
福島県楢葉町資料
日本赤十字
ｸｳｴｰﾄ国
三陸鉄道
岩手日報社
日刊スポーツ
元プロ野球選手
朝日新聞・関西学院大共同調査資料
2015国勢調査速報値
漁業センサス2013
岩手の工業分類別統計
東北農林水産統計(H27)
学校基本統計速報(H27)
県民経済計算
岩手県経済白書
都道府県別石油製品販売実績(H27)
NHKホームページ

写真、文　草野　悟

山崎麻理子
Mariko Yamazaki

2020 世界災害語り継ぎフォーラム
The International Forum on
Telling Live Lessons from Disasters

2020.01.25
一般財団法人3.11伝承ロード推進機構 山崎 麻里子
Mariko Yamazaki
General Incorporated Foundation
3.11 Densho Road Promotion Organization

中越メモリアル回廊
The CHU-ETSU Eaethquake Memorial Corridor



熊本地震震災ミュージアム 熊本地震 記憶の廻廊

出典：熊本県知事公室




東海大学阿蘇キャンパス

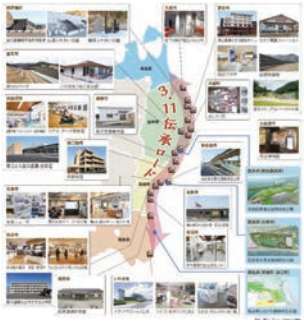

地表地震断層（益城町 潮井神社


巨大な落石（大津町 瀬田神社）

●震災遺構の保存
●熊本地震の情報を発信する拠点の整備
●熊本地震関連の情報発信

3．11伝承ロード 3.11 Densho Road

「教訓が、いのちを救う」Lessons save lives



各地に残された震災遺構


高野会館（阿部長商店）


大川小学校（石巻市）


たろう観光ホテル（宮古市）

各地に整備された震災伝承施設


いのちをつなぐ未来館（釜石市）


震災津波伝承館（岩手県）


3.11メモリアル交流館（仙台市）


東日本大震災学習・資料室（みやぎ生協）

各地で行われる震災伝承活動



市民向け防災研修（ゆりあげかもめ）
会員向けスキルアップ研修（ゆりあげかもめ）
定期開催「語り部ガイド」（大川伝承の会）
市民向け防災研修（石巻伝承の会）

3．１１伝承ロードの構築

震災伝承ネットワーク協議会
（2018年7月発足）

目的：大震災の記録や経験、教訓等を伝える震災伝承をより効果的・効率的に行うためのネットワーク化に向けた連携を図ること

【構成委員】

東北地方整備局	局長（会長）、企画部長（副会長）、建政部長
青　森　県	県土整備部長
岩　手　県	復興局長、県土整備部長
宮　城　県	震災復興・企画部長、土木部長
福　島　県	企画調整部長、土木部長
仙　台　市	まちづくり政策局長、都市整備局長

【３つの取り組み】
○震災伝承ネットワークの運営・伝承ロード形成
○防災プログラムの基盤形成と開発
○復興に向けた地方創生・地元支援

震災伝承検討会
（2018年12月発足）

目的：今後の取り組み等について、学識者、被災市、産業界等からも幅広く意見を聴取する

【構成委員】

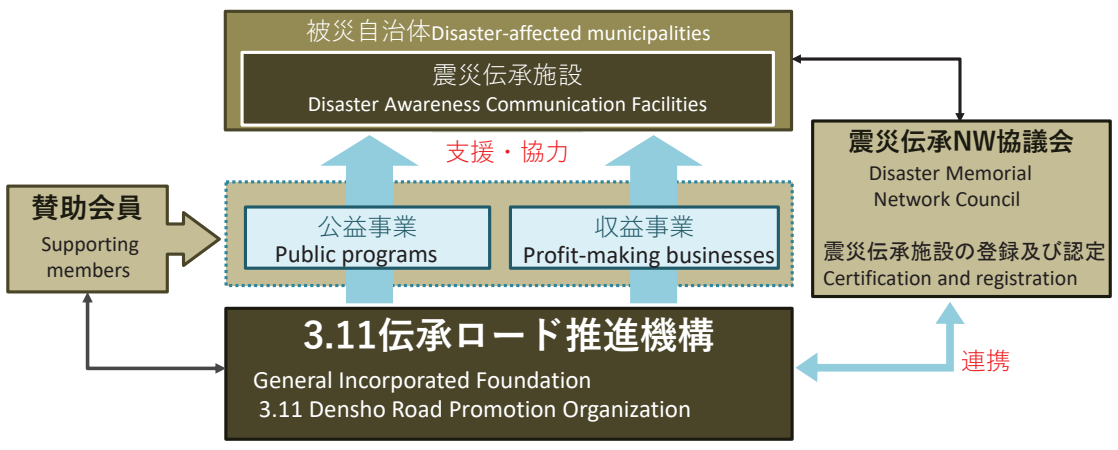
【座長】	今村　文彦	東北大学災害科学国際研究所長
【委員】		
学　識　者	小沢　喜仁	福島大学教授
	南　　正昭	岩手大学教授
	涌井　史郎	東京都市大学教授
民間業団体等	小縣　方樹	(一社)東北観光推進機構会長
	海輪　誠	(一社)東北経済連合会会長
	鎌田　宏	東北六県商工会議所連合会会長
	千葉　嘉春	東北建設業協会連合会会長
	等々力　健	日本放送協会仙台放送局長
	平田　尚久	(一社)日本建設業連合会東北支部長
自　治　体	小林　眞	八戸市長
	山本　正徳	宮古市長
	亀山　紘	石巻市長
	清水　敏男	いわき市長

【提言】
①震災伝承施設の活用、②教訓のアーカイブ化、③防災力の強化、④交流促進による地域の活性化の観点から、産学官民が連携して取り組むための推進体制の構築が必要。

3．１１伝承ロード推進機構
3.11 Densho Road Promotion Organization

各震災伝承施設をネットワーク化する「プラットフォーマー」となる。
地域の防災力の向上と被災地振興を図る「コーディネーター」となる。

To serve as a platform that networks every Disaster Awareness Communication Facility.
To serve as a coordinator for improving local disaster prevention capabilities and the promotion of the disaster-affected areas.



3．１１伝承ロード登録施設（震災伝承NW協議会）

236施設（R2.6.9現在）
- **青森県…6施設**
- **岩手県…81施設**
- **宮城県…116施設（仙台市…20施設含む）**
- **福島県…33施設**

主な震災伝承施設（第3分類）

八戸みなと体験学習館
津波遺構たろう観光ホテル
たろう潮里ステーション
宮古市市民交流センター　防災プラザ
田老防潮堤
震災メモリアルパーク中の浜
大船渡市立博物館
地下水族科学館　もぐらんぴあ
3. 11東日本大震災遠野市後方支援資料館
釜石祈りのパーク
いのちをつなぐ未来館
大槌町文化交流センター おしゃっち
震災遺構明戸海岸防波堤
島越ふれあい公園
羅賀ふれあい公園
東日本大震災伝承館(いわてTSUNAMIメモリアル)
高田松原国営追悼・記念施設
東日本大震災　学習・資料室
せんだい3.11メモリアル交流館
震災遺構 仙台市立荒浜小学校
石巻ニューゼ
震災伝承スペースつなぐ館
東日本大震災メモリアル南浜 つなぐ館
唐桑半島ビジターセンター・津波体験館
リアス・アーク美術館　「東日本大震災の記録と津波の災害史」常設展示
気仙沼市 東日本大震災遺構・伝承館
津波復興祈念資料館　閖上の記憶
岩沼市 千年希望の丘交流センター
東松島市 東日本大震災復興祈念公園
高野会館
名取市震災メモリアル公園
塩釜市津波津波防災センター
石田沢防災センター
NHK仙台拠点放送局
山元町防災拠点・山下地域交流センター（1階防災情報センター）
山元町震災遺構　中浜小学校
中浜小学校震災モニュメント「3月11日の日時計」
アクアマリンふくしま
いわき市ライブいわきミュウじあむ「3.11いわきの東日本大震災展」
いわき市地域防災交流センター 久之浜・大久ふれあい館
相馬市伝承鎮魂祈念館
福島県環境創造センター交流棟「コミュタン福島」
城山公園
みんなの交流館　ならはCANvas
いわき震災伝承みらい館
東日本大震災・原子力災害伝承館



3．１１伝承ロード推進機構の活動
3.11 Densho Road Promotion Organization



震災伝承施設等に関する情報発信・支援等の充実・強化
Enhancing and improving information provision and support for Disaster Awareness Communication Facilities, etc.

各拠点を活用した防災教育・研修事業の企画検討
Planning and studying disaster prevention education and training programs that make use of the sites

各拠点を活用した「防災ツーリズム」の創出
Generation of "disaster-prevention tourism" that makes use of the sites.



3．１１伝承ロード推進機構
3.11 Densho Road Promotion Organization

「教訓が、いのちを救う」
Lessons save lives

松本和夫
Kazuo Matsumoto

Conveying the memories of the 2016 Kumamoto Earthquake to future generations

Office of the Governor / Kumamoto Prefecture

Overview of the 2016 Kumamoto Earthquake 1



Overview of the 2016 Kumamoto Earthquake 2

		ForeShock	Main Shock
Date & Time		April 14, 2016 21:26	April 16, 2016 01:25
Epicenter		Near Kumamoto City	Same as the Foreshock
Magnitude		6.5	7.3
Municipalities where the seismic intensity was recorded as 6Lower or above on the Shindo scale	Seismic Intensity 7	Mashiki Town	Mashiki Town Nishihara Village
	Seismic Intensity 6Upper	None	Kumamoto City, Kikuchi City, Uto City, Uki City, Koushi City, Ozu Town, Kashima Town, MinamiAso Village
	Seismic Intensity 6Lower	Kumamoto City, Tamana City, Uki City, Nishihara Village, Kashima Town	Yatsushiro City, Tamana City, Amakusa City, KamiAmakusa City, Aso City, Nagomi Town, Kikuyo Town, Mifune Town, Misato Town, Yamato Town, Hikawa Town

Summary of Damage 3

※As of 2019.10.11
（including Earthquake-related damage caused by heavy rains in June）

■Human Casualties

Deaths	272
Serious injuries	1,184
Minor injuries	1,553
Total	3,009

Causes of Death
○Deaths caused directly by the Earthquake 50 persons
○Other Earthquake-related deaths 222 persons

■Damage to Homes

Fully Destroyed	8,657
Half Destroyed	34,491
Partially Damaged	155,143
Total	198,291



Scale of the Earthquake & Impact on Kumamoto Citizens 4

○Within 28 hours, 7 tremors with a seismic intensity level above a 6Lower, and 2 tremors of seismic intensity 7 were recorded for the first time in Observational History.
○83% of Kumamoto's total population experienced an Earthquake above seismic intensity 6Lower, resulting in the evacuation of more than 10% of the population.

Scale of the Earthquake and its impact on the Prefecture; equal to the destruction of the Kobe Earthquake in 1995
～Active Aftershock Activities severely hindered the Early Recovery of prefectural citizens' life and economy～

Scale of the Earthquake and Damage ※There have been more than 4,500 Aftershocks since March 31, 2018

	No. of quakes above Seismic Intensity 6Lower	Aftershocks that occurred in the 15 following the main shock	No. of people affected	No. of Evacuees ※1	Total Financial Damage
Kumamoto Earthquake	7 ※2 tremors of seismic intensity 7	2,959	about 1.48M people (about 83% of the Prefectural Population)	about 184K people (about 10.3% of total Prefectural Population)	JP¥3,785billion (estimated by Kumamoto Prefecture in September 2016)
The Kobe/ Great Hanshin Earthquake (1995)	1	230	about 2.32M (about 42% of the Prefectural population)	about 317K (about 5.7% of the Prefectural population)	JP¥9,600billion (estimated by National Land Agency in February 1995)
Niigata-Chuetsu Earthquake (2004)	5	680	about 0.38M (about 16% of the Prefectural population)	about 103K (about 4.2% of the Prefectural population)	JP¥3,000billion (estimated by Niigata Prefecture in November 2004)

※1 No. of Evacuees was estimated from the no. of people who evacuated to Registered Shelters, This number excludes people who stayed in Non-Registered Shelters (cars, etc.).

Affected Areas 5


Mashiki Town Residential areas


Mashiki Town Residential areas


Minamiaso Village National Route 57


Aso City Prefectural road


Kumamoto City Kumamoto Castle


Kumamoto City Kenguh Shopping Arcade

To convey the memories, experiences, and lessons learned from the Kumamoto Earthquake to future generations

6

Kumamoto Earthquake Museum

sharing the memories of the Kumamoto Earthquake

Connects sites affected by the Kumamoto Earthquake with exhibition centers which host a collection of data about the earthquakes

The Prefectural Government and the eight affected municipalities are working together to create a "corridor-type field museum" to connect sites which act as reminders of the Earthquake

Digital Archive of the 2016 Kumamoto Earthquake

Stores and publishes documents related to the Kumamoto Earthquake for future generations to access

These documents are published on the website https://www.kumamoto-archive.jp/

Kumamoto Earthquake Museum

Kumamoto Earthquake Memory Corridor

7

The "Kumamoto Earthquake Museum" is a "corridor-style" field museum in which you may travel along a route that allows you to see reminders of the earthquake and visit centers where you can learn about the earthquakes.

■Basic concept of the Kumamoto Earthquake Museum

To teach people about the lessons learned from the Kumamoto Earthquake and make the information accessible to future generations

- Contribute to improving disaster preparedness for future large-scale natural disasters
- Promote the sharing of information both inside and outside of Japan, leading to further restoration of the affected areas and the development of Kumamoto Prefecture

■ Composition of the earthquake museum

- Earthquake remains (photo①)
- Exhibition centers for sharing information about the Kumamoto earthquake (photo②)
- Existing cultural and community facilities in which you can see traces of the Kumamoto earthquake

■ The ever-evolving earthquake museum

- As Kumamoto continues to recover, the museum will continue to grow

【Examples of regional bases (①)】



Surface earthquake fault (National designated natural monument) 【Mashiki town】

【Examples of regional bases (②)】



Former Cho-yo seibu Elementary school 【Minamiaso village】

Map of the Kumamoto Earthquake Museum

8



Goals for the realization of the Kumamoto Earthquake Museum

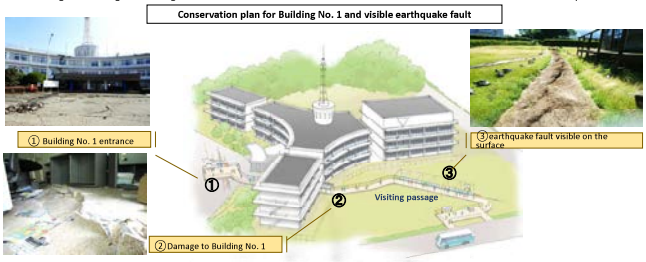
(1) Conservation of Kumamoto Earthquake Reminders

(Former Tokai University Aso School Building No. 1 and visible earthquake fault)

9

- Preserve the former Tokai University Aso Building No. 1 and the earthquake fault visible on the surface as the earthquake reminders (Open in spring 2020)
- Preserving the damaged building and the fault line as reminders of the disaster has never before been done in Japan .

Conservation plan for Building No. 1 and visible earthquake fault



Goals for the realization of the Kumamoto Earthquake Museum

(2) Development of the Main Exhibition Centers (Tokai University Aso Campus)

10



In addition to conserving sites to act as reminders of the earthquake, we also plan to open an exhibition hall to exhibit information about the earthquakes (Scheduled to open in spring 2022)

Goals for the realization of the Kumamoto Earthquake Museum

(3) Create a video recording of people telling their stories

11

We have recorded people talking about their experiences of the Kumamoto Earthquake , and the video is currently showing at the Kumamoto Prefectural Government Office lobby.
(We recorded 135 people, including children, students, companies, medical professionals and regional representatives)



Still image of a video

Speakers

Administrative staff	13
Police, self-defense force, fire department	13
Businesses, Tourism agencies	19
Medical and welfare professionals	11
Elementary, junior and senior high school students, university students	33
Residents of different regions	24
Storytellers, volunteers	22
Total	135

Goals for the realization of the Kumamoto Earthquake Museum
（4） Monitored tours to visit earthquake reminders and the exhibition centers
12

To ensure that the Kumamoto Earthquake and the lessons learned from it are not forgotten, monitored tours have been held around the earthquake reminder sites and tourism facilities since 2018. (These tours have been held 8 times, with 372 participants from both in and outside the prefecture (As of November 18, 2019))




Images of the Monitored Tour

Goals for the realization of the Kumamoto Earthquake Museum
（5） Renewal of Educational Tours
13

The number of educational trips in Kumamoto has significantly decreased since the earthquakes.
(Number of guests 2015:106,253people → 2016:34,584people)
→Restoring the number of educational trips (New sites, restoration of old sites)
Learn about the Kumamoto Earthquake
} Creation of a new learning program: 「Take a trip to learn about the Kumamoto earthquake」

FY2017 | FY2018 | FY2019

Decided on program contents, Training of guides and narrators

Started accepting educational trips
2018：Aso city
2019：Mashiki town, Kumamoto city, Minamiaso village

The Prefectural Government supported these educational trips

Establishment of a "one-stop counter" to handle educational trips

Took action to promote the learning program
(Travel agencies, Promoting to Schools, Promotional talks)






Finding the sites of the Kumamoto Earthquake Museum
（1） Preservation of earthquake reminders
14

【Kumamoto Earthquake Reminders candidates】 52

Example


Visible earthquake fault
(National designated natural monument)
【Mashiki Town】


Visible earthquake fault
(National designated natural monument)
【Mashiki Town】


National Road 57 collapse
【Minamiaso Village】


Guard rail
【Nishihara Village】


A large stone at Seta Shrine
【Ozu Town】

Finding the sites of the Kumamoto Earthquake Museum
（2） Establishment of information-sharing centers about the Kumamoto Earthquake
15

【Centers in Municipalities】 13 centers

Example


Kumamoto Castle
【Kumamoto City】


Kumamoto City Zoological and Botanical Gardens
【Kumamoto City】


Mina terrace
【Mashiki Tov


Former Cho-yo seibu
Elementary school
【Minamiaso village】


Moenosato
【Nishihara Village】


New town hall
【Ozu Town】

Conveying the lessons learned from the Kumamoto Earthquake to future generations
16

- Collaborate with people who will tell their stories of the earthquakes (Provide Training)
- Establish the exhibition centers to share information about the Kumamoto Earthquake in municipalities throughout the prefecture
- Promote tour packages and the Kumamoto Earthquake Museum

ギュルム タヌルジャン
Gülüm Tanircan

2020 International Forum on Telling Live Lessons from Disasters, Jan 24-26 2020, Kobe, Japan

Towards Earthquake Resilient Communities: Dissemination Activities in Turkey in Cooperation with Japan

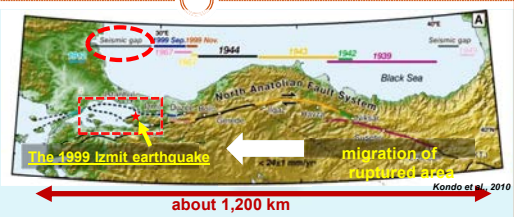
Assoc. Prof. Dr. Gülüm Tanırcan
Boğaziçi University, KRDAE, Istanbul, TURKEY

Content

- Earthquake Hazard in Marmara
- Earthquake Risk Mitigation Strategies
- Public Activities of KOERI on Earthquake Training
- Turkey-Japan Collaborative Activities on Disaster Risk Reduction
- Dissemination Activities through a SATREPS project

Earthquake Hazard in Marmara

population around Marmara Sea: ~ 22 millions



- The Marmara Region is under an earthquake threat due to nearby active faults .
- In case of a large earthquake the total economic loss would amount to USD 90-120 billion*
- The government would be faced with emergency response and reconstruction costs as high as USD 30 billion 6.7 million people would be exposed*

Earthquake Risk Mitigation Strategies

The Turkish government and businesses are aware of the threat, and have already done a lot to strengthen the city's resilience to a potential large earthquake.

Good Practices:

Actions at National Level:

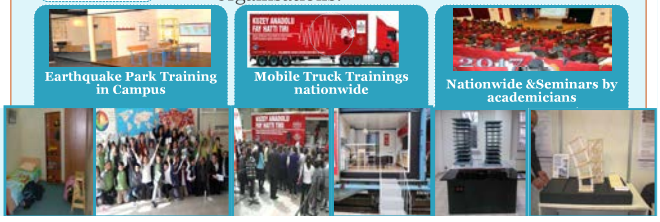
- Establishment of Disaster and Emergency Management Presidency (2009).
- National Earthquake Strategy and Action Plan (2012)
- New Seismic Hazard Map of Turkey (2016)
- New Building Earthquake Code (2018)
- Seismically Isolated City Hospitals (2015-~)
- Safe Schools Initiative (Retrofitting)
- Establishment of Turkish Catastrophe Insurance Pool
- Urban Renewal Project



Public Activities of KOERI on Earthquake Training

Boğaziçi University KOERI → KOERI at Boğaziçi University in Istanbul is considered a well-known and trusted organization that works daily to reduce seismic risk.

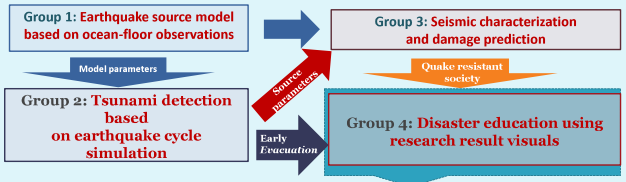
Disaster Preparedness Education Unit → Disaster Preparedness Education Unit aimed at raising the disaster awareness of society and the local preparedness and first response skills of organisations.



Turkey-Japan Collaborative Activities on Disaster Risk Reduction

2000-2002	• Study on a Disaster Prevention/Mitigation Basic Plan in Istanbul and Seismic Microzonation JICA&IMM
2009-2012	• School Based Disaster Education Project, the Ministry of National Education & JICA
2013-2018	• Earthquake and Tsunami Disaster Mitigation in the Marmara Region and Disaster Education in Turkey (MarDIM), JAMSTEC, JICA, JST & KOERI

Earthquake and Tsunami Disaster Mitigation in the Marmara Region and Disaster Education in Turkey



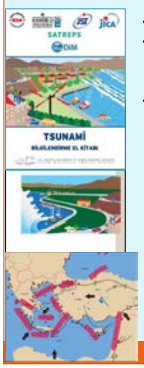
MAJOR OBJECTIVES OF GROUP 4

- Update Disaster Preparedness Training Programs
- Disaster information dissemination through the media
- Sharing information through regional seminars and contributing to disaster management plans

Dissemination Activities

- Training Materials
  - *Booklets
  - *Audio, video materials (anime,comic book)
  - *3-D puzzles of traditional buildings
- Seminars and Media Meetings
- Training / Seminar Evaluations
- Earthquake Park Renovation

Training Materials



- A Tsunami Information Booklet
- It is the first training material in national language on tsunami
- Tsunami Awareness Video





Training Materials



Preparation for Earthquake Before/During and After

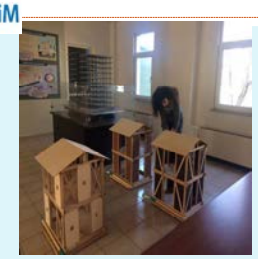


Manga : How to you behave during the earthquake at Home and at Office



Training Materials





Wooden building models with removable laths and roof : which building combination behaves better /worse during the shaking.

Regional Seminars



- Yalova April 28, 2015 (100 participants)
- Tekirdag Sept. 8, 2015 (80 participants)
- Canakkale Feb.27, 2017 (200 participants)
- Istanbul Sept. 19, 2017 (70 participants)

TOTAL : ~450 People



Tsunami Awareness Day (November 5th) Press Meetings



Media Meetings & Seminars

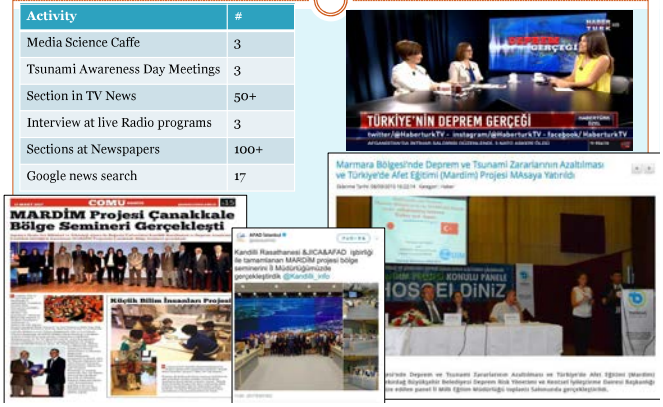
Considering the role of media on disaster education, informative meetings for key media members on disasters in Turkey have been planned.



Observations at Nagoya Meeting → Application in Istanbul

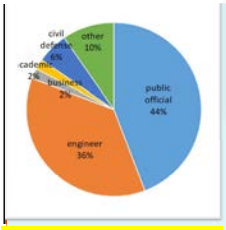
Visibilitiy of Meetings at Media

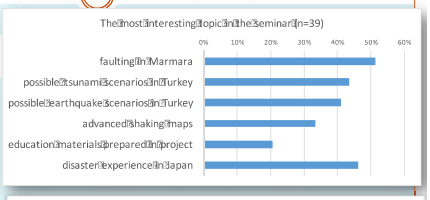
Activity	#
Media Science Caffe	3
Tsunami Awareness Day Meetings	3
Section in TV News	50+
Interview at live Radio programs	3
Sections at Newspapers	100+
Google news search	17

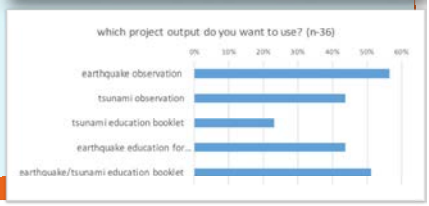


Evaluation for Regional Seminar

Participants for Regional Seminar (Istanbul, Sept. 19, 2017)n=39





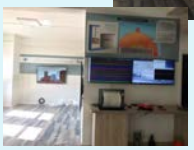


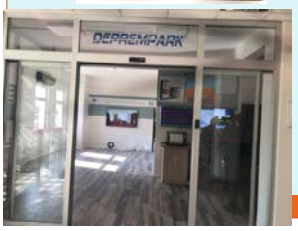
- High interest for project contents was demonstrated
- People are interested to utilize project outputs

Earthquake Park Renovation









THANK YOU FOR YOUR ATTENTION

ファウスティト A. オーレ
Faustito A. Aure

EASTERN VISAYAS STATE UNIVERSITY

ECHOES FROM THE BEATEN PATHWAYS OF HAIYAN (YOLANDA)

FAUSTITO A. AURE, MRD
Director, Extension Services
Eastern Visayas State University
Main Campus - Tacloban City, Philippines



"IF WE WILL NOT TALK ABOUT IT, IT'S AS IF IT DID NOT HAPPEN".

- ANONYMOUS



Name: **Kay Zabala**
Address: **Tacloban City, Leyte**
Age: **35**
Civil Status: **Single**
Unforgettable event during Yolanda: **11 members of her family died during Typhoon Yolanda/Haiyan** (Mother, Twin Sister, 1 Elder Sister, 3 Aunts, ! Uncle, 4 nieces)
Occupation: **Life Coach**
Lessons learned/ experience during Yolanda: **You need not lose your humanity inspite being a typhoon victim, instead let hope prevail and share your story so others may know and learn.**





Name: **Eoko Meranda**
Address: **Tacloban City, Leyte**
Age: **25**
Civil Status: **Married**
Unforgettable event during Yolanda: **He survived the Typhoon because he transferred his family to a higher ground a day before its landfall. As advised by his father which was also taken from his grandfather that whenever there's super typhoon, the shoreline will recede immensely and later will result to storm surges.**
Occupation: Tricycle **Driver**
Lessons learned/ experience during Yolanda: **Listen to the wisdom and advise from old people.**





Name: **Engrasia Llanda**
Address: **Basey, Samar**
Age: **63**
Civil Status: **Married with 6 children**
Unforgettable event during Yolanda: **He entire family survived the storm because they went to the cave in Samar**
Occupation: **Tikog Mat Weaver**
Lessons learned/ experience during Yolanda:
We need to evacuate immediately if there is an incoming typhoon





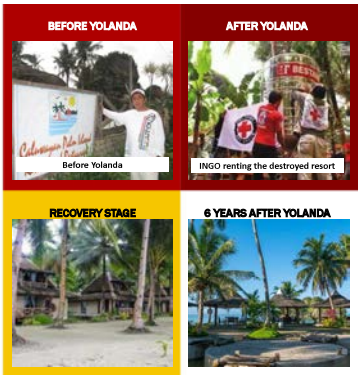
Name: **Jules Martin Villarente**
Address: **Tacloban City, Leyte**
Age: **24**
Civil Status: **Single**
Unforgettable event during Yolanda: **Looting food items from destroyed and abandoned supermarket s**
Occupation: **Unemployed**
Lessons learned/ experience during Yolanda:
Resourcefulness during calamities for survival





Name: **Zenaida Pacuri**
Address: **Marabut, Samar**
Age: **60**
Civil Status: **Single mother**
Unforgettable event during Yolanda: **Family owned resort was heavily destroyed**
Occupation: **Caretaker of a family owned resort**
Lessons learned/ experience during Yolanda:

1. **Things are just things you cannot carry your riches to the grave**
2. **Think of nobler causes in life.**
3. **If one door closes, one window of opportunity opens**

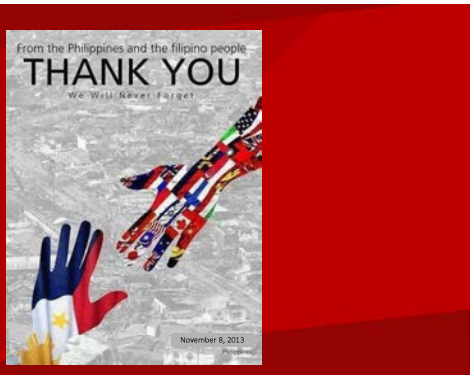




Name: **Faustito Aure**
Address: **Tacloban City, Leyte**
Age: **53**
Civil Status: **Single**
Unforgettable event during Yolanda: No tim,e to debrief instead **immersed myself in recovery and rehabilitation work after the typhoon**
Occupation: **Public School Teacher**
Lessons learned/ experience during Yolanda: **To be a survivor is to have a moral responsibility to tell the world and be committed why such incident should not happen again.**



"IF WE WILL STILL NOT TALK ABOUT IT, WE WILL NEVER LEARN, WE WILL ALL GET EXTINCT, IT WILL BE GONE FOREVER".

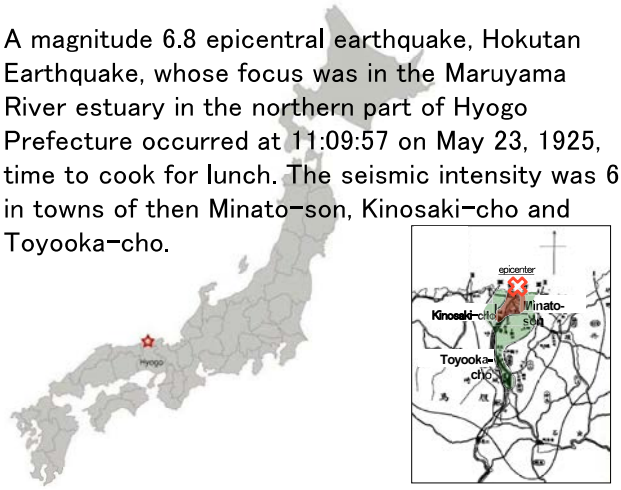


松井敬代
Takayo Matsui

TOYOOKA AND KINOSAKI; TOWNS THAT HAVE RECOVERED FROM HOKUTAN EARTHQUAKE

Takayo Matsui

A magnitude 6.8 epicentral earthquake, Hokutan Earthquake, whose focus was in the Maruyama River estuary in the northern part of Hyogo Prefecture occurred at 11:09:57 on May 23, 1925, time to cook for lunch. The seismic intensity was 6 in towns of then Minato-son, Kinosaki-cho and Toyooka-cho.




Tsuiyama area

In Minato-son, near the epicenter, many people were crushed to death due to instant building collapse.

In Tsuiyama area (on the left bank of the river), of all 250 houses, 145 were burnt down and 105 were destroyed.


Tai area

In Tai area(on the right bank), no fire occurred while some people were crushed to death. In Kehi area, only three houses were burnt owing to the exertions of the citizens' fire companies.

In Tai area, the residents continue to go up to the shrine of "Ujigami(Local Deity)" and do "Osendo-Mairi(One thousand times' worship)" on May 23 every year.

They walk around the shrine holding wooden bill early in the morning.

After the prayer, the representative mentions that no-one was burnt to death by prioritizing the fire fighting.




Earthquake disaster monument

In Toyooka-cho, cooking fires for lunch caused fire break-out in various parts of the town.

Though extinguished once in the afternoon, fire broke out again around 2pm and spread to the central area except for northern part of the town, Odai area.

85% of the entire town was burnt or damaged.


Toyooka-cho

Toyooka-cho and Kinosaki-cho, which had been devastated, planned a contrasting town development for recovery from the earthquake.

Toyooka-cho, which had planned a modernization city planning just before the earthquake, pushed the plan further.

It placed a Civic Center in the center of the station street, with the road straightening and widening. Reinforced concrete construction was recommended for private houses to have a role of fire protection zone.

Even now, more than 90 years later, modernization heritages as Kotobuki Rotary(roundabout), lattice roads, reinforced concrete buildings, etc., remain, making a landscape of Toyooka city.



Central Toyooka just after the earthquake



Kotobuki Rotary (Roundabout)



Reenforced concrete buildings along station street

In Kinosaki-cho, being located in a valley region surrounded by mountains on three sides and dense with two or three-story buildings, fire for preparation for lunch at hot spring inns spread in a flash and almost the whole town was burnt down.

272, nearly 8% of the town's population was killed, including 40 guests. More than 70% of the deaths were women.

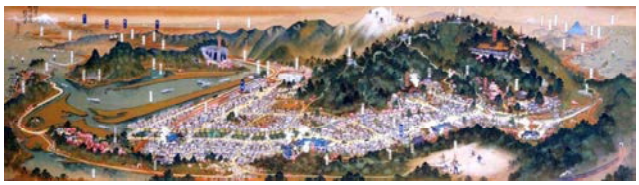


Kinosaki-cho

In Kinosaki-cho, the residents decided to rebuild hot-spring inns, etc. with wooden construction as it had been for preservation of their townscape.

Otani River, which often flooded, was widened, deepened while the ground of both banks being raised by dredged soil-sand. Winding roads were straightened and widened. The revetments were stonewalled basalt while parapets and reinforced concrete bow bridges were built.

Decisions were made by the residents themselves through many discussions, which preserved the present townscape with historical taste as a result.



Bird' s Eye View "Tourism Guide of Kinosaki-Spa in progress"(1938)



Townscape of Kinosaki-spa and Otani River





Fire Drill and Memorial Service 2017

In Kinosaki-cho, a fire drill is held every year on the morning of May 23rd. After the siren at the time of the earthquake, the residents pray along with the priest's reading in front of the disaster victim tower.

On the same day, in Kinosaki Elementary School, children listen to a lesson about the earthquake and conduct a evacuation drill every year since the disaster.

In 2015, "Toyooka Machi Juku (a society for studying townscape)" was formed in order that the townscape which consists of remnants of recovery from the earthquake would be known to local residents – diagonal and lattice streets in the city center, so-called "Reconstruction Buildings" installed as fireproof belt and wooden houses deliberately built for fire preservation.

In 1982, also, "Kinosaki Onsen Machinami no Kai (a society for preservation of townscape)" was formed. The purpose of the society is to keep the identity and atmosphere of Kinosaki created by the Otani River which flows the center of the town, bridges, lines of willow and two or three-story buildings along the river.

Each of these societies do activities which is rooted locally.

松井憲
Ken Matsui

August 20, 2014

The Mountain Where Dragons Live

f rom 8.20 Torrential Rain Disaster in Hiroshima City

ドラゴンが棲む山 －8.20 広島豪雨災害－

Reconstruction & Interaction House
Mondragon Director Ken Matsui
復興支援館 モンドラゴン 事務局長 松 井 憲



August 20, 2014

2014年8月20日

















That disaster,

took the lives of

77 people,

Injured many people…

あの災害は

77人もの命を奪い、

多くの人にケガを負わせ、

Broke homes,
buildings,
roads …

住まいを
建物を
道路を 壊した…

Complete / half destruction,
damage … 418 units
Floor / underfloor
inundation … 4,091 units

全 半 壊・損 壊…418戸
床上・床下浸水…4,091戸

In addition,

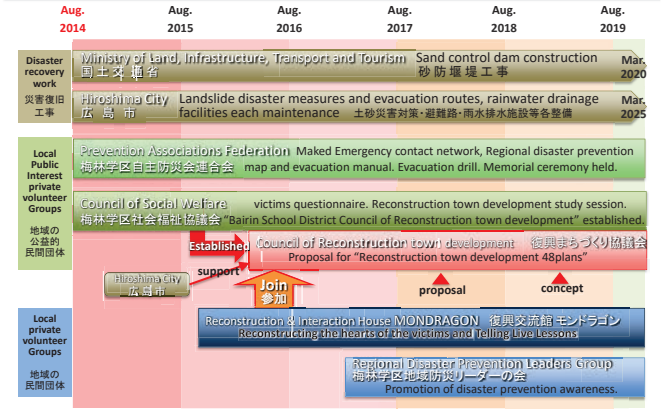
Residents 'hearts
It was broken …

そのうえ、
住民の心を
壊していた…

Bairin School District *August 20, 2014*
During 8.20 Torrential Rain Disaster in Hiroshima



Organization involved in the restoration and reconstruction of Bairin School District
梅林学区の復旧・復興に掛かる団体組織

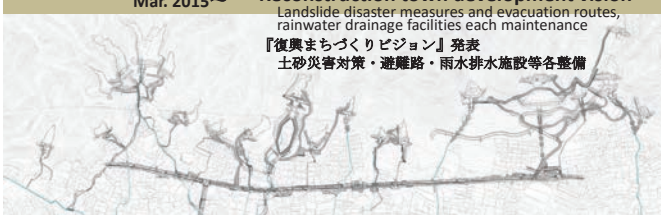


■ Ministry of Land, Infrastructure, Transport and Tourism 国土交通省
Disaster recovery work 災害復旧工事

From the disaster	Period Date	Content
next month	6 years	Sand control dam construction 25 units initially → 40units 砂防堰堤工事 当初25基 → 40基

■ Hiroshima City 広島市
Disaster recovery work 災害復旧工事

From the disaster	Period Date	Content
7 months	10 years Mar. 2015～	Announcement of "Reconstruction town development vision" Landslide disaster measures and evacuation routes, rainwater drainage facilities each maintenance 『復興まちづくりビジョン』発表 土砂災害対策・避難路・雨水排水施設等各整備



Hiroshima City 広島市

From the disaster	Period Date	Content
1 year	Aug. 2015 〜2017 3 times	Memorial ceremony held (to 3 years Prefecture City, co-hosted) 追悼式典開催（〜3年 市県共催）
		
1 year 4 months	Dec. 2015〜	Started support for community reconstruction activities for residents Council of Social Welfare → Council of Reconstruction town development 住民の復興まちづくり活動の支援開始 社会福祉協議会 → 復興まちづくり協議会

Bairin School District Prevention Associations Federation 梅林学区自主防災会連合会

Attribute Disaster prevention organization by local residents determined by the Disaster Countermeasure Basic Act

From the disaster	Period Date	Content
4 months	6 times Dec. 2014〜 May 2015	Maked Emergency contact network for residents, Regional disaster prevention map and evacuation manual 住民緊急連絡網・地域防災マップ・避難マニュアル作成
10 months	June 2015	Evacuation drill (200 → 1,700 people) 避難訓練実施（例年200人→1,700人）
1 year	every Aug.20	Memorial ceremony held 追悼式典開催




Bairin School District Regional Disaster Prevention Leaders Group 梅林学区地域防災リーダーの会

Attribute School district disaster prevention leader volunteer group. Promotion of disaster prevention awareness. 学区防災リーダーのボランティア・グループ. 防災啓蒙推進

From the disaster	Period Date	Content
2 year 8 months	Apr. 2017	Preparation for launch 発会準備
3 year 8 months	Apr. 2018	Starting (with 10 people, currently 12 people) Held a study session once a month 発会（10名でスタート、現12名）勉強会（毎月1回）
4 year 11 months	Jul. & Nov. 2019	Disaster prevention class at Bairin Elementary School 梅林小学校で防災教室（2019年7月, 11月）

Build a facility to deepen bonds between residents, aiming for "Reconstruction of the heart" …

住民どうしの絆を
深めるための施設を建設し、
“こころの復興”を目指したい…

Children and grandchildren for the next generation We want to connect the idea of disaster prevention .....

子や孫たち 次世代に
防災減災の想いを繋ぎたい…

Reconstruction & Interaction House Mondragon 復興交流館 モンドラゴン

Attribute Volunteer group centered on victims. 被災者を中心にしたボランティア・グループ

Theme テーマ

Reconstructing the hearts of the victims
And Telling Live Lessons
-復興と伝承-

The goal of the activity 活動の目標

In 3-5 years,
Act aggressively and broadly, become a local symbol,
We aim to build facilities and build permanent systems.

3〜5年間で地域のシンボルになるよう
積極的かつ広範囲な活動を行い、恒久的な制度・施設の建設を目指す。



Reconstruction & Interaction House

Mondragon

復興交流館 モンドラゴン

From the disaster	Period Date	Content
1 year 4 months	Dec. 2015	Established (with 13 victims, now 22 people) 発足（被災者13名でスタート、現22名）
1 year 8 months	Apr. 2016	Opening
4 year 10 months	Oct. 2018	Over 10,000 visitors (after open 31 months) 来訪10,000人超（open31ヶ月後）

Fundraising

Donations from individuals, organizations and companies are 44%,
Sales are 40%, Disaster relief is 10%, City subsidies are 6%,
寄付…44%、売上…40%、 災害義援金…10%、補助金…6%



Reconstruction & Interaction House

Mondragon

復興交流館 モンドラゴン

Activity category Disaster victim support 被災者支援

Reconstruction of the victims of heart
Okonomiyaki Canteen

被災者の心の復興
お好み焼き食堂



Community rebirth コミュニティ再生
salon/classroom
Seasonal events
Flower garden planting
Lecture (family care / life related)
Support that can be done by victims



Building a network with the affected areas
Share of the affected areas reconstruction wisdom and skills
被災地とのネットワークの構築・・・・・・被災地復興の知恵やスキルの共有

Reconstruction & Interaction House

Mondragon

復興交流館 モンドラゴン

Activity category Telling Live Lessons 伝承（語り継ぎ）

Collection, exhibition and Storage of materials	資料の収集・展示・保管
Explanation of materials	資料の解説
Disaster area guide and explanation	被災地ガイド・説明
Storyteller	語り部活動
Collection and digitalization of old documents	古文書の収集・デジタル化









Reconstruction & Interaction House

Mondragon

復興交流館 モンドラゴン

Activity category	Disaster prevention　防 災 啓 蒙
Disaster prevention classroom / lecture / forum	防災教室・講演会・フォーラムの開催
Installation of surveillance cameras and rain gauges	監視カメラ・雨量計の設置
Visit the museum	災害関連資料館の視察行
Production and independent screening of disaster prevention enlightenment movies	防災啓蒙映画の製作・自主上映
Acceptance of inspection (Administration・general) research groups and students Guide and storyteller	視察（行政・一般）研究団体・学生の受入れ ..... 案内・解説

Reconstruction & Interaction House

Mondragon

復興交流館 モンドラゴン

■Visit status （来館件数）　April 3, 2016 to Dec.31, 2019

Fiscal year 年度	Number of Visitors 来訪者数	Number of Visits （来館件数）					
		Administration 行政	General 一般	Inspection* 視察*	research Institute 研究	Student 学生	Media メディア	total
total	14,486	85	120	112	49	46	91	503
2016	3,492	16	18	25	20	11	6	96
2017	3,876	20	35	33	18	11	14	131
2018	4,227	28	46	29	9	12	38	160
2019*	2,891	21	21	25	2	12	35	116

* As of Dec.31, 2019

*"Inspection" is a number in "Administration" and "General"
*"視察"は「行政」と「一般」の内数

■Activity status （活動件数）　April 3, 2016 to Dec.31, 2019

Fiscal year 年度	Community rebirth / Disaster victim support コミュニティ再生・被災者支援						Disaster prevention course/lecture 防災 講演・教室	
	salon/classroom サロン・教室		Seasonal events 諸時行事		etc.			
	times 回数	number of people 人数	times 回数	number of people 人数	times 回数	number of people 人数	times 回数	number of people 人数
total	128	1,288	17	434	5	143	32	4,167
2016	32	336	10	218	4	114	4	197
2017	36	297	2	58			7	814
2018	33	321	2	59			13	1,399
2019*	27	334	3	99	1	29	8	1,757

* As of Dec.31, 2019

Reconstruction & Interaction House

Mondragon

復興交流館 モンドラゴン

Activity category	Participation in local reconstruction activities 地域復興活動への参加
Participating in community development activities	地域のまちづくり活動に参加
Participated in "Bairin School District Council of Reconstruction town development"	『梅林学区復興まちづくり協議会』に参加 地域部会、コミュニティ専門部会
* At the community special committee Proposed `` Reconstruction exchange base facility establishment '',Adopted in the recovery town development plan.	＊コミュニティ専門部会にて、「復興交流拠点施設設置」を提案、復興まちづくりプランに採用。

Bairin School District Council of Social Welfare

梅林学区社会福祉協議会

Attribute	Social welfare organization by local residents, which is defined by the Social Welfare Act	
From the disaster	Period Date	Content
1 year 3 months	Nov. 2015	Disaster area check and victims questionnaire 被災地確認・被災者アンケート
1 year 4 months	Dec. 2015	Reconstruction town development study session ... 4 times 復興まちづくり勉強会開催...4回/月1回
1 year 10 months	June 2016	"Bairin School District Council of Reconstruction town development" established 『梅林学区復興まちづくり協議会』発足

Bairin School District Council of Reconstruction town development
梅林学区復興まちづくり協議会

Attribute Subordinate organization of Bairin School District Social Welfare Council

From the disaster	Period Date	Content
1 year 9 months	May 2016	Established (Regional group×5, Specialized group×2) 発足（地域部会×5,専門部会×2）
3 year 5 months	Jan. 2018	Proposal to the Mayor of Hiroshima for "Reconstruction town development 48plans" 『復興まちづくりプラン』を広島市長へ提言



Bairin School District Council of Reconstruction town development
梅林学区復興まちづくり協議会

Activity Creating of "Reconstruction town development 48plans"
『復興まちづくりプラン』48項目の策定

Period Date	Content
Apr.-Dec. 2017	Held 4-5 meeting each at 5 regional groups 2 specialized groups and 4 board meeting 5地域部会 2専門部会で各4〜5回 評議委員会を4回開催
Jan. 2018	Proposal to the Mayor of Hiroshima *community group suggested: 1. Establishment of Telling Live Lessons facilities 2. Conducting disaster drills and classrooms 3. Maintenance, such as walking path that connects the local resources 4. Training the storyteller 5. Collection and storage of materials 6. Revitalizing the community 広島市長へ提言、コミュニティ部会では6項目を提言 1.復興交流施設設置 2.防災訓練・教室実施 3.地域散策路整備 4.語り部育成 5.災害資料収集 6.コミュニティ活性

Bairin School District Council of Reconstruction town development
梅林学区復興まちづくり協議会

Activity Creating of a concept proposal
『復興まちづくりプラン』項目の構想案の策定

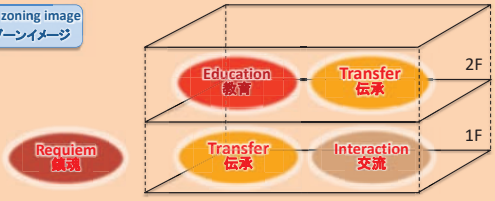
Period Date	Content
Jul. 2018-Feb. 2019	Held 8 meeting at community specialized group and 1 board meeting コミュニティ専門部会 8回，評議委員会を1回開催
Feb. 2019	Submit a concept proposal to Hiroshima City Community specialized group : "Telling Live Lessons facilities establishment concept plan" The first block regional group : "Park maintenance plan" 構想案を広島市へ提言 コミュニティ部会：「復興交流拠点施設 整備構想」 第1地域部会：「第1ブロック 公園整備構想」

Telling Live Lessons facilities establishment concept plan
復興交流拠点施設 整備構想

Main functions 主要機能



Facility zoning image 施設ゾーンイメージ



Telling Live Lessons facilities establishment concept plan
復興交流拠点施設 整備構想

Incorporation Functions 導入機能

1. Telling Live Lessons 災害の記憶の伝承
2. Display of disaster memories 災害の記録の展示
3. Disaster prevention education 防災教育
4. External collaboration / Acceptance of inspection 外部連携 / 視察受入
5. Public relations / Transmission of information 広報 / 情報発信
6. Interaction / Communication 交流・コミュニティ

- Listed the functions performed by the base facilities
  拠点施設としての機能をリストアップ
- For each item, the role sharing between Hiroshima City and residents was roughly assumed.
  各項目につき、公民の役割分担を想定
- In the future, we will examine facility specifications, construction site selection, access, construction work plans, and management systems
  今後、施設仕様・建設地選定・アクセス・工事計画・管理・運営等を検討
- Aimed at opening of the 2022 fiscal year.
  2022年度の開館を目指している

Telling Live Lessons facilities establishment concept plan
復興交流拠点施設 整備構想

Expansion of the experience of past activities at *MONDRAGON*
これまでの *復興交流館 モンドラゴン* での活動経験の展開

1. Standardization of the "storyteller" 1.「語り部」の標準化
2. Search for a new form of "storyteller" 2.「語り部」新しい形の模索
3. Facility branding 3. 施設のブランド化
   In the education example:
   - Development of original training
     Creating an original scenario for disaster ethnography
   - Trainer certification system adopted
   - Certificate of completion (card) issued

   教育例：
   - オリジナル研修の開発
     エスノグラフィー・オリジナルシナリオ作成
   - トレーナー認定制度 - ライセンス発行
   - 受講終了証(カード) 発行

Future plans 将来構想

Using this facility as a base, I would like to link the areas organically and make the whole Bailin school district a park with the theme of disaster prevention.
施設を拠点として、梅林学区全体を有機的にリンクした防災パークに…

“Reconstruction
of the heart”
of the disaster area residents …

被災地住民の
“こころの復興”

Regeneration
of
community
of residents …

住民の
コミュニティの再生

For
next generation
disaster mitigation …

次世代の
減災に向けて

Telling Live Lessons
this disaster
to the next generation…

次世代へ
語り継いでいきたい



Thank you
for
your support.

皆様のご支援を
お願いします。

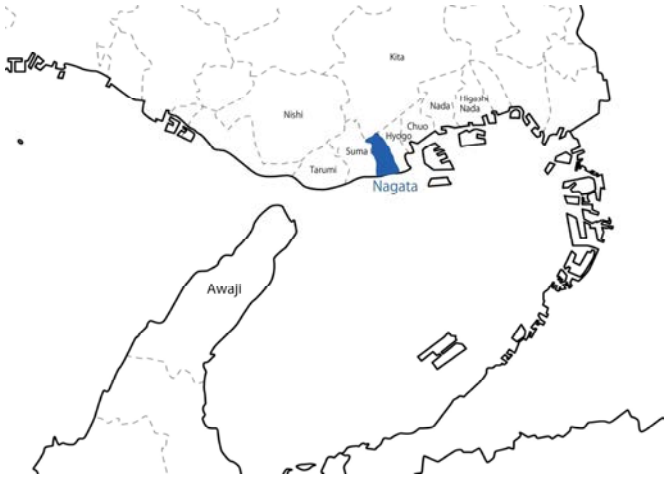
Reconstruction & Interaction House
Mondragon

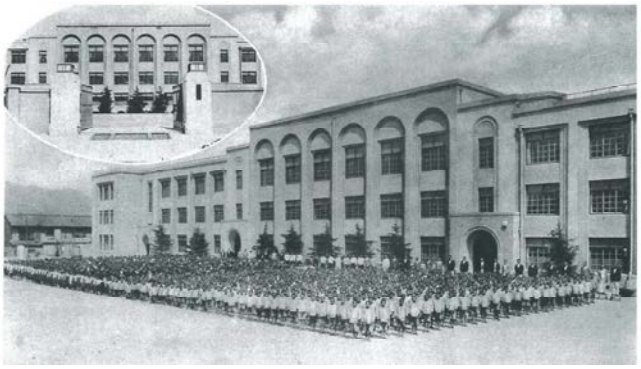
Planning: Reconstruction & Interaction House **Mondragon**
Product by: Office Kysh @2019~2020

山住勝利
Katsutoshi Yamazumi

Reviving the Memories of the Local Community through Earthquake Disaster Experiential Learning

Katsutoshi YAMAZUMI
(Chief, Earthquake Disaster Experience Learning Lab. Futaba Gakusha)





Futaba Elementary School (1929)



Futaba Gakusha (2010-)

The Great Hanshin Awaji Earthquake struck on January 17, 1995.
Futaba Elementary School, located in the south-west area of Nagata ward in Kobe city, became an evacuation center for many victims of the earthquake

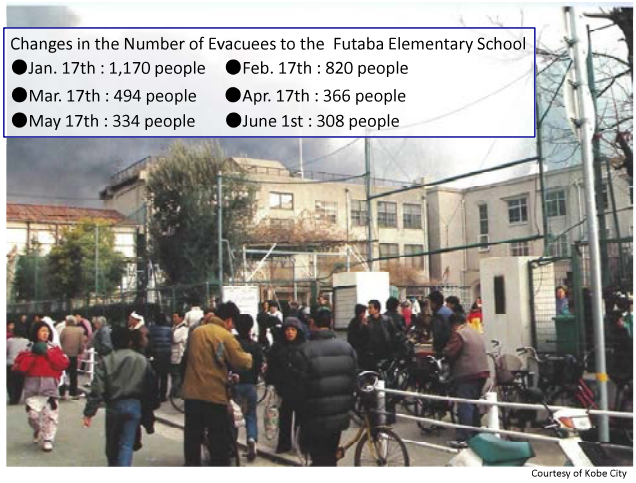


Courtesy of Kobe City



Taisho shopping street

Courtesy of Kobe City



Courtesy of Kobe City



The assembly hall of the Futaba Elementary School became an evacuation center during the Great Hanshin-Awaji Earthquake.

The Futaba Gakusha's earthquake disaster experiential learning programs

The Futaba Gakusha's earthquake disaster experiential learning programs have been developed based on the memories of the local community related to the Great Hanshin Awaji earthquake. Furthermore, this building (the former Futaba Elementary School and current Futaba Gakusha), which was able to survive the earthquake, acts as a physical reminder that helps to better reinforce such memories.



Evacuation center experience : participants use cardboard boxes to make their own evacuation space. By experiencing first hand the living environment at an evacuation center, the participants can get an idea of what it is like to stay there during a disaster.



Stories about actual earthquake experiences: the aim of this activity is for participants to hear first-hand accounts of the Great Hanshin Awaji Earthquake from people who actually experienced it, and to understand the fear of such a disaster from a personal perspective, as well as get a sense of the bonds between people and consideration shown that helped the victims of the earthquake disaster to overcome it.

Comments from the Earthquake Disaster Experiential Learning Activity Participants (Junior High School Students)

"Although I had previously thought that I could just deal with an earthquake after it has occurred, this experience helped me to drastically change such thinking."
"I was very shocked to hear about how hundreds of people died in Nagata Ward."
"By actually experiencing the evacuation shelter, I was able to learn how difficult life must have been, and I felt as though I couldn't live under such conditions for more than a couple of days."
"This was a very useful experience, and although I previously had absolutely no interest, this experiential learning activity helped to excite my curiosity, and I felt that I need to learn to be more vigilant in the future."
"It was easy to visualize the stories of the people who experienced this ordeal, and it helped me understand how difficult it must have been. Since I never had the chance to hear about life at the evacuation shelter in such detail, this was a very good experience for me."
"I hope that I am able to take what I have learned today and to make use of it whenever the Nankai Trough earthquake happens to occur."

チョン カイリン
Chong Khai Lin

THE DEVELOPMENT OF "BENCANA" BOARD GAME AS A DISASTER EDUCATION TOOL IN PRIMARY SCHOOLS.

A STUDY ON SK KAMPONG KARANGAN, KUALA KRAI, KELANTAN & SK BUKIT TANGGA, KEDAH. (STAGE 3: PILOT PROGRAM IMPLEMENTATION

Khai Lin Chong, Faizatul Akmar Abdul Nifa, Sharima Ruwaida Abbas, Suria Musa and Mohd Nasrun Mohd Nawi

Disaster Management Institute,
School of Technology Management & Logistics,
Universiti Utara Malaysia, 06010 Sintok, Kedah, MALAYSIA.

PRESENTATION OUTLINE

- Background of Study
- Aim & Objectives
- Method of Study
- Pilot Stage
- Initial Findings
- Future Work

BACKGROUND OF STUDY

- In December 2014, three states in Malaysia, Pahang, Terengganu and Kelantan received heavy rains which led to a massive flood which was locally termed as the "Yellow Flood".
- The state of Kelantan suffered the biggest impact of this flood, where 8 of 10 territories were inundated, leading to destruction of livelihood of local communities.
- Although massive floods were not a foreign occurrence in Kelantan, the locals admitted to not have expected the severe devastation caused by the 2014 flood. It was the worst flood experienced in 100 years.
- Many schools were shut down for more than 2 weeks due to seas of mud in the buildings and the access roads were destroyed during the flood.

BACKGROUND OF STUDY

- Children who have been taught about the phenomenon of disasters and how to react to those situations have proved to be able to respond promptly and appropriately, thereby warning others and protecting themselves during times of emergencies (Shaw et al, 2015)
- The importance of disaster education at school is increasing because of the following reasons (Shiwaku, 2009; UN/ISDR 2006):
  - children are one of the most vulnerable sections of the society during a disaster;
  - they represent the future;
  - school serves as a community's central location for meetings and group activities;
  - effects of education can be transferred to parents and community

BACKGROUND OF STUDY

- The formulation of an effective disaster education programs should include collaborations with the researchers, local community and school so so that the learning process not only be based on hard facts but also cross-learning through sharing of stories, facts and cultural approaches (Shaw et al, 2015; Petal, 2008; Sharma, 2008).
- Paton (2005) highlighted the need for integrating community development initiatives to increase resilience with disaster education and facilitate self-help capacities within the vulnerable community to reduce the reliance on external response and recovery resources.

GAMES – AN INDISPENSABLE TOOL IN DISASTER EDUCATION

- The attention span is an important consideration in the education of young people. This tendency is for a positive relationship between the distance of attention and the level of teaching of teaching techniques.
- Therefore, games, simulations and games are an effective tool for delivering disaster knowledge to children. However, the importance of details and accuracy of information is not sacrificed for teaching. Children who have the same age can respond differently to the techniques used for their education.
- Therefore, due consideration should be paid to the means of communication used in the dissemination of disaster risk information to young children and must cover a variety of interactive and visual techniques and, as far as possible, including hands-on learning and experience (Wisner, 2006).

AIM OF STUDY

Through collaborative efforts and expertise, this research shall focus on the **issues of community resilience and safety** and how **disaster education in primary schools** may benefit the **overall community preparedness**.

OBJECTIVE

- *To explore school community awareness and preparedness toward flood disaster*
- *To explore school community knowledge on disaster risk reduction and knowledge how to reduce risk due to disaster*
- *To identify current initiatives on disaster risk reduction among school children undertaken by the school*
- *To propose a disaster related board game that can be applied by the primary school in flood disaster prone area*

This presentation reports Stage 3 of the study – the pre-development stage of "Bencana" Board Game in SK Kampong Karangan, Kelantan and SK Bukit Tangga, Kedah.

METHOD OF STUDY

Stage 1: Literature study of disaster education program in schools.

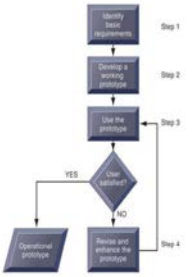
Stage 2: Fieldwork – Semi Structured Interview with School administrators, students, community leaders.

Stage 3: Fieldwork – Pilot Stage of Bencana Board Game implementation.

Stage 4: Integration of data and revisions to the Bencana Board Game – ready for periodic future implementation

STAGE 3 – BOARD GAME DEVELOPMENT

- This stage involves the development of the game prototype. Development of a prototype also requires choosing a suitable methodology.
- The prototyping process consists of four step model which is adapted from Laudon (2000).
- In this study prototyping process involves four steps, where the first step is identify basic requirement, step two develop initial prototype, step three use the prototype step four evaluate as operational prototype or revise and enhance the prototype.
- Two focus group sessions were conducted in 2 primary schools; one school located in disaster prone area indicating that the students may have experience disaster and the other school is located in a relatively safe area thus the students may not have experience disaster previously.



PILOT STAGE – BOARD GAME TESTING (1)






KEY FINDINGS (1) – PILOT STAGE IN SK KAMPONG KARANGAN, KELANTAN

- Only 35% of the students got the information on disaster from their teachers – this is because disaster education is not included in the National Curriculum for Primary Schools.
- Television & Newspaper are their main source of information when it comes to disasters.
- Students feel that loss of property is the biggest effect of disaster while loss of human life is considered minimal when it comes to flood disaster.



KEY FINDINGS (1)
– PILOT STAGE IN SK KAMPONG KARANGAN

- While the students feel that the game is interesting and has simple rules, they feel that the questions part of this game is very challenging - this could be due to their lack of technical knowledge in disaster preparedness.
- The game was tested for Year 3 and Year 4 students. It was apparent that the Year 4 student thoroughly enjoyed the game more and understood the questions - Kelantan locals spoke a slightly different dialect compared to the rest of Malaysia and this may cause some misunderstanding of terminologies for younger students.
- 90% of the students feel that the board game is very useful to add their knowledge in disaster preparedness, look forward to play the game again and are happy with the design aspects of the game.

PILOT STAGE – BOARD GAME TESTING (2)



KEY FINDINGS (2)
– PILOT STAGE IN SK BUKIT TANGGA, KEDAH

- While the students feel that the game is interesting and has simple rules
  - Students' awareness level increased after playing board game.
- The game was tested for Year 4 and Year 5 students. It shows that they are enjoyed the game and understood the questions.
- 90% of the students feel that the board game is very useful to add their knowledge in disaster preparedness, look forward to play the game again and are happy with the design aspects of the game.

FUTURE WORK

- An improved version of the board game will be developed by making revisions in the following aspects;
  - Level of difficulty for questions suitable for Year 3 and 4 students (age 9-10)
  - Linguistics aspects for the regulations & questions – suitable for local understanding.
  - Materials and images (to avoid copyright infringement)
  - Increasing the size of the game – enlarge to be 3m x 3m so students can stand on the mat, taking into consideration of the children's natural characteristics (active, moving, physical activity is preferred)
  - Including the role of the teacher to be the game master, so this could be a class activity to teach disaster preparedness.

THANK YOU FOR YOUR TIME

中川和之
Kazuyuki Nakagawa

分科会　ジオパークと語り継ぎ

自ら語ってくれない大地の声を伝える

中川和之　時事通信社　解説委員
静岡大学防災総合センター客員教授
日本ジオパーク委員会調査運営部会員（地震学会推薦）

1

私の郷里　兵庫県芦屋市　六甲山の南麓



ボースカウト芦屋1団で家から歩いてキャンプ場へ
小2までは、ビーチサンダルで浜まで歩いて水泳



私たちは目の前に証拠がありながら
キャンプ場や夜景、世界有数の港町は
地震＝地球の営みがもたらしたことを
知らなかった



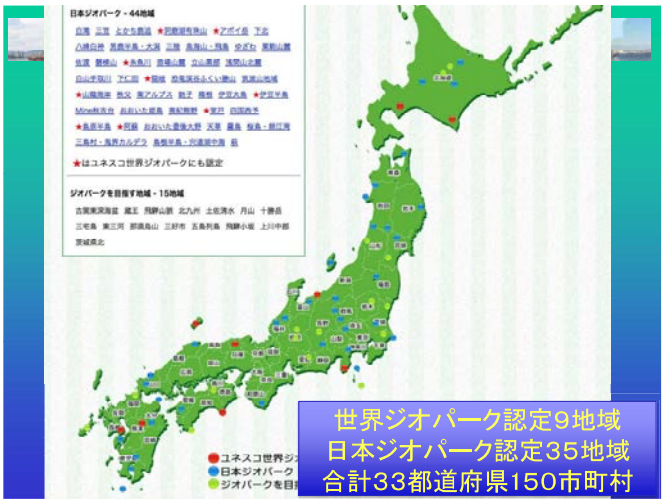


六甲山を高くする地震を繰り返してできた
諏訪山断層の断層崖上の諏訪山公園からの夜景

ジオパークは大地の物語を語り継ぐ運動



44か国161地域がユネスコ世界ジオパーク（2004年～2020年1月現在）



世界ジオパーク認定9地域
日本ジオパーク認定35地域
合計33都道府県150市町村

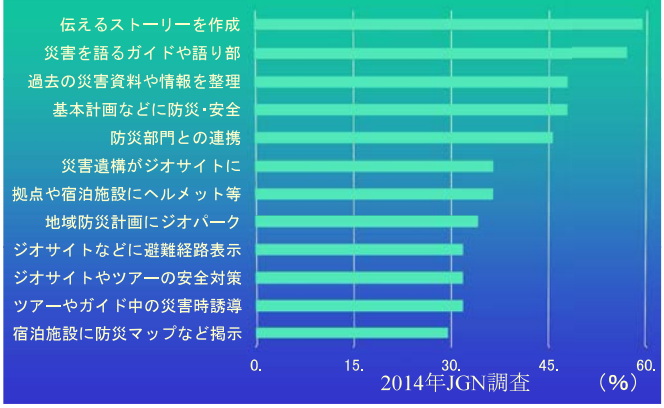
ジオパークって、なんだ？

秋田・ゆざわジオパークの子供たちから聞いて見よう



「地域の人が語りつぐことが大事」

6割のジオパークで災害伝承や語り部、3分の1に災害遺構



ガイドラインを元に4年ごとの再審査でチェック
活動はネットワークに加盟してともに価値づくり

OPERATIONAL GUIDELINES FOR UNESCO GLOBAL GEOPARKS
ユネスコ世界ジオパーク運営指針

UNESCO Global Geoparks are living, working landscapes where science and local communities engage in a mutually beneficial way.

ユネスコ世界ジオパークは、科学と地元社会が相互に利益をもたらす方法で連携する、生きた、動的な景観である。

保全 → 教育

大地の遺産（災害の痕跡）

ジオツーリズム

持続可能な地域社会作り

ユネスコ世界ジオパーク運営指針

- UNESCO Global Geoparks use geological heritage, in connection with all other aspects of that area's natural and cultural heritage, to enhance awareness and understanding of key issues facing society in the context of the dynamic planet we all live on.
- ユネスコ・グローバル・ジオパークは、当該地域の自然・文化遺産のあらゆる分野と関連した地質遺産をもって、我々が暮らす変動する惑星の中で、社会が直面している重要課題への意識と理解を高める。
- including but not limited to increasing knowledge and understanding of: geoprocesses; geohazards; climate change; the need for the sustainable use of Earth's natural resources; the evolution of life and the empowerment of indigenous peoples.
- 重要課題には、地球科学的プロセス、ジオハザード、気候変動、地球の自然資源の持続的利用の必要性、生命の進化と先住民のエンパワーメントに関する、知識と理解の増大が含まれるが、それに限定されない。

みなさんと議論したいこと

- ジオパークならではの語り継ぎ方とはなにか。
- ジオの恵みと、ハザードの災いを、どのように伝えるか。
- 語らない大地を、誰がどのように語らせるのか。
- ジオパークで培った手法を、社会にどう活用してもらうか。

- 共同座長のイブラヒム コモオ氏は、アジア太平洋ジオパークネットワーク コーディネーターで地質学者、土砂災害の専門家でもあり、日本では見られない古い大地が特徴のマレーシアのランカウイユネスコ世界ジオパークを率いています。ジオパークの地域ではないです、世界自然遺産に認定されているマレーシアのキナバル山の麓での地すべり災害の事例を紹介いただきます。

- パネリストのナンシー アグダ氏は、フィリピン大学国立地質科学研究所に所属する地質学者で、国内で新たなジオパークをスタートさせようとしています。フィリピンは、南海トラフ地震を引き起こすフィリピン海プレートの西南側にあり、地震や火山、台風も多い地域。ジオパークの考え方を活かした災害からの復興を進めている事例を報告いただきます。



- 西谷香奈氏は、日本のジオパーク運動が始まる以前からのプロのネイチャーガイドで伊豆大島ジオパーク推進委員会の委員です。数十年に1度繰り返される火山噴火だけでなく、土砂災害や昨年の台風15号などの災害について、ガイドという立場でどう語るのかの悩みなど、火山島伊豆大島での具体的な事例を紹介いただきます。

- 地質学の博士号を持つ柴田伊廣氏は、現在は文化庁文化財第二課で天然記念物を担当。入庁前は室戸ユネスコ世界ジオパークの専門員で、日本ジオパーク委員会調査運営部会員でもあります。阪神大震災を起こした地震によって地表に現れた野島断層などの天然記念物の現状とともに、地域でボトムアップな利活用を進めようとしている熊本地震の布田川断層の状況などについて、紹介いただきます。

イブラヒム コモオ
Ibrahim Komoo



KUNDASANG TOWN

- an highland agriculture
- Gateway to Mt. Kinabalu (410m) – World Heritage Site
- Small town surrounded with many villages
- Elevation more than 1000m, slope 5 – 25 degree
- Major issue: ground instability



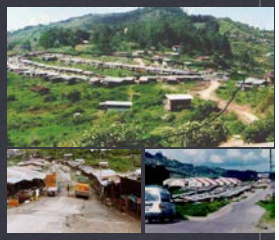
Early Discovery of the Landslide

- *Tanah Pandai Berlari* (soils easily running)
- what they observed: ground gives rise to different varieties of inconveniences - land more susceptible to depression, lateral movements & various manifestations of instability
- living with danger
- learning to adapt with ground movements

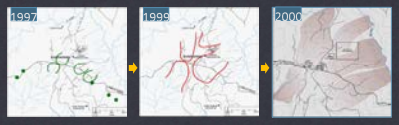


AUTHORITY'S APPROACH TO GROUND INSTABILITY

- they know about ground instability, especially about 'road depressions' but not aware about large-scale landslides
- does not exist planned control & mitigating measures
- short-term measures: repairing basic utilities such as water pipes, electric poles and village roads
- investigation and remedial measures of failures along major roads



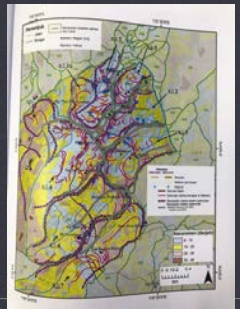
EARLY OBSERVATION



- Early observation and mapping (1997 – 1999)
- Kundasang is under the threat of 5 large-scale landslides systems each measures around 1000m length & 500m wide
- Signs of landslide: slope failures, road depression, tilted houses and lamp posts; water pipe burst; ground cracks, bulging and seepages because of the large size, unclear boundary and slow movement – many are aware of their existence

SYSTEMATIC LANDSLIDE MAPPING

- Systematic landslide mapping was conducted in 2000-2002
  - Utilizing several thematic maps – DSM IFSAR; River basin map; satellite SPOT
  - Geomorphological interpretation
  - Field mapping
  - Detailed deformation mapping
  - Landslide synthesis map
  - Large-scale landslide complex



FAILURES AT KUNDASANG SCHOOL & ZEN

Kundasang Secondary School

- gentle sloping ridge was leveled for the school
- located at the boundary of two large-scale landslide systems
- one of landslide scarp intersects the school's 3 building, causing the building to break into two parts
- These resulted the building has to be demolished, and finally the school to be relocated



FAILURES AT KUNDASANG SCHOOL & ZEN

Zen Garden Hotel

- the hotel was built at steeper slopes using the 'cut and filled' method
- medium size slope failure occurred and destroyed a row of hotel building
- This incident provide 'visual image' of landslide damage to public and finally can be used to explain to community the danger of landslide



Impacts to Community

- At large area, the lateral movements were only from few centimeters to several meters per year. These had resulted:
  - Loss of lives, injury & psychological pressure
  - Damage to private properties – house, continuous repair
  - Damage to public properties – schools, roads, water pipes
  - Impact to public conveniences – transportation, water and power supplies
  - Land degradation and boundary


The Borneo Post
Living in danger zone

PUBLIC ENGAGEMENT

- Between 2000 to 2003, several public engagements were conducted mainly through meetings and seminars.
- Target groups were:
  - Community leaders of affected areas
  - Local authority and political leaders
  - Public Work Department and other implementing agencies



MITIGATION MEASURES

- Mitigation measures mainly by public authority to protect main roads and government buildings.
- Private properties are still mitigated by their owners.



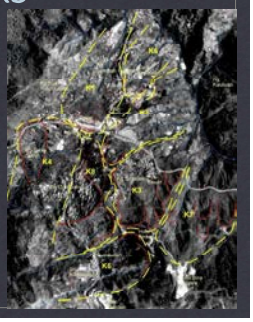
Lesson Learned

- Public and authority are aware that Kundasang is affected by large-scale landslide complex.
- Community leaders are able to inculcate the concept of public safety.
- Public authority provide plans for better mitigation measures.



CONCLUDING REMARKS

- Large-scale landslide are major issues to the government and the local community. It has great impact to the people and the development of the area.
- For many years, the uncertainty about ground instability has created problem to the development of the area.
- Our detailed scientific research has provide short- and long-term solution to the authority and local community at large.



REFERENCES

- Yong, K.H. 1997. Undergraduate Thesis, UKM Malaysia
- Komoo, I. & Morgana, S.N. 1999. Journal of Nepal Geological Society
- Komoo, I. & Lim, C.S. 2003. Bulletin of Geological Society.
- Komoo, I. & Hood, M.S. 2003. Living with Danger: Kundasang's Active Landslide. LESTARI Publication
- Lim, C.S. 2018. PhD Thesis, UKM Malaysia



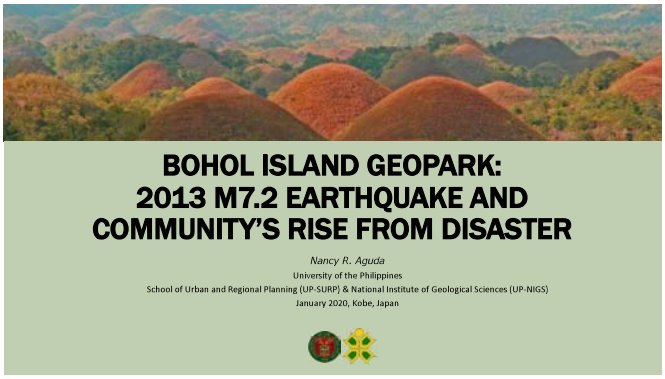
LIVING WITH DANGER:
KUNDASANG'S ACTIVE LANDSLIDE

Abstract

Introduction



ナンシー アグダ
Nancy Aguda



BOHOL ISLAND GEOPARK: 2013 M7.2 EARTHQUAKE AND COMMUNITY'S RISE FROM DISASTER

Nancy R. Aguda
University of the Philippines
School of Urban and Regional Planning (UP-SURP) & National Institute of Geological Sciences (UP-NIGS)
January 2020, Kobe, Japan

I. Introduction
II. Bohol Island
III. M7.2 Earthquake
IV. Damages
V. Recovery
VI. Bohol Island Geopark

Philippine Setting

Population = 109 Million (2019)

Land Area = 300,000 Th sq km

Coastline: 36,289 km

Pop. Growth Rate = 1.5%

Pop. Density = 368 persons/sq km

Administrative Units
: 18 Regions
: 81 Provinces
: 1,489 Municipalities
: 145 Cities



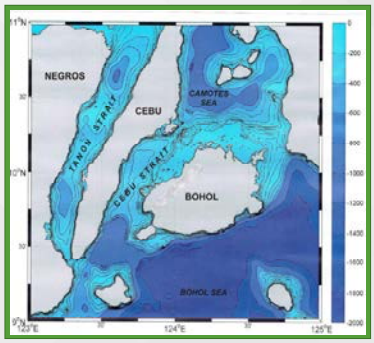
I. Introduction
II. Bohol Island
III. M7.2 Earthquake
IV. Damages
V. Recovery
VI. Bohol Island Geopark

Bohol Island

Regional geologic setting:

Boundary: Cebu Strait, Camotes Sea and Bohol Sea

Geomorphology:
N: undulating hills
E: rugged, hilly
W: marine terraces, coastal plains
S: uplifted marine terraces



I. Introduction
II. Bohol Island
III. M7.2 Earthquake
IV. Damages
V. Recovery
VI. Bohol Island Geopark

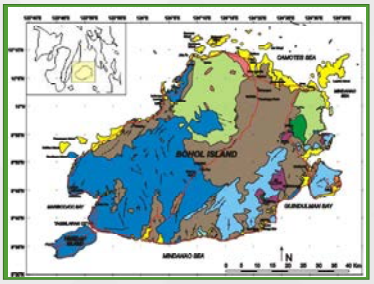
Bohol Island

Stratigraphy:

Clastics:
Limestones (Carmen, Sierra Bullliones and Maribojoc formations)
Volcaniclastics (Ubay Formation)

Igneous:
Jagna Andesite
Talibon Diorite

Basement:
Bohol Ophiolite
Alicia Schist



I. Introduction
II. Bohol Island
III. M7.2 Earthquake
IV. Damages
V. Recovery
VI. Bohol Island Geopark

Bohol Province

Population = 1.2 Million (2010)

Land Area = 411,726 hectares

Pop. Growth Rate = 0,96%

Pop. Density = 3 persons/ ha

Administrative Units
: 1 City; 47 Municipalities
: 1,109 Barangays
: 3 Congressional Districts

Coastline: 654 kilometers

Municipal H20 : 6,245 sq km



I. Introduction
II. Bohol Island
III. M7.2 Earthquake
IV. Damages
V. Recovery
VI. Bohol Island Geopark

M7.2 Earthquake

Date: October 15, 2013

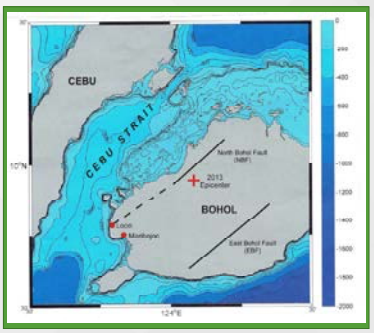
Time: 8:12 AM

Location: 9.86 °N, 124.07°E

Depth: 12 km

Generator: North Bohol Fault

Aftershocks: ~4,000 1 month after



I. Introduction
II. Bohol Island
III. M7.2 Earthquake
IV. Damages
V. Recovery
VI. Bohol Island Geopark

Damages

Death: more than 200

Injured: more than 700

No. of persons needed assistance: more than 350,000

Damaged houses: more than 54,000

Affected Localities: 22 out of 48

Cost of damage: 2B PhP (50M USD)



I. Introduction
II. Bohol Island
III. M7.2 Earthquake
IV. Damages
V. Recovery
VI. Bohol Island Geopark

Damages

Bohol Chocolate Hills



Ground rupture Anonang, Inabanga



Damaged houses Sagbayan, Bohol



Portion of National Highway Getafe, Bohol

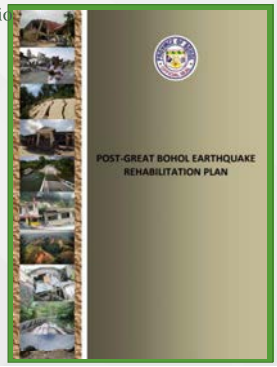


I. Introduction
II. Bohol Island
III. M7.2 Earthquake IV. Damages
V. Recovery
VI. Bohol Island Geopark

Recovery and Rehabilitatio

Relevant Sectors:

a. Food and Warehouse Cluster
b. Shelter Cluster
c. Protection Cluster
d. Camp Coordination and Camp Management (CCCM) Cluster
e. Health Cluster
f. Water, Sanitation and Hygiene (WASH) Cluster
g. Infrastructure Cluster
h. Government Structures and Facilities
i. Education Cluster
j. Logistics Cluster
k. Livelihood Cluster



I. Introduction
II. Bohol Island
III. M7.2 Earthquake IV. Damages
V. Recovery
VI. Bohol Island Geopark

Recovery and Rehabilitation

Baclayon Church



Before 2013 Earthquake



After 2013 Earthquake



Present

Loay Church



Before 2013 Earthquake



After 2013 Earthquake



Present

I. Introduction
II. Bohol Island
III. M7.2 Earthquake IV. Damages
V. Recovery
VI. Bohol Island Geopark

Recovery and Rehabilitation



Before 2013 Earthquake

Bohol Provincial Capitol



After 2013 Earthquake



Present

I. Introduction
II. Bohol Island
III. M7.2 Earthquake IV. Damages
V. Recovery
VI. Bohol Island Geopark

Bohol Island Geopark

April 2015:

Revisiting Bohol after disaster

Coordination with Bohol Officials re establishment of geopark





I. Introduction
II. Bohol Island
III. M7.2 Earthquake
IV. Damages
V. Recovery
VI. Bohol Island Geopark

Bohol Island Geopark

2016
Writing of book on Bohol Geopark

2017
Book Launching

Geopark consultations with technical volunteers, Bohol Province officials, National agencies

Geopark consultations with technical volunteers, Bohol local govt officials, National agencies





Bohol Island Geopark | 13

I. Introduction
II. Bohol Island
III. M7.2 Earthquake
IV. Damages
V. Recovery
VI. Bohol Island Geopark

Bohol Island Geopark

Oct 2017
4th Bohol Earthquake Commemoration

Launching of Bohol Island Geopark

Symbolic unveiling of Chocolate Hills Geopark Marker





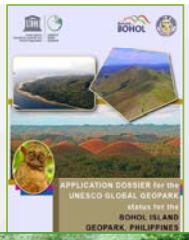
Bohol Island Geopark | 14

I. Introduction
II. Bohol Island
III. M7.2 Earthquake
IV. Damages
V. Recovery
VI. Bohol Island Geopark

Bohol Island Geopark

Nov 2018
Submission to UNESCO

July 2019
UNESCO Evaluation Mission

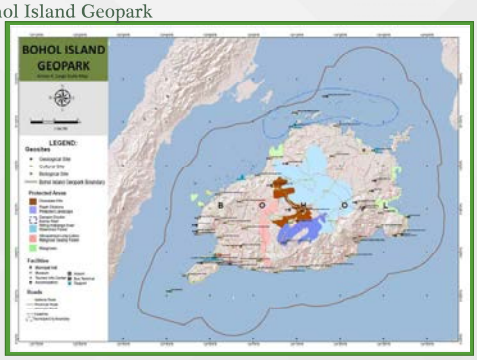




Bohol Island Geopark | 15

I. Introduction
II. Bohol Island
III. M7.2 Earthquake
IV. Damages
V. Recovery
VI. Bohol Island Geopark

Bohol Island Geopark



Bohol Island Geopark | 16

I. Introduction
II. Bohol Island
III. M7.2 Earthquake
IV. Damages
V. Recovery
VI. Bohol Island Geopark

Important Bohol Geosites

Chocolate Hills

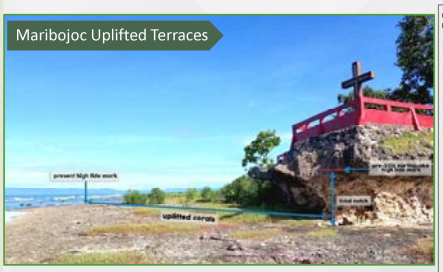


UNESCO Global Geopark Focus Areas:
- Education
- Science
- Geoconservation
- Sustainable Development

Bohol Island Geopark | 17

I. Introduction
II. Bohol Island
III. M7.2 Earthquake
IV. Damages
V. Recovery
VI. Bohol Island Geopark

Maribojoc Uplifted Terraces



UNESCO Global Geopark Focus Areas:
- Education
- Science
- Climate Change
- Geological Hazards

Bohol Island Geopark | 18

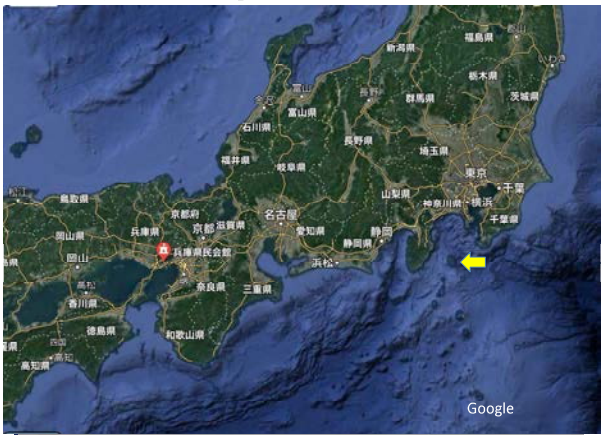

I. Introduction
II. Bohol Island
III. M7.2 Earthquake
IV. Damages
V. Recovery
VI. Bohol Island Geopark
Inabanga Ground Rupture
Photo: PHIVOLCS
UNESCO Global Geopark Focus Areas:
Education
Science
Climate Change
Geological Hazards
Bohol Island Geopark | 19

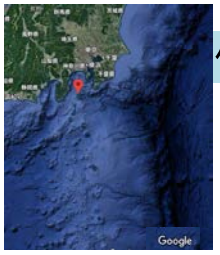

THANK YOU.

西谷香奈
Kana Nishitani



伊豆大島はどこにある？





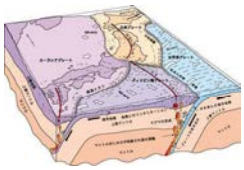
伊豆大島は活発な火山の島

東京から南へ約120km

年間4cm富士山に向かって移動中

2万5000年前水面に出てきた海底火山。100～200年周期で大噴火。

江戸時代後半からは、36～38年間隔で噴火継続中。



全国地質業協会連合会Webサイト
https://www.zenchiren.or.jp/tikei/plate.html

地球の動きを体感できる島！
災害が身近な島！

過去100年以内の自然災害

噴火　1957年　死者1名　重軽傷者53名
1986年　山腹割れ目噴火で全島民島外避難
地震　1978年　伊豆大島近海地震(震度5)
住宅一部損壊150軒
1923年　関東大震災　岡田地区津波波高12m
死者7名　家屋全半壊117軒
台風　1958年(狩野川台風)死者2名　家屋全半壊104軒
2013年(台風26号による土砂災害)
死者行方不明者39名、家屋全半壊77軒
2019年9月(台風15号による家屋全半壊)
大火　1965年　元町408世帯焼失

たとえば元町に生まれ育った63歳の知り合いは…



私自身も2013年10月16日
台風の大雨による土砂災害を体験
(33名死亡3名行方不明)



多くの島民にとって予想外の出来事
狩野川台風の経験はあったが…

言えなくなった言葉



この言葉の奥には、たくさんの人の
恐怖、苦しみ、悲しみがあることを知った

「火山が噴火しなければ、波に削られてやがて島は無くなってしまうでしょう。噴火が作った地面の上に、私たちは暮らしているんです。」

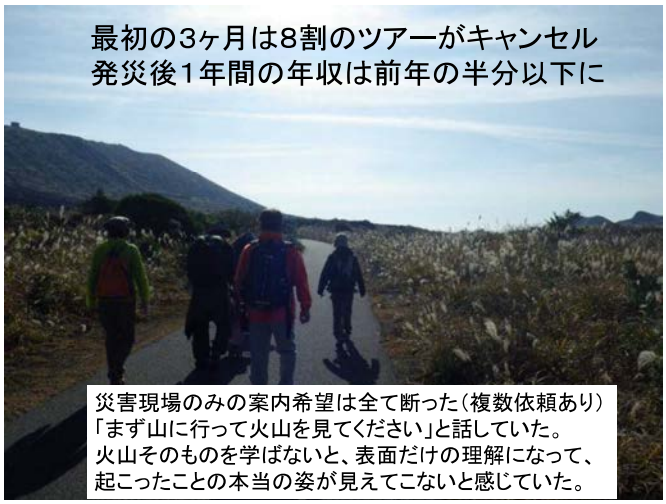
半日山を歩きブログで情報発信
半日泥かきボランティアの日々





火山の大きさを体感した

最初の3ヶ月は8割のツアーがキャンセル
発災後1年間の年収は前年の半分以下に



災害現場のみの案内希望は全て断った（複数依頼あり）
「まず山に行って火山を見てください」と話していた。
火山そのものを学ばないと、表面だけの理解になって、
起こったことの本当の姿が見えてこないと感じていた。

2013年11月2日（災害17日後）
初めてのお客様



住民セミナー
11月17日(災害1ヶ月後)



溢れるマスコミ情報に住民は不安。町は説明会を開く余裕が無い。道路が原因で崩れたという声も複数聞かれた。

ジオパーク推進委員会と東大地震研究所共催の説明会を実施。

参加者数160名



感想（アンケートより）
9割が「良かった！」
1割が「聞きたいのは、明日どうすれば良いか」

科学が間に入ることで、
感情的にならない。

私の仕事はジオガイド。様々なお客様と歩いている。（年に160日前後ツアー）

何かを語り継いでいるのか？


熟年夫婦

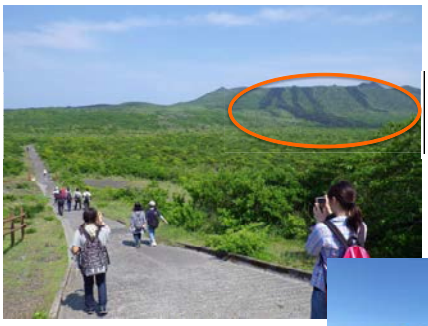

仕事仲間


「水源の会」の研修


高校の理科授業

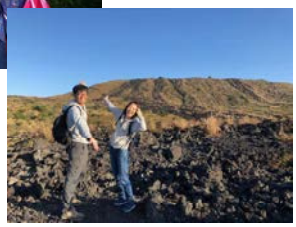

3世代家族


ひとり旅





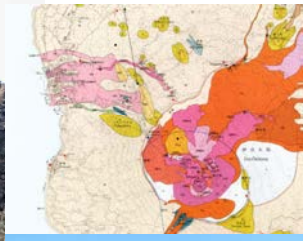
歩いて、見て、触れて、
想像して…

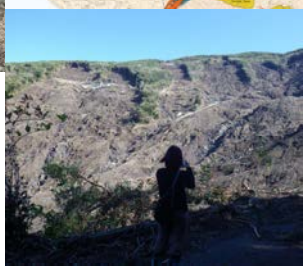


地球（火山）は
生きている！



溶岩流の断面を観察しながら…





人の暮らしも災害も
全て大地と
つながっている！

科学は日々進歩しているが
わかっていないことがたくさんある！
（人は地球の活動に抗えない）





火山観測機器の働きを紹介しながら…

2013年大雨に掘られた大地は…



風がくぼみを埋め、元に戻していった！



昨年9月の暴風でなぎ倒された山の植物は…



（写真は台風3日後）

台風の3日後に、地面から若葉を
伸ばし始めた！



暴風で樹皮を剥がされた木は…



わずかに残った樹皮から再生を始めた！

生命ってすごい！



私がしているのは“語り継ぎ”というよりも
目の前の景色や体験を通しての“思い”の共有？

地球も人も全ての生き物も
つながりあい、変化しながら
ただ一度きりの大切な時を生きている

地震、津波、暴風雨、土砂崩れ、火山噴火などは全て、地球の活動によって起こるもの。
これらの人が抗うことのできない大きな力は、風景を一変させ、私たちの心身にとても大きな
ダメージを与える。でも人も生き物も必ず再生しようとする…つながりあい、変化し続ける。
目の前の景色や体験を通じ、地球と生命がつむぎ出す物語を、お客様と一緒に楽しみたい。

伊豆大島には、次の噴火が迫っています！

（噴火間隔が今まで通りなら、あと3～5年で噴火）



今後、大きな災害が起きても…

ジオガイドとして備えて、生き残って
ありのままを見て、伝え続けていきたい

柴田伊廣
Takahiro Shibata

天然記念物の保存活用と地震断層
Conservation of natural monuments and earthquake faults

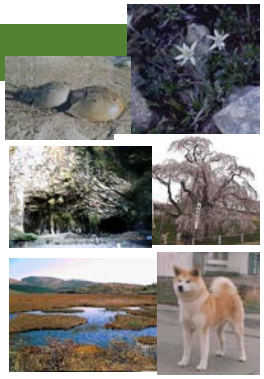
柴田伊廣（文化庁文化財第二課）
SHIBATA Tadahiro
Cultural Properties Second Division,
Agency for Cultural Affairs-Japan

北淡震災記念公園

What is a Naturel Monuments?

- First nature conservation law in Japan.
- 2020th is the **100th anniversary** of the designation of the first natural monument.
- Animals, plants and geological sites. **It is of high academic value for Japan.**
- Number of natural monuments：**1,031**

※**10 active faults** have been designated as natural monuments.



Landscape created by Earthquake, landslide...etc


きさかた
象潟（秋田県にかほ市）


屏風ヶ浦（千葉県銚子市）


佐渡小木海岸（新潟県佐渡市）


仏宇多（仏ヶ浦）（青森県佐井村）

Japan's longest fault system(MTL).


提供：中央構造線博物館


写真提供：中川和之

Akiba highway was created along the fault topography.

People passing the Akiba Highway passed culture from urban areas to mountainous areas.





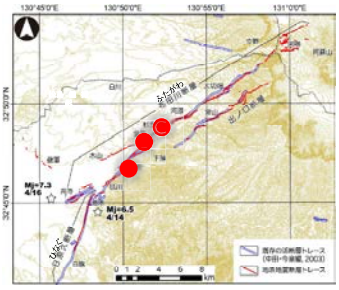
Faults are indispensable for understanding and developing culture.

写真提供：大鹿村教育委員会

Futagawa Fault Zone

提供：熊原康博（広島大学）・
大学合同地震断層調査グループ

- Mashiki town, Kumamoto Pref.
- **Source fault of the 2016 Kumamoto earthquake**
- Following the magnitude 7.3 earthquake, a surface earthquake fault of about **31 km in length appeared**, and the ground caused a right strike-slip of up to about 2.5 m and a vertical step of about 1 m.
- 3 places of the Futagawa fault zones have been designated as natural monuments.



Narrative testimony
(October 2017)



Today, I thought it was a study for a narrator. Japan is a land where typhoons, volcanoes, earthquakes and tsunamis occur. As a person living near the fault, I would like to tell you how to live and how to deal with natural disasters.
I didn't remember the teacher's class, but it was fun anyway.



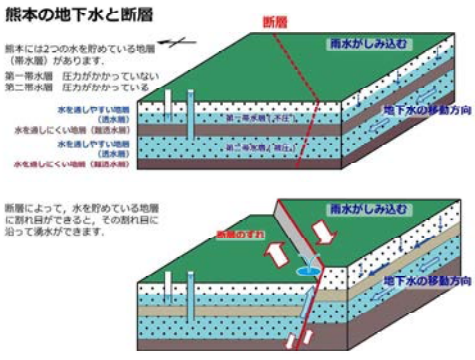
Sugido, Mashiki town
(Shioi Shrine)



Sugido, Mashiki town
(Shioi spring water)

Map of springs at Mashiki Town





Education to learn the relationship between the earthquake and the formation of Mashiki town .

Terrain created by earthquakes taken by children.









Active faults preserved as natural monuments are ...

"The real thing" used to pass down disasters

⬇

"The real thing" to talk about local identity

ポール ミラー
Paul Millar



The UC CEISMIC Canterbury Earthquakes Digital Archive: Supporting Post-Disaster Research

Dr Paul Millar, Professor of English Literature and Digital Humanities, Deputy Pro-Vice-Chancellor

College of Arts, University of Canterbury
Christchurch, New Zealand

UC UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

Disaster Remains and Passing-on of Memories Panel
International Forum on Telling Live Lessons From Disasters
January 2020, Kobe, Japan

paul.millar@canterbury.ac.nz





22 February 2011, many deaths



He aha te mea nui o te ao?
He tangata! He tangata! He tangata!
What is the most important thing in the world?
It is people! It is people! It is people!

UC CEISMIC
Canterbury Earthquake Digital Archive

CEISMIC: Canterbury Earthquakes Digital Archive

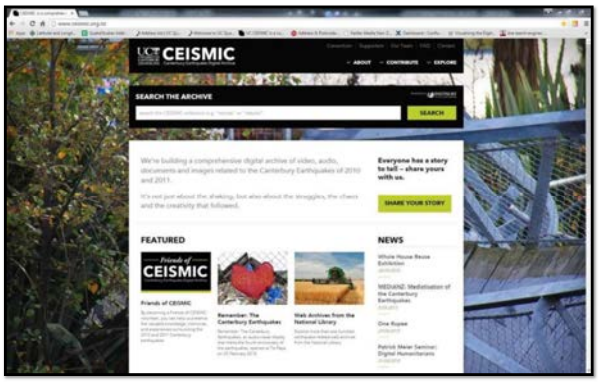
- 200,000+ items
- Stories, images, documents, video, and audio
- Mix of research, community, cultural heritage and crowd-sourced content
- A specialised search engine, powered by DigitalNZ

ARCHIVES NEW ZEALAND
Christchurch City Libraries Ngā Kete Wānanga-o-Ōtautahi
CERA Canterbury Earthquake Recovery Authority
NZ ON SCREEN
National Library of New Zealand
Manatū Taonga Ministry for Culture & Heritage
Canterbury Museum
TE PAPA
NHRP Natural Hazards Research Platform
UC UNIVERSITY OF CANTERBURY

UC CEISMIC
Canterbury Earthquake Digital Archive



UC CEISMIC
Canterbury Earthquake Digital Archive



UC CEISMIC
Canterbury Earthquake Digital Archive

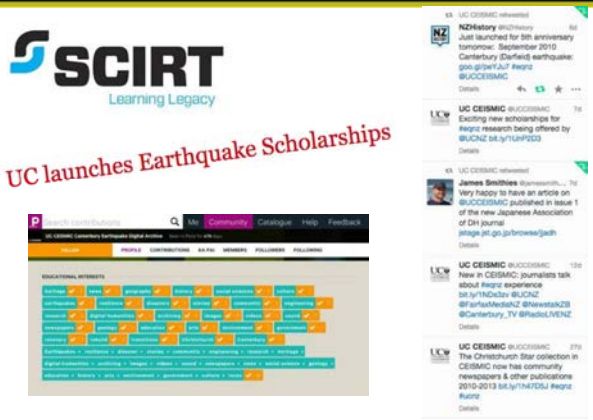


Photographs: Copyright, Fairfax Media NZ

UC CEISMIC
Canterbury Earthquake Digital Archive



UC CEISMIC
Canterbury Earthquake Digital Archive





The QuakeBox
Korero Mai: Tell Us Your Story



Collected from April-December 2012
8 different sites across the city
722 stories collected in 13 languages
120 hours of video, and 800,000 transcribed words

UC CEISMIC Canterbury Earthquake Digital Archive
Te Kāhui Roro Reo • New Zealand Institute of Language Brain & Behaviour

Retelling post-disaster stories facilitates

- Analysis of evolving narrative structure
- Understanding of the way people think, feel, respond and communicate
- Consideration of the changing relationships between people, spaces and places
- Investigation into how changes to stories relate to post-disaster factors

UC CEISMIC Canterbury Earthquake Digital Archive | Te Kāhui Roro Reo • New Zealand Institute of Language Brain & Behaviour

Individuals' stories are

- Efforts to make sense of the world in crisis and uncertainty, to regain order and facilitate recovery
- Cultural performances that can foster dialogue, debate, and social action.
- Show us what is personal and absent in the languages of public issues, policies, and broad population studies

UC CEISMIC Canterbury Earthquake Digital Archive | Te Kāhui Roro Reo • New Zealand Institute of Language Brain & Behaviour

Individual Stories vs Official Accounts

- Stories resist idea of disasters becoming safe and controllable over time
- In times of great grief and passion they have been employed or appropriated to covertly politicise disaster behind guises of nation building or patriotism.
- **Disaster Narratives vs Resilience Narratives.** A crucial distinction if 'resilience' depends on a progressive-oriented dominant narrative that views the devastation and rebuilding of cities as a version of capitalism's process of 'creative destruction'.
  (Vale and Campanella, *The Resilient City: How Modern Cities Recover from Disaster* (2005) *p.15)*
- Stories resist efforts to homogenise or valorise disaster by, for example, revealing disaster vulnerability, impact, response and recovery to be profoundly gendered or ethnicity-based.

UC CEISMIC Canterbury Earthquake Digital Archive | Te Kāhui Roro Reo • New Zealand Institute of Language Brain & Behaviour

Narrative accounts of Māori experiences

- Resilience and rejuvenation within whānau and communities
- Cultural confidence, whanaungatanga (social capital) and individual experiences of mana motuhake (agency/self-determination) in disaster responses and recovery
- Impact of the pre-existing socio-economic disadvantage on experiences of community resilience
- More vulnerable to natural disasters when government policies 'fail to respect indigenous rights and fail to acknowledge the relevance of indigenous knowledge to both social and environmental recovery'

UC CEISMIC Canterbury Earthquake Digital Archive | Te Kāhui Roro Reo • New Zealand Institute of Language Brain & Behaviour



'four days being at home with no power and water... you could hear the helicopters the police sirens … [like] a war zone'.

UC UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

杉本伸一
Shinichi Sugimoto

Preservation and utilization of disaster remains

A case study of the Mt. Unzen Fugendake eruption disaster and the Great East Japan Earthquake tsunami

Sanriku Geopark promoting office
Coordinator Shinichi SUGIMOTO

Outlines of volcanic disaster at Unzen



- Started on November 17, 1990
- End in February 1995
- continuous growing of lava dome
- Generation of pyroclastic flows due to partial collapses of the lava dome.

The Disaster remain of Unzen Volcano



Remains of a disaster in the eruption of Mt.Unzen.

- Ohnokoba elementary school building burned down by pyroclastic flow
- damaged houses by the debris flow

Process of the preservation of Disaster remains

- By the suggestion of inhabitants.
- Support of the expert from the outside.

➢Ohnokoba elementary school
- ①Request for volcanic sightseeing from residents
- ② Reflected in the town's reconstruction plan
- ③Preservation and maintenance as a memorial base

➢damaged houses by the debris flow
- ① Residents need funds for reconstruction
- ② The prefecture approved the request and bought it
- ③Conservation and maintenance as a memorial park

The relations between revival plan

Not only direct damage the city of Shimabara.
A big influenced was given a whole Shimabara peninsula.

- The settled reconstruction plan

The revival plan was development by the local inhabitants and company, various groups repeated a discussion as well as administration all in one body.

- revival plan
  - ① Reconstruction of life
  - ② To build disaster prevention city
  - ③ Regional revitalization

Volcano tourism is planned, and preservation and maintenance of disaster remains.

Great East Japan Earthquake tsunami



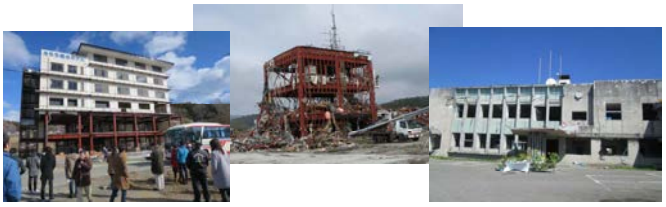
- Occurs at 2:46 pm on March 11, 2011
- Tohoku district Pacific coast earthquake of magnitude 9.0
- Strong shaking and domestic observation history maximum tsunami of maximum seismic intensity 7.
- It brought serious damage in the wide range around Tohoku, the Kanto district.

Process of the preservation of disaster remains

- The problem of “disaster remains” is highlighted as a symbol of “pass down of disaster”
- Residents' opinions are divided, and local governments cannot make clear policies.
- Disaster remains and planned disasters are removed one after another.
- Government support for preservation of earthquake remains.
- Securing sufficient time for discussion on the preservation of the remains of residents.

Remains which were trying to store by Great East Japan earthquake disaster

- Preservation of disaster remain is being promoted by the government.
- In some cases, preservation has not progressed due to conflicting opinions among residents.



The remains of structure which was not able to store

- Minamisanriku disaster prevention government building
  - A direction of the preservation at first
  - An express a policy of the removal in September 2013
  - The local voice was divided over the preservation or dismantling of the government building.
  - Prefecturally preserved for 20 years after the earthquake, then final decision
- Otsuchi-cho government office building
  - Reconstruction volunteers lead the preservation campaign
  - The town council rejected the petition for conservation
  - The mayor sets up a review committee and decides to preserve some of the reports.
  - Candidates who promise to dismantle in the mayoral election
  - Final dismantling completed

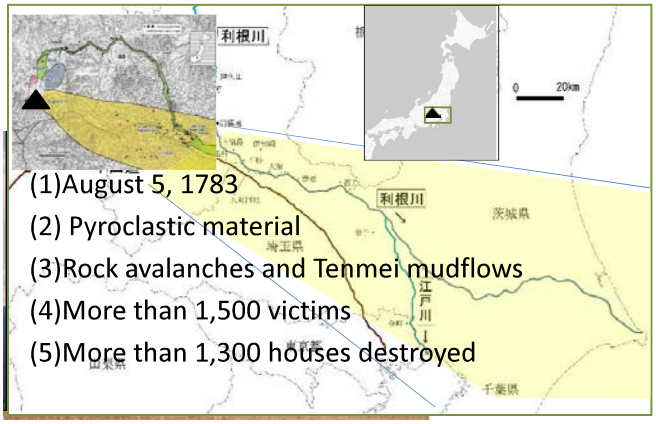
One necessary for preservation and utilization to disaster remains

1. The activity that inhabitants were made up mainly
2. For connected with revival plan
3. Support of the expert who administration and inhabitants contact part
4. With a process for the preservation , it is important that I find a route of the utilization at the local whole including explanation and the disaster prevention education by local guides

関俊明
Toshiaki Seki



1. Overview of the Asama Disaster in the Third Year of Tenmei



(1)August 5, 1783
(2) Pyroclastic material
(3)Rock avalanches and Tenmei mudflows
(4)More than 1,500 victims
(5)More than 1,300 houses destroyed

2. Excavation of the Tenmei3

- Conducted only in Gunma Prefecture
- The same time axis due to the phenomenon of disaster
- The Edo Period Archaeology In Response to Literature and Tradition
- Elucidation of disaster



- [Oral] : "(return to take the family mortuary tablet) After saying goodbye farewell Gosuke…."
- [Relics / Tradition]: "The wooden parts of the damaged houses are part of the Buddhist altar"
- [Remains] :Example of conveying recovery and reconstruction: recovery earth mine



3. Excavation of Kamahara Kannondo, the stage of the sad story



→Unearth of local old people progresses to academic research

The only museum dealing with this disaster





Unearth of local old people advances into academic research
→The place where the residents' identity is based

4.Monuments (Natural Objects and Disaster Topography)






5. More than 390 items (local journals)

"One generation" ＝30 years



5.(1)Episodes related to the 33rd memorial service

- Feeding Monument
- Publishing things
- Fiction
- Drawing
- the act of transcribed a damage record




→Generational change: Things handed down (1st and 2nd generation)

5.(2)Anniversary events

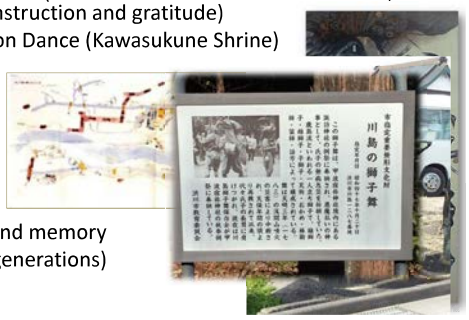
Anniversary events that have been held in the year of the break



→With the thought of the memorial service, the recollection of a new memory

5.(3)Things that remember reconstruction and damage

- 「浅間焼吾妻川利根川泥押絵図」(Damage Drawing drawn 73 years later)
- 「植野堰・広瀬桃木堰絵図」(41 years later)
- “Sintaikannnonnhi” (A monument with a sense of thanks ,47 years after reconstruction and gratitude)
- Revival of the Lion Dance (Kawasukune Shrine)



→Reconstruction and memory arrangement (2-3 generations)

5.(4)Discovery of relics in the riverbed and sediments

- The Bells of Jorin-ji Temple(127 years later)
- Gate stone of Enmei-ji Temple(134 years later）
- The horse's head Kannon built 11 years before (around180 years later)



→A series of contingent discoveries brings back new memories (5-6 generations)

5.(5)Discovery in the former village of Kanbara

- Discovery of relics associated with the construction of charcoal-grill
- Discovery of the victim during construction grounds work
- Unearth of relics by the local geriatric association and old-fashioned volunteers



→The action of recalling the memory by the relic, and tracing their ancestors (6-7 generations)

5.(6)Academic research begins

- "Comprehensive Survey of Buried Villages at the Foot of Mt. Asama"(1979-)
- Discovery of two bodies of victim under the stone steps (1979)
- Excavation of other towns and villages in the lower reaches
- Opening of the Tumagoi Local Museum(1983)

→Media, textbook description for students, many visitors, local service association activities, etc. for archaeological surveys

→To tell down and establish their own identity(7 - 8 generations)

5.(7)Quiz Rally rounds Remains







→Activities to use the power of "education" to pass on to the next generation in local events (8-9 generations)

*8 generations since the disaster occured,240 years

①The remains and relics/ the real thing have the power to move people's hearts

②anniversary event / "social wisdom" to overcome sadness

③It is also able to follow the footsteps that have been carried out in the course of time axis / historical disaster

④4 "Memories of Disasters" … "Telling"

“Creating a mechanism for society to remember“

蒋正興
Chiang Cheng-Shing

國立自然科學博物館

Taiwan's 921 Earthquake

Difficulties and Challenges Faced by the National Museum of Natural Science

国立自然科学博物館は台湾921地震の困難と課題にどのように向き合うべきでしょうか？

Cheng-Shing Chiang*, I-Min Chen, Ling-Ho Chung, Chia-Hsin Tsai, Xin-He Lee
蔣正興, 陳依民, 鍾令和, 蔡佳欣, 李信和
National Museum of Natural Science, Taiwan 国立自然科学博物館,台湾



Chi-Chi Earthquake (921 Earthquake)

- Local date 21 September
- Magnitude M_w = 7.3
- Depth = 8 km
- Epicenter Chi-Chi, Nantou
- Casualties = 2,415 killed



Damage to Kuangfu Junior High School During The Chi-Chi Earthquake

Photo by 小林郁雄



Preserving Damaged Buildings to Create the 921 Earthquake Museum



Difficulties and Challenges Faced By the 921 Earthquake Museum of Taiwan

台湾921地震教育園区の困難と課題

Public opposition	Time pressure	Reduced funding	Aging building and facilities

Multipurpose Venue for Rescue Dog Training





Zhushan Site for Studying Paleo Earthquakes





Chelungpu Fault Preservation Park for Earthquake Relics Preservation





Difficulties and Challenges Faced by the Zhushan Museum

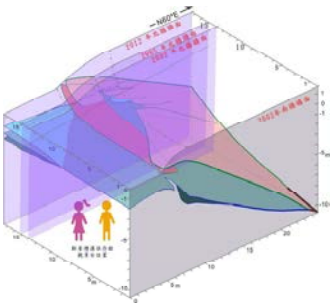
- Exhibition preservation and maintenance
- Construction difficulties

Evolution of Fault Trench (2002-2005)

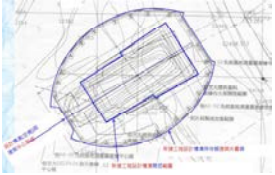


History of Trench Excavation





Early Difficulties at the Zhushan Site


Difficulties Encountered During Construction of the Zhushan Site

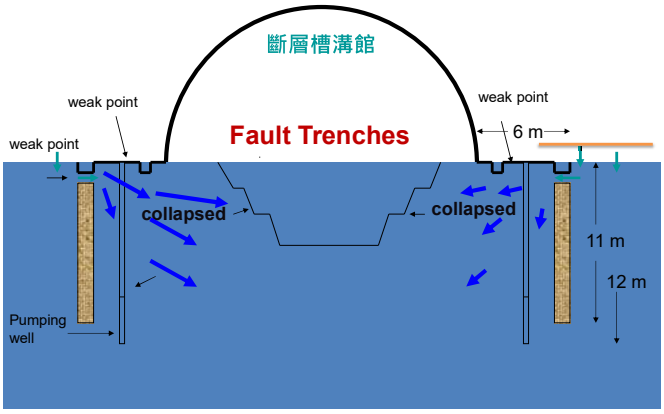




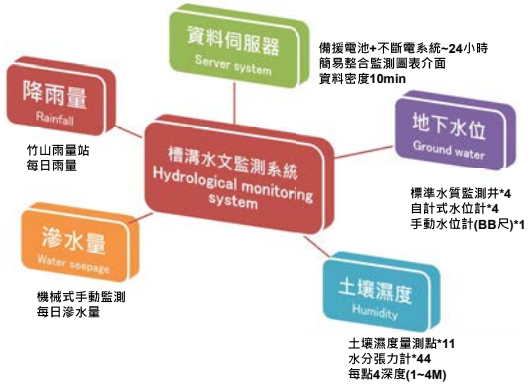
Evolution of Fault Trench (2013)



Analysis of Water Seepage in Fault Trench



Hydrological Monitoring System



Conclusion

- The funding for museums in Taiwan is mainly from the government. Although stable, there are year-on-year reductions, making it necessary to find external revenue resources. As buildings and facilities become older, maintenance costs increase year on year.
- Taiwan is often in the path of typhoons. It is not easy to protect the soft soil layers or prevent trench collapses due to water seepage.

Thank you for your attention



坂口奈央
Nao Sakaguchi

Why didn't the residents preserve the disaster remains?
—A case of the Great East Japan Earthquake and Tsunami—

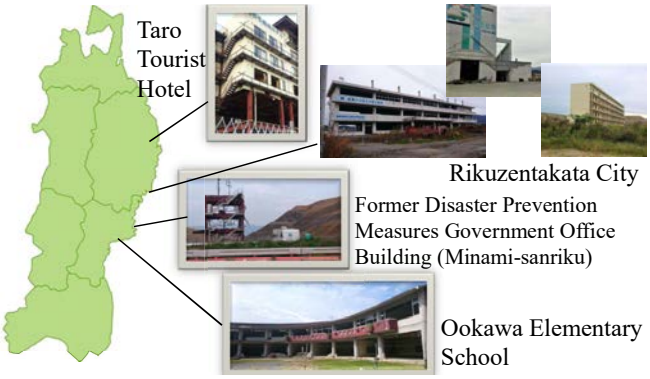
2020 International Forum on Telling Live Lessons from Disasters
Disaster Remains and Passing-on of Memories
25 January 2020
Nao SAKAGUCHI (Tohoku University)

Disaster Remains

- Even though it is a disaster-prone country, there are few buildings in Japan that have been preserved as disaster remains.
- After the Great East Japan Earthquake and Tsunami, the striking images of giant ships carried ashore and buildings with casualties have come to be places for prayers or icons of the disaster. This has caused emotional conflict to emerge among the surviving residents.

→The Japanese government announced that it would fund the initial cost of preserving the disaster remains, that is to say, the tsunami-damaged buildings and structures (Nov. 15, 2013).

- A total of 12 disaster remains in 9 municipalities were preserved, out of a total of 26 disaster-stricken municipalities in Iwate and Miyagi Prefectures (2018).
- It can be said that the Great East Japan Earthquake and Tsunami was the first disaster to widely and genuinely raise the question of how to handle disaster remains.
- The definition of the disaster remains by researchers and governments have been broad and fluid. On the other hand, the meaning and purpose of the disaster remains has been narrow and superficial.



Aspects of the Great East Japan Earthquake and Tsunami



- Many missing
(15,895 dead, 2,539 missing)
Survivors wish to keep connected to their missing family members
- Traces and remains of the homes lost: people identify the story of their lives with once-familiar things which have lost their original function
- For residents, the disaster remains evoke not only memories of the tsunami, but also of their daily lives before the tsunami.
- For survivors who have experienced the disaster, to preserve the disaster remains widely means to "console the souls."

The Ship "Kyotoku-maru" in Shishiori District, Kesennuma

(Disassembled in October 2013)

Tourist Spot = Spectacle; Residents Opposed

A former chairman of the Shishiori District Residents' Association who was a crew on a Northern Pacific salmon fishing boat commented:

- "Ships rust away. To imagine seeing it fall into ruin…."
- "Ships should be on the sea. That's the old rule of the sea." To properly mourn for the spirit of the ship, the ship should be disassembled.

→ Shishiori District was home to many seafood manufacturers before the disaster, but this elderly former fisherman's comment reveals his feelings towards the sea and the ship.





Source: Kohoku Shimpo Newspaper, Aug. 26, 2012

A Dispute over the Sightseeing Boat "Hamayuri" in Akahama District, Otsuchi Town, Iwate Prefecture



Local Women's Club Advocated for Promoting Tourism and Creating Jobs; Turned into a Conflict Among Residents

The women of Akahama District were actively involved in local activities.

Underlying was the life structure specific to the fishing community: men at sea & women on land.

→ **Financial Independence**

Husbands were on the crew of Northern Pacific salmon fishing boats which flourished until the 1970s, and deaths by accidents at sea were not unfamiliar. Women took initiative and were creative in their labor, and took pride in playing an important role in their regional economy.

What it means for the local survivors

The locals do NOT view the disaster remains as means to provide education for disaster prevention and pass down memories for future generations.

They instead find purposes of keeping the remains in connections to the daily local life they have had.

It is essential to focus on the process of formation of the meanings.

Former Municipal Hall Building in Otsuchi Town, Iwate Prefecture



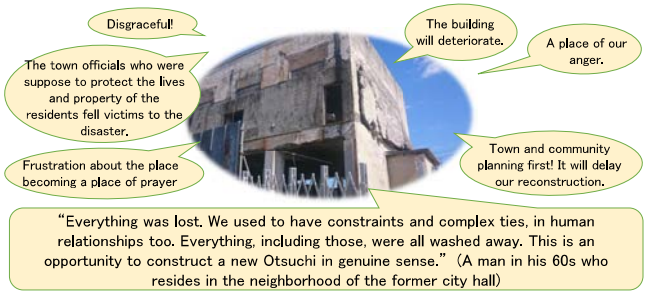
Photo as of July 24, 2011

Background Story of the Demolition of the Former Municipal Hall Building

- Built in 1954. Served as the hub of the town for more than half a century.
- The mayor and 27 officials who were setting up disaster headquarters in front of the building immediately after the quake lost their lives to the tsunami.
- The next mayor, elected in August 2011, officially announced partial preservation of the building as a message for future generations.
- The following mayor, elected in August 2015, campaigned for demolition, reigniting a town-wide debate.
- The budget for demolition was approved in March 2018, leading to the establishment of a citizen's group calling for the ruin's preservation. Their petitio to suspend the demolition work was rejected in court The demolition work was completed in March 2019.



"A Scene of Shame"-- The reason given for its demolition (by a man in his 60s at the time of the disaster)



"Everything was lost. We used to have constraints and complex ties, in human relationships too. Everything, including those, were all washed away. This is an opportunity to construct a new Otsuchi in genuine sense." (A man in his 60s who resides in the neighborhood of the former city hall)

Shame Culture in Japan

Benedict, R. The Chrysanthemum and the Sword (1954), Sakuta, Keiichi (1986), Terasawa, Masaharu (1985)

- A sense of self-affirmation such as strong assertiveness and having a feeling of superiority which is self-consciousness against one's own value being accepted and appreciated by others / A sense of humiliation from having one's value denied by others: These two contradicting aspects were experienced by each individual living in Otsuchi
- ***Direct Shame***: that the then Mayor and government members became the victims of the disaster from their misguided actions. Feeling a sense of humiliation as if one's experience preceding the disaster was also denied.
- ***Indirect Shame***: Nostalgia for Otsuchi's times of prosperity, together with recollection of one's own responsibility living through Otsuchi's social decline. A sense of self-reflection

Why Did the Residents Decide Not to Preserve the Otsuchi Town Hall Building?

How the Media Described the Story of the Former Town Hall Building to the Outside World

News reports discussed the administration's functional issues, which turned into the idea of preservation serving as justice.

To the residents, the town hall building is a symbolic landmark (merkmal) which nurtured love and pride for their hometown.

However, through the dispute over the former city hall building, it was exposed to the public that Otsuchi had been suffering social and economical stagnation before the disaster, and was also continuing to suffer from social issues after the disaster. This two-pronged feeling of defeat and discord revealed itself as shame.



• The survivors of the disaster remember the disaster remains in 3 separate phases; pre-disaster, disaster, and post-disaster.

These memories bring confusion and conflicts in people. The survivors go through the process of reclaiming themselves through communications in emergency shelters and discussions at community or reconstruction meetings.

• For the locals, the disaster remains bring real and live memories of disaster that continue to transform as time passes. Thus, the disaster remains has not become a part of history yet. For the locals, the remains still constitute meanings in their life and society.

• Memories of the disaster remain as;

"The symbol of disaster " created through the time of disaster and the right aftermath. Wants to utilize the remains as much as possible.

"The symbol of pre-disaster" held mainly by the generation that went through the revolution of lifestyles

→ Two meanings come and go in people's memories.

エコ アグス プラウォト
Eko Agus Prawoto

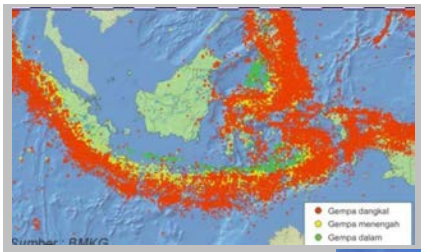
2020 international forum on telling live lessons from disaster-kobe japan

extending the memory

of the community toward disaster preparedness

from myth , scientific explanation and popular culture

eko prawoto I duta wacana christian university- indonesia





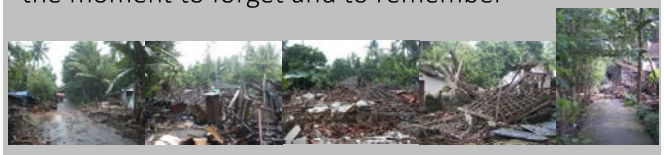






Indonesia, living on the ever-shaking ground

the moment to forget and to remember





after the disaster....

the myth from the past appear again as an 'explanation'





the spirit of togetherness as the most important social capital

physical recovery - interregional cooperation



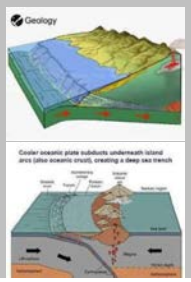
the ritual as an extension of the memory





reaching the next generation

scientific explanation, would it be sufficient?



the power of myth
pop art as media

touching the heart of the culture







kebon harjo....

extending the memory and interregional cooperation











are we prepare?



吉椿雅道
Masamichi Yoshitsubaki



CODE

"To help one another when they are at the difficult time"

We thankfully had a huge support from over 70 countries when the Great Hanshin Awaji Earthquake hit Kobe on 17th January 1995. CODE was established to return our thankfulness. We have been supporting 35 countries and regions and implementing 62 relief activities.

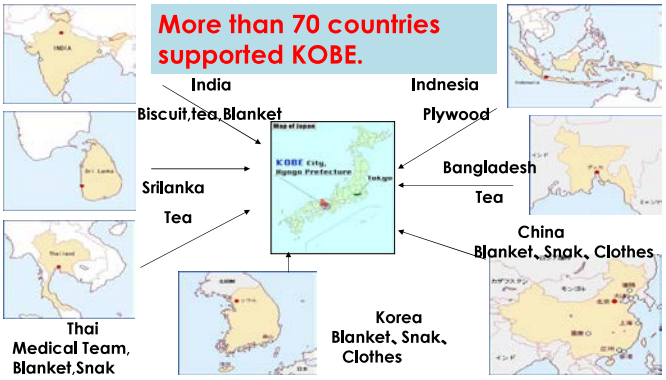
Citizens toward Overseas Disaster Emergency

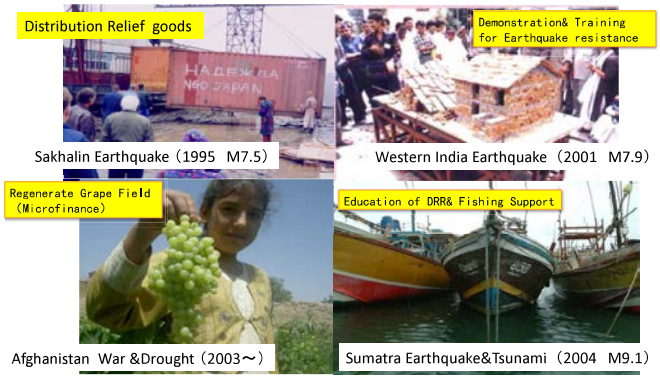




The Great Hanshin-Awaji Earthquake (KOBE Earthquake)

Magnitude: 7.2 on the Richter Scale
Death toll: 6,434
Injuries : 40,092
Houses partially or completely destroyed in the quake: 240,954
Houses partially or completely destroyed by fire: 7,456



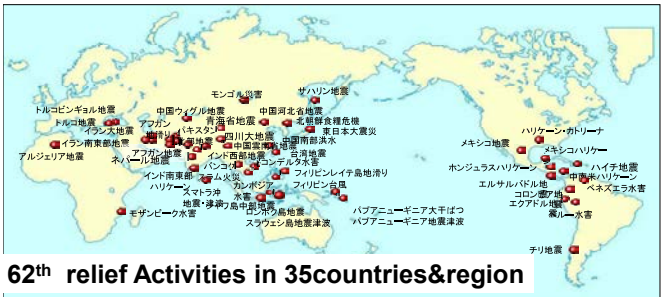






CODE 海外災害援助市民センター

Citizens towards Overseas Disaster Emergency



62th relief Activities in 35countries&region

CODE's Relief Activities & Exchange

2008 Sichuan Earthquake in CHINA

2010 Chili Earthquake/Tsunami

2018 Lonbok Earthquake
Sulawesi Earthquake/Tsunami
Sunda Strait Eruption /Tsunami in INDONESIA

Sichuan Earthquake

Date: 12/May/2008 14:28(Local time)
Scale: M8.0
Affected Area: Around 400km from Chengdu to the northeast
Affected peoples: 46.24million peoples
Death: 69,226 peoples
Injured: 374,643 peoples
Missing: 17,923 peoples
House damage: completely 216,000
partially 4150,000
School damage: 7,000
Total affected Area:
総被災面積: 500,000㎢
(1.3times of Japanese land)





CODE`s Relief Activities



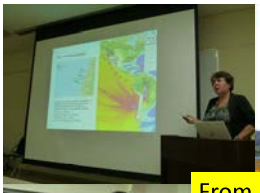
Exchange Affected Area（Tohoku・Noto-Sichuan）

Chile Earthquake

Date：27/feb/2010　3:34（Local time）
Scale：M8.8（5th largest in history）
Epicenter：107km north-northeast of Concepcion
Deep：35km
Tsunami run-up height:　Max 28m
　　Average:5m～9m
Death:　802 peoples
　（about 500 peoples were killed by Tsunami）
Affected peoples　：200,000
Affected Area ：Talcahuano（ 6～10m）
　　Dichato（6～9m）
　　Robinson Crusoe Island（10m）











From Affected area to Not yet area





A NGO staff learned About Disaster Prevention in Kochi. And She conveyed Chile's experience to Kochi

Indonesian Disaster





「Lonbok Earthquake」
Date：29/July ,5/Aug, 19/Aug /2018
Epicenter：Northeast of Mataram,
　　West Nusa Tenggara
Scale：M6.4（29/July）,M6.9（5/Aug）,M6.9（19/Aug）
Death:555　House damage:74,000

「Slawesi Earthquake/Tsunami」
Date：28/Sep/2018
Epicenter：About 80km north of Pal,
Scale：M7.5　　Middle Sulawesi
Death:2,090　missing:680　House damage: 67,310

「 Sunda Strait Eruption /Tsunami 」
Date：22/Dec/2018
Affected Area：Banten province, western Java,
　　Lumpung province,Southern Sumatra
Death：426　Missing29　House damage: 1,527







Learn each other traditional wisdom with local people







「Keeping Memories Alive」
learning from support and exchange in affected area

＊Not only people tell but nature speaks
（Ex :100year foresting, Tidal forest = Eco-approach）

＊Even if it is not transmitted in words, it may be transmitted through songs, place names, and traditions.
（Ex :Shiawase hakoberu youni,Jono-oge, Smong,
　　Tsunami-tendenko）

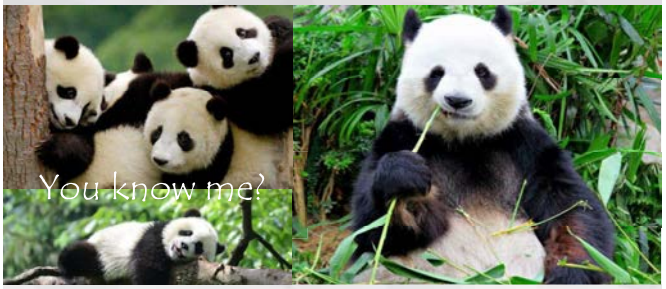
張国遠
Zhang Guoyuan

Research on Status and Solutions of School Disaster Education
——China-Japan Cooperation and Response

***Guoyuan Zhang*, President & Associate Professor**
New Century Institute of Education Safety Science and Technology，
Beijing City University

Kobe,Japan
March 27, 2020

I'm from Sichuan



2008 Sichuan Earthquake



Indicators	Loss
Seriously Damaged Areas	> 100,000km2
# of death toll	69,227
# of injured pp	374,643
# of missing pp	17,923
# of dead & missing students	5,335
Direct Economic Loss	RMB 845billion

2018 Loss of Natural Disasters in China



Indicators	Loss
Damaged Agriculture Areas	> 200million km2
# of affected pp	130 million
# of death toll	589
# of missing pp	46
# of House collapse	97,000
Direct Economic Loss	RMB 264 billion

Development in School Disaster Education

international community attached importance

- UN's International Decade for Natural Disaster Reduction
- Hyogo Framework for Action and the Hyogo Declaration
- Sendai Framework for Disaster Reduction 2015-2030
- UNESCO+UNISDR：Competition with natural disasters: disaster reduction begins at the school

Chinese government has adapted

- China's International Committee for the Reduction of Natural Disasters
- National Safety Education Day for Primary and Secondary School Students
- China's Disaster Reduction Action
- Nation-Wide Comprehensive Disaster Reduction Model Communities
- National Science and Technology Model Schools for Earthquake Preparedness and Disaster Reduction

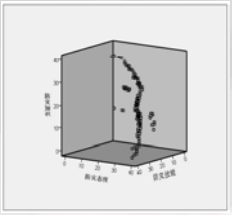
Overall society actively response

- Various government agencies and education system
- NGOs
- Communities and families

Current Situation of Students' disaster prevention literacy

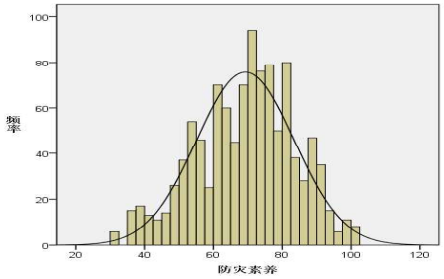
Overall level of disaster prevention and literacy of primary and secondary school students in China is low & correlations among knowledge, skills and attitudes

Disaster Prevention	Min	Max	M	SD	Failing Rate	Outstanding Rate
Literacy	12	100	60.30	11.93	48.70%	5.00%
Knowledge	0	36	18.20	5.83	70.60%	4.40%
Skills	0	36	18.87	6.25	72.40%	6.20%
Attitudes	0	36	28.10	5.00	6.60%	53.90%



Teachers' disaster prevention literacy

Overall disaster prevention quality of teachers in China is low & correlations among knowledge, skills and attitudes







China's Study Tours in Japan

Japan's Study Tours in China









Thank you !

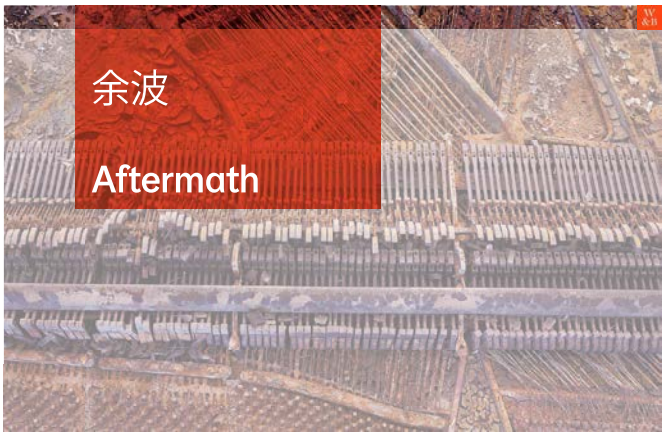
J. デイヴィッド ワッゴナー三世
J. David Waggonner III



1	Flood	洪水
2	Aftermath	余波
3	Dutch Dialogues	オランダとの対話
4	New Orleans Water Plan	ニューオーリンズ 水計画
5	Rebuild By Design	設計による再構築
6	Norfolk	ノーフォーク
7	Charleston	チャールストン
8	Louisiana SAFE	ルイジアナ 安全
9	Present	現在
10	Community	公共
11	Memory	記憶










オランダとの対話
Dutch Dialogues


Dutch
Dialogues
NEW ORLEANS
NETHERLANDS


ニューオーリンズ
水計画
New Orleans
Water Plan

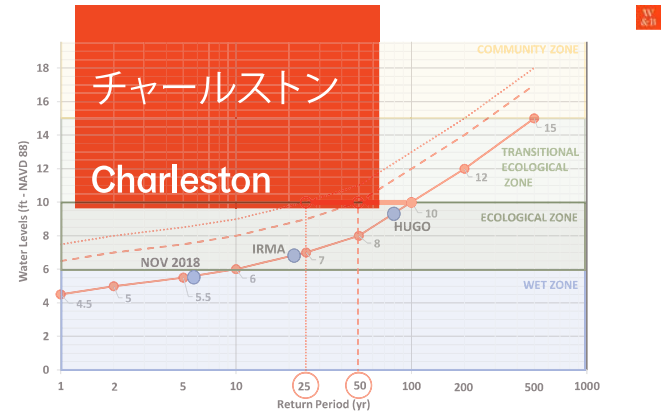

Vision
Urban Design
Implementation


設計による再構築
Rebuild By Design



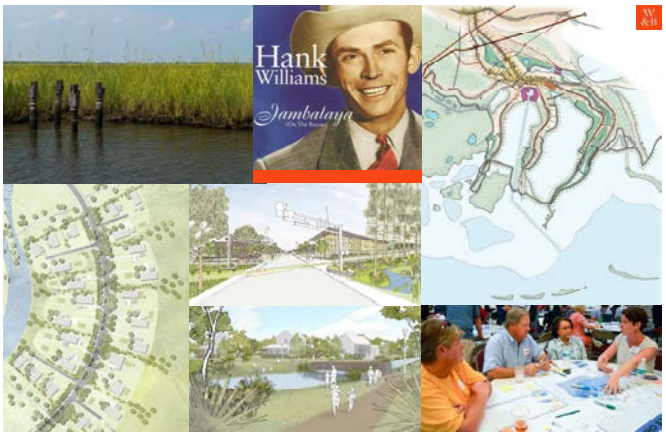

ノーフォーク
Norfolk
Infrastructure at Risk

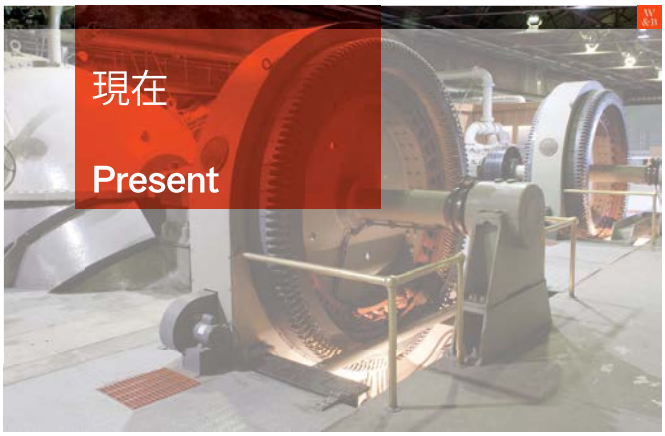



チャールストン
Charleston
Water Levels (ft - NAVD 88)
Return Period (yr)
COMMUNITY ZONE
TRANSITIONAL ECOLOGICAL ZONE
ECOLOGICAL ZONE
WET ZONE
NOV 2018
IRMA
HUGO




ルイジアナ 安全
Louisiana
SAFE


Hank
Williams
Jambalaya













吉椿雅道
Masamichi Yoshitsubaki

ポスターセッション
Poster Session

ポスターセッション参加者プロフィル、アブストラクト、ポスター
Participants' Profiles, Abstracts, and Posters

2020年1月26日
January 26, 2020

ポスターセッション参加者プロフィルとアブストラクト/
Poster Session Participants' Profiles and Abstracts

ポスターセッション統括 / Overall Coordination of Poster Session

澤田雅浩 (座長) / Masahiro Sawada (Chair) 1

アレサンドロ パスート（共同座長）/ Alessandro Pasuto (Session Co-chair) 2

ポスターセッション発表者 / Poster Session Participants

1. リープ ダム：「災害に強い住宅を全ての人々にーメコン川沿い集落における災害に強い住宅建設に向けたコミュニティの教訓 3
   Leap Dam： *RESILIENT HOUSING FOR ALL – Incorporating community lessons in building disaster resilient housing of the Mekong river communities*

2. ジャン イ：「中国の文脈での災害記憶」 6
   Jiang Yi：*Remembering Disasters in China's Context*

3. アブデシュ クマール ガングゥル：「インドの災害を語り継ぐ」 10
   Abdhesh Kumar Gangwar：*Telling Tales of Some Indian Disasters*

4. シティ マグフィラ：「生存者」 14
   Shiti Maghfira ：*Survivor*

5. アンディ フェルダナ：「メラピ山での災害との調和に生きる」 16
   Andi Ferdana：*Living in harmony with the disaster at Merapi*

6. モハメド アリザマニ：「技術支援と建築材料展示の複合施設のバム地震被災地での設立」 18
   Mohammad Alizamani：*Establishment of the Technical Services & building Materials Exhibition Complex in the Bam Earthquake (2003)*

7. マニヴァー スヤヴォン：「レジリエンスの声：コミュニティが主体となった人道支援におけるラオス女性」 21
   Manivanh Suyavong：*Voices of Resilience: Lao Women in Community-Based Humanitarian Response*

8. オン ケ シン：「洪水の語り継ぎ、貴方の物語と私の物語：ソーシャルメディアを通じた洪水の語り継ぎのクラウドソーシング」 24
   Ong Ke Shin, ：*Tales of flood, Yours and Mine: crowdsourcing flood stories through social media*

9. ニ ソエ：「サイクロン・ナルギス：その後のほんとうのお話」 26
   Nyi Soe ：*Cyclone Nargis: A first hand Narrative of the aftermath*

10. バルシャ シュレスタ / サンジャヤ ウプレティ：「遺産保護のための努力：ネパール・ラニポカリにおける 2015 年ゴルカ地震復興について」 28
    Barsha Shrestha / Sanjaya Uprety：*Struggle for Heritage Conservation: The Post Disaster Reconstruction of Ranipokhari in Kathmandu'*

11. ルペシュ シュレスタ：「モニュメントは崩壊し、モニュメントは再建する―よみがえる知恵、スキル、記憶」 31
    Rupesh Shrestha：*Living heritage of Patan - rebuilding heritage inside Kathmandu valley*

12. サルワル バリ：「民主化を通じたコミュニティのレジリエンスの構築」 33
    Sarwar Bari：*Building Community Resilience Through Democratization*

13. サジャ マジード：「2004 年の津波フィールドワーカーから 2019 年の防災博士号までの サジャの物語」 36
    Saja Majeed：*Disaster survivor to disaster researcher―The story of Saja from 2004 Tsunami response worker to 2019 PhD in disaster resilience*

14. ラチャニーコーン ソンティップ：「津波博物館による語り継ぎ: 15 周年記念及び日タイの友情」 38
    Ratchaneekorn Thongthip：*Tsunami storytelling from a museum: The 15th memorial and friendship between Japan and Thailand*

15. マーレーン ムリー：「物語を共有する:太平洋津波博物館が津波の記憶を引き継ぐ方法」 40
    Marlene Murray：*Sharing Stories: How the Pacific Tsunami Museum Keeps Tsunami Memories Alive*

16. グエン ヴオン：「災害対策・対応のためのバーチャルリアリティ」 42
    Nguyen Vuong：*Virtual Reality for Disaster Preparedness and Response*

17. 丸林祐子「死者へ捧げる献立」 44
Yuko Marubayashi：*Recipes for the Dead - An Attempt at Integrating Japanese Death Culture and Acts of Testimony*

18. 伊藤駿 / 中丸和：「語り継ぎの担い手育成のための学生向けプロジェクトベースドラーニング」 46
Shun Ito / Nagomi Nakamaru：*Project Based Learning for Training Youth to Tell History of Disasters*

19. 朝廣和夫：「災害時における共助による農業支援について」 49
Kazuo Asahiro：*Support for Farmland Restoration through Mutual Assistance after Disasters*

20. アンドゥルー ミッチェル：「熊本地震における外国人居住者の経験」 51
Andrew Mitchell：*Kumamoto Earthquake Experience Project (KEEP)*

21. 川﨑梨江 / 匹田篤：「2014 年の広島土砂災害の被災者へのインタビューの分析」 53
Rie Kawasaki / Atsushi Hikita：*Study of Survivors' Storytelling about Sediment Disaster in Hiroshima, 2014*

22. 森康成：「1995 年の大震災 における 淡路島での個人的な体験」 55
Yasushige Mori：*A Personal Story of Catastrophe of the 1995 Earthquake in Awaji Island in Japan*

23. 浅利満理子：「東日本大震災被災地における民間伝承ネットワークの取り組み紹介」 57
Mariko Asari：*Introduction to the Approach of a Non-governmental Network of Community Organizations Devoted to Preserving & Disseminating Information Relating to the 2011 Great East Japan Earthquake & Tsunami*

24. 中川政治：「東日本大震災時の避難行動可視化の取り組み」 59
Masaharu Nakagawa：*Visualization of evacuation behavior patterns in the 2011Tohoku Tsunami*

25. 田中正人 / 江川未紗：「避難行動を日常化する」 61
Masato Tanaka / Misa Egawa：*Making Evacuation Behavior a Daily Routine*

26. 中村洋介：「震災 25 年 語り継ぐ学校防災 －その時学校では何が起こっていたのかー」 63
Yosuke Nakamura：*Dissemination of various kinds of Experience at Educational Site －The Case Study of the Great Hanshin-Awaji Earthquake－*

27. 宮定章：「災害に負けない地域づくり～備えあれば憂いなし 神戸市長田区認定 NPO 法人まち／コミュニケーションの事例～」 65
Miyasada Akira：*Telling disaster prevention like cherry blossoms (SAKURA)～ Prepare first, Safety and Lively life later, for disaster～"*

28. 折橋祐希 / 喜田悠太郎：「阪神間における災害デジタルアーカイブの構築とそのプロセス～1938 阪神大水害と 1995 阪神・淡路大震災を例に～」 68
Yuki Orihashi / Yutaro Kida：*The Construction and its Process of Digitally Archiving Records of The Great Hanshin Flood in 1938 and the 1995 Great Hanshin-Awaji Earthquake*

29. 鈴木比奈子：「地域の災害経験の共有－災害記念碑デジタルアーカイブマップの公開－」 71
Hinako Suzuki：*Sharing communities' disaster experiences - disclosing digital archive map of disaster monuments*

30. 荒井勲：「あなたにも出来る被災者支援」 73
Isao Arai：*Handmade support for survivors*

31. 稲垣文彦：「中越メモリアル回廊のための取り組み」 74
Inagaki fumihiro：*Initiatives taken for the CHU-ETSU Earthquake Memorial Corridor*

32. 高田知紀：「妖怪伝承を知的資源として活用した防災教育プログラム」 76
Tomoki Takada：*A Study on Education Framework for Disaster Risk Reduction by Utilizing "Yokai" as Intellectual Resources*

33. 東山陽次：「雲仙岳噴火災害の長期的な語り継ぎとその課題」 77
Yoji Higashiyama：*Passing Down the History of the Damages Caused by Mt.Unzen Volcano and the Issues at Hand*

ポスターセッション統括 ／ Overall Coordination of Poster Session

澤田雅浩（兵庫県立大学大学院減災復興政策研究科准教授）（座長）
sawada.masahiro@gmail.com / sawada@drg.u-hyogo.ac.jp

1972 年 1 月 10 日 広島市生まれ
慶應義塾大学環境情報学部卒（94 年）
同大学院 政策・メディア研究科修士課程終了（96 年）
同大学院 政策・メディア研究科後期博士課程単位取得退学（00 年）
博士（政策・メディア）
2000 年 4 月より 長岡造形大学環境デザイン学科講師として着任
2007 年 4 月より 長岡造形大学建築・環境デザイン学科准教授
2010 年 4 月より 長岡造形大学復興支援センター センター長（兼任）
2017 年 4 月より 兵庫県立大学大学院減災復興政策研究科准教授
現在に至る
専門は都市計画、都市防災、災害復興計画

修士課程在学中に阪神淡路大震災が発生し、現地での調査活動・ボランティアに従事し、安全で安心な都市を作る必要性を痛感、都市計画の中でも都市防災をメインテーマとして研究を行う。海外でも 99 年に発生したトルコマルマラ地震や台湾集集地震からの復旧・復興調査を継続的に実施している。

中越地震以降は被災状況の調査を行うだけでなく、地域の復興支援や今後の防災のあり方に関する研究や実践を行っている。震災直後は GIS を活用した外部支援として「中越地震復旧・復興 GIS プロジェクト」の事務局も務めた。

現在は公益社団法人 中越防災安全推進機構 理事（長岡震災アーカイブセンターきおくみらい館長）公益財団法人山の暮らし再生機構理事、NPO 法人ふるさと未来創造堂理事長等を務めている。防災減災、復興に関連しては岩手県大船渡市復興計画策定委員会委員、兵庫県西宮市地域防災計画検討委員会委員などを務めている。

著書に「中越地震から 3800 日 復興しない被災地はない」ぎょうせい 2014（共著）「災害フィールドワーク論」古今書院 2014（共著）「都市計画とまちづくりがわかる本」彰国社 2012（共著）「都市防災学」学芸出版社 2009（共著）など

Masahiro Sawada (Associate Professor, Graduate School of Disaster Resilience and Governance, University of Hyogo) (Session Chair)
sawada.masahiro@gmail.com / sawada@drg.u-hyogo.ac.jp

Prof. Masahiro SAWADA is an Associate professor at Graduate school of Disaster Resilience and Governance, University of HYOGO. He specializes in Urban and Rural Planning and has collaborated in the reconstruction of Yamakoshi Village and Higashiyama District of Ojiya-City after the Niigata-Chuetsu earthquake 2004, planning relocation and developing projects like “Kioku-mirai” Museum (Reconstruction Process Archive from the Niigata-Chuetsu Earthquake).

He has served on the board of institutes (Chuetsu Organization for Safe and Secure Society,), and written articles about the Reconstruction Process from Earthquake Disaster(A Study on Administrative Support in Revival Process from The Niigata Chuetsu Earthquake in 2004) on 6th International Conference on Urban Earthquake Engineering and about a Sharing Disaster Information(A Study on the Technique for Information Sharing and Presentation of Earthquake Disasters) in Journal of Natural Disaster Science and so on. He is currently working on support for Reconstruction Planning in 3.11 Earthquake(and Tsunami) Disaster affected Areas(Ofunato-city, etc..) He received his B.A.(Environmental Information) in 1994 from KEIO University and his Master of Media and Governance in 1996 from KEIO University. He received his Ph.D. in Media and Governance in 2006 from KEIO University.

アレサンドロ パスート（イタリア国立研究評議院・地質水文保全研究所 研究部長）（共同座長）
alessandro.pasuto@irpi.cnr.it

学位：地質科学（パドバ大学）
専門分野：応用地質学、地形学、防災（特に地滑りリスク評価及び対策）
国際協力：EU 資金によるプロジェクト多数、イタリア研究評議院と日本国土交通省の研究協力、イタリアー日本水文地質学共同研究ラボの設立、テルネット創設メンバーほか

Alessandro Pasuto (Research Director, CNR - National Research Council of Italy, IRPI - Research Institute for Geo-Hydrological Protection, Padova (Italy)
alessandro.pasuto@irpi.cnr.it

Degree in Geological Sciences at University of Padova and now Research Director at National Research Council of Italy (CNR). He is currently Acting Director of the Research Institute for Geo-Hydrological Protection (IRPI). and President of the Padova CNR Research Area. His activity is mainly focused on applied geology and geomorphology as well as natural hazard with special emphasis in landslide risk assessment and management.

Since the beginning of his career he is continuously involved in many International Projects mostly funded by European Commission.

Since 1990 he is consultant of the Italian National Department of Civil Defence during emergencies related to hydrogeological disasters in NW Italy.

Since 1999 he is in charge of the CNR- MLIT (Ministry of Land, Infrastructures, Transport and Tourism of Japan) scientific cooperation. In this framework in 2003 he established GRJL, Geo-Risk Joint Lab, Italy-Japan Joint Laboratory on hydrogeological risks supported by Italian Ministry of Foreign Affairs. Moreover in 2005 he was founder member of TellNet, "International Disaster Transfer Live Lessons Network, established in Kobe during the 2nd United Nations World Conference on Disaster Risk Reduction.

Member of the Italian official delegations at the 2nd and 3rd UN World Conference on Disaster Risk Reduction (Kobe, Japan 2005; Sendai, Japan 2015).

Since 2014 he is coordinating bilateral scientific research activities between CNR-CAS (Chinese Academy of Sciences) on landslides hazard and in 2017 in cooperation with Institute of Mountain Hazard and Environment he established the Sino-Italian Joint Laboratory on Geological and Hydrological Hazards based in Chengdu (Sichuan, China).

He is member of the European Landslide Expert Group and of the Executive Committee of CERG (European Centre on Geomorphological Hazard).

He is involved in research studies in several foreign countries such as: Japan, China, Malta, Svalbard Islands (Norway), Argentina and manages research groups in Italy and abroad. Moreover, he collaborates with several universities and research centres both in Italy and abroad. He is author of more than 200 scientific papers and acts as guest editor for prestigious journals.

ポスターセッション発表者 / Poster Session Participants

ダム・リープ（国連人間居住計画（UN-Habitat）カンボジア事務所）
Email: dam.leap@gmail.com

ダム・リープは、UN-Habitat カンボジア事務所で防災関連プロジェクトのコーディネーターとして活躍している。プロジェクト活動全般の実施と、様々な関係団体と連携し、円滑なプロジェクトの運営に努めている。プロジェクト対象地域であるカンボジアのトボンクモム州で、パートナー、関係機関、裨益者などとのコミュニケーションや連絡調整を図り、プロジェクトの成果が住居基準に則ったものであるよう管理を行い、進捗状況のモニタリング・評価と活動内容の調整業務を担当している。 UN-Habitat で防災プロジェクトに携わる以前は、 UN-Habitat、IFRC とカンボジア赤十字、 New Humanity、 CARE International などの NGO で様々な防災プロジェクトに従事してきた。

Leap Dam (United Nations Human Settlements Programme (UN-Habitat))
Email: dam.leap@gmail.com

Mr. Leap Dam is a Project Coordinator for the above-mentioned DRR project of UN-Habitat. He is responsible for the implementation of overall project activities, facilitation of efficient project implementation in close collaboration with all stakeholders. He ensures: good communications and coordination with partners, stakeholders and beneficiaries; compliance of the project outputs to the shelter standards in an accountable manner, and; monitoring and evaluation of the progress and quality of all project activities in Tbong Khmom province. Prior to joining UN-Habitat, he also worked with many DRR projects with Habitat for Humanity, IFRC and Cambodian Red Cross, New Humanity, CARE International, and other NGOs in Cambodia.

災害に強い住宅を全ての人々に
－メコン川沿い集落における災害に強い住宅建設に向けたコミュニティの教訓－

ダム・リープ（国連人間居住計画（UN-Habitat）カンボジア事務所）

カンボジアは世界でも最も自然災害に脆弱な国の一つであり、洪水、台風、強風などの被害を繰り返し受けることで、多くの命が失われたり、人々の暮らしが破壊されたりした。2018 年、熱帯台風ソンティンがもたらした豪雨により、ラオスのセナムノイダムが決壊し、カンボジアのダム下流域にあたる 5 つの州では大洪水が発生、62,317 世帯の生活に影響し、16人が死亡、5,398 世帯が避難を余儀なくされる事態となった。メコン川流域に位置する農村部の貧しいコミュニティでは、多くの家屋が崩壊した。これにより、多くの世帯が自宅を離れて、十分な食料や安全な飲み水もなく、衛生状況も十分ではない避難所での生活を強いられることとなった。

この洪水被害への対応として、国連人間居住計画（UN-Habitat）は日本政府の支援の下、2019 年 4 月より「カンボジアにおける生活環境改善及び防災能力向上支援プロジェクト」を実施している。本プロジェクトは、洪水被害を受けたコミュニティで、より安全な住宅の再建に迅速に対応することを目的としている。環境に配慮した持続可能な建築資材を活用し、災害に強い住宅を供給している。UN-Habitat は、"People's Process"（人々のプロセス）と呼ばれる手法を用い、住宅再建にコミュニティメンバーの参加を促しながら、彼らの知恵と技術を活かしてプロジェクトを進めている。本プロジェクトでは、2020 年 3 月末までに200棟余りの被災住宅を再建あるいは補修することになっている（対象地域全体で2000世帯余りへの裨益）。

災害を語り継ぐという本フォーラムの趣旨に合わせ、 UN-Habitat のプロジェクトスタッフは、防災減災戦略をいかに住居建築に織り込むことができるかについて、コミュニティの視点から発表する。2018 年にメコン川流域のコミュニティを襲った大洪水の被害状況、被

災地域のマッピング作業、コミュニティの組織化、低コスト建築資材の調査、防災建築デザイン、住居再建など、プロジェクトの活動内容について紹介する。コミュニティを組織化するプロセスは、経験や教訓を互いに共有し、自然資源管理や資材の再利用、強固な社会的ネットワークなどを通して、災害への適応能力を高めていくうえで非常に重要である。本発表では、UN-Habitat がプロジェクトを実施し、カンボジアの風土に適した災害に強い住宅を建築する上で、コミュニティの経験がいかに重要な役割を果たしているかについて考える。

RESILIENT HOUSING FOR ALL

Incorporating community lessons in building disaster resilient housing of the Mekong river communities

Leap Dam（United Nations Human Settlements Programme (UN-Habitat)）

Cambodia is one of the world's most vulnerable countries to natural disasters and the country has suffered repeatedly from floods, storms and strong winds which has caused the loss of lives and destruction of livelihoods. In 2018, due to the heavy rainfall from Tropical Storm SON-TINH, the Sepa-Nam Noi dam in Lao PDR collapsed affecting 62,317 households, causing 16 deaths, and forced 5,398 households to evacuate in the five downstream provinces in Cambodia. The rural poor communities near the Mekong river have suffered the destruction of their houses. Many families have been forced to evacuate their homes to the shelters with no sufficient food and access to clean water and sanitation.

As a response to the flooding, UN-Habitat in Cambodia with the support from the Government of Japan has been implementing the "Project for Improving Living Environment and Disaster Prevention Capacity in Cambodia" since April 2019. The project consists of the reconstruction of housing to respond to the immediate need for safe shelters in the flood-affected communities. It focuses on providing housing that is resilient to disasters using environmentally sustainable materials. UN-Habitat has been taking a unique approach called "People's Process" that involves the participation of the community members in housing reconstruction and the use of their knowledge and skills. The project aims to complete the full reconstruction and repair of over 200 houses by March 2020 that will benefit over 2,000 families.

In line with the forum's theme of telling live lessons of disaster memories, UN-Habitat's project staff will present the organization's experience in incorporating disaster risk reduction (DRR) strategies into housing construction from the community perspective. The project staff will provide an overview of the impact of the 2018 flooding on the populations residing in the communities located along the Mekong river. The presentation will cover the activities of the project which include mapping of the disaster-affected villages, community establishment, low cost materials survey, disaster-resilient housing design and reconstruction of housing. The community establishment process is vital

in exchanging experiences and lessons learned and in revealing their adaptive capacity to deal with disasters through natural resource management, reuse of materials and strong social networks. The presentation will highlight how the community experiences can play a pivotal role in implementing UN-Habitat's project and in reflecting DRR strategies in resilient housing in the Cambodian context.

ジャン イ（セイブ・ザ・チルドレン 中国）

Email: Jiangyi1906@163.com

Jiang Yi は、中国子供を救うプログラムの上級プロジェクト責任者である。また、雲南農業大学の MSW プログラムの講師を務め、新世紀教育安全科学技術研究所の研究者である。現在、彼女のプロジェクトと研究は、児童保護、学校の安全とソーシャルワーカーの臨床研修に焦点を当てている。Jiang Yi は、2008 年から 2013 年まで、Give2Asis のプロジェクトマネージャーとして、海外から中国本土へのプロジェクトを設計し、助成金を担当していた。2008 年の四川大地震の後、彼女は 1600 万ドル以上の資金で、緊急救援、復旧、再建プロジェクトのために 100 件以上の助成金を作成・管理した。経済法と国際学の修士号を取得し、Jiang Yi は 1st Summer University of East Asia の映像人類学を卒業した。2017 年、彼女は米中関係委員会の専門家であった。

Jiang Yi (Save the Children, P.R. China; Social Work Department, Yunnan Agriculture University, P.R. China; New Century Institute of Education and Safety Science and Technology, P.R. China)

Email: Jiangyi1906@163.com

Jiang Yi is now Senior Project Officer with Save the Children China Program. She is also Tutor of MSW Program in Yunnan Agriculture University and Researcher of New Century Institute of Education and Safety Science and Technology. Currently, her project and research focuses on child protection, school safety and social worker clinical training. Jiang Yi was Project Manager with Give2Asis from 2008 to 2013, in charge of project design and grant-making from overseas to Mainland China. After 2008 Sichuan Earthquake, she made and managed over 100 grants for emergency relief, recovery and rebuilding project in amount of funds over $16million. With M.A. in Economic Law and International Studies, Jiang Yi also graduated from the 1st Summer University of East Asia Institute of Visual Anthropology. She was the 2017 Professional Fellow Program Fellow of National Committee on U.S.-China Relations as well.

中国の文脈での災害記憶

ジャン イ（セイブ・ザ・チルドレン 中国）

このプレゼンテーションでは、主に 2008 年四川地震以降の最近数十年に焦点を当てて、災害を記憶することの必要性と重要性を指摘し、中国の文脈における災害を記憶する方法について議論している。災害を記憶する方法を整理した上で、子どもを向けに、DRR の災害記憶関連教育を盛り込むことを提案し、ドラマ教育方法論を提案する。

記憶は過去と現在をつなぐ橋である。記憶は、個別および集合的に保持および保存さている。物語を語り、物語を聞くことで、記憶は生き続ける。何が起こったかを思い出すために、例えば災害、場所と時期、原因と効果、対応と責任などは、人間が同様の事件を避けたり、よりよく対応したりするのに役立つ。

中国では、いくつかの覚える方法を整理している。

まず、メディアのニュースとジャーナリズムが保存している。例えば 2008 年四川大地震後に、主流メディアの中継ニュースでは、災害の規模、死傷者数、災害損失や、政府が中心となった緊急救援と災害後の活発な復興にスポットライトを当てており、その過程を英雄主義として強調した。一部のメディアは、災害を経験した個人に関する詳細な報告を行ったが、その中の多くは、生き残るか救助するかに関する伝奇的な経験であると言われている。このような報道では、民俗的ナラティブの方法を用いる。ジャーナリストのガイドと統制により、インタビューを受けた個人とその物語をある程度に分類することが可能であるが、その物語はある程度に個人化されたものではなく、当時の社会が提唱した価値を表す可能性もある。さらに、報告された個人の災害の記憶は何度も繰り返され、その結果、雑多なものになり、物語を疎外する可能性がある。

2008 年の地震から 10 年後、中国で新しいメディアが非常に発達してきた。メディアは災害を報告・記念する主要なチャンネルになってきた。報道では、国家や政府だけではなく、徐々に人々に焦点を移し、個々の一般的な人々から家族まで、さまざまな角度からより詳細な中国の全体的な社会の変化と発展につながるストーリーを伝えるようになった。特に短いビデオやドキュメンタリーは主な動画製品となっている。VR 技術、航空写真技術、データインタラクションなどの新技術が広く使用されてきた。しかし、このような報道ではイノベーションと競争力をより重視しているため、災害そのものの記憶、教訓や経験への反省は、メディア制作の背景としては後退している。

第二に、災害博物館の建設を通じて記憶を保存している。代表的な災害博物館は、蘭州地震博物館、唐山地震記念公園、唐山地震記念館、建川博物館の紋川地震博物館、北川国立地震遺跡博物館（北川旧県の被災地を記念館として保存された）などがある。すべての博物館は、応急救援や災害後の復興、などを展示しており、災害の歴史を記録する機能を果たしている。災害に関する科学知識の普及啓発のエリアもある。

第三に、災害を保存する方法としての文学である。災害を書く際に、ルポルタージュ、映

画、テレビシリーズの脚本、フィクションなど、さまざまな形式の文学がある。ほとんどは、個人的な記憶を通して災害を書かれたものであり、書かれている個人個人は歴史的、文化的存在となり、集合的記憶の一部となる。このような文献は、人間の過去および現在の集合的記憶を再生する役割を果たし、後々、人間文化の構築に貢献する。

第四に、歌と音楽は災害記憶のキャリアとしての機能がある。私たちが知っているように、音楽は人体に独特な効果をもたらすことができる。文学や芸術という形で人々に精神的な喜び、励まし、教育を与えることに加えて、トラウマ治療も目を引いている。したがって、災害救援と災害後の再建プロセスでは、被災地で曲や音楽を書いたり歌ったりすることは多機能である。四川大地震の 10 年後に、ボランティアが作成した被災者を励ます歌は、重要な災害の記憶になってきた。

災害教育において、どうすれば子供に災害を覚えてもらうことができるか。

現在、中国の子どもに対する DRR 教育は、主に災害知識の普及、いわゆる災害の種類、災害の前兆と特徴、災害の原因、災害の規制・頻度、災害への対応能力、脱出・救助方法、心理的対応の仕方などを取り組んでいる。中国の子ども向け DRR 教育の発展に伴い、普及啓発、講義や講演、体験練習、課題学習、オンラインゲームなど、DRR 教育の形態はますます充実しているが、災害記憶に関する DRR 教育と災害の記憶方法はまだ空白である。

このプレゼンテーションでは、子どもたちに災害の歴史に心で触れさせる状況ドラマ式の教育方法論を提案する。子供たちは様々な被災状況を想定した劇を演じ、被災者や目撃者の気持ちを体験し、災害発生現場の体験やパフォーマンスを通じて共感の気持ちを生み出せてもらう。このような方法を通じ、子供たちは災害や歴史に直面するために、災害時に何が起こるか、起こったときに何をすべきかを考えてもらうことにより、個人の備えができ、被災軽減を効果的に実現する。最近、子どもたちの DRR 教育で状況ドラマを使用するパイロットがいる。例えば、子供向けのドラマ「西への旅（DRR の新バージョン）」は、四川省のセイブ・ザ・チルドレンと子供劇場が共同監督であり（2018 年）、北京教育管理局が主催した「百校百演劇」コンペティション（2019 年）がある。いずれでもさらに改善と開発の余地がある。

Remembering Disasters in China’s Context

Jiang Yi（Save the Children, P.R. China）

By pointing out the necessary and importance of remember disasters, this presentation discusses the topic of how to remember disasters in China’s context, and focuses on recent decades, mainly around 2008 Sichuan Earthquake and afterwards. After sorting out the methods of remembering disasters, this presentation proposes to include disaster memory-related education in DRR for children, and finally suggests a situational drama teaching methodology for such education.

Memory is the bridge connecting past and present. Memory is hold and preserved both

individually and collectively. By telling stories and listening to stories, the memory lives. To remember what had happened, e.g. disasters, where and when, cause and effective, response and responsibilities, etc. helps human being in avoiding or better dealing with the similar incidents/disasters in the future. Therefore, it is necessary and crucial to remember disasters.

Then, how to remember? There are several ways in China being sorted out.

First, remembering by media news and journalism. Right after each disaster, e.g. 2008 Sichuan Earthquake, occurs, pro-government mainstream media immediate reports news very much focus on the magnitude of disaster, number of casualties, disaster losses, with spotlight hitting on government-centered emergency relief and vigorous post-disaster rebuilding, and render heroism in the process. Some media conducts in-depth reports on individuals who have experienced the disasters. Many are said to have legendary experiences in survive or rescue. The report use a method of folk narratives but by journalists' guide and control, which may lead to categorization of the interviewed individuals and their narratives to some extent represent the values advocated by society at that time rather than the individualized ones. In addition, the reported individuals' memories of disasters were aroused over and over again, which results in miscellaneous and may further lead to alienate narrative.

Years later, e.g. one decade after 2008 Earthquake, when new media is very developed in China, it becomes a main channel to report and commemorate disasters. Reports gradually move their focus on people rather than only the State or government and the stories were told from different angles, from individual common people to families, detail-oriented, through a slice of live perspective to link with China's overall social change and development. Video becomes mainstream products in reporting, especially short videos and documentary. New technology such as VR technology, aerial photography technology, and data interaction were widely used in producing. However, the reports emphasize more on innovation and competitiveness, therefore, the memory of disasters itself and reflection on lessons and experiences were retreated only as the background of the media productions.

Secondly, to remember through construction of disaster museum. Some representative disaster museums include the Lanzhou Earthquake Museum, the Tangshan Earthquake Memorial Park, the Tangshan Earthquake Memorial Hall, the Wenchuan Earthquake Museum of the Jianchuan Museum, and the Beichuan National Earthquake Relics Museum (consists of the Beichuan Old County earthquake site and memorial hall). The museums all function in recording the history of disasters, including relief and post-disaster reconstruction and exhibit display. Some have disaster-related science popularization and experience area.

Thirdly, literature as a way to remember disasters. There are various forms of literature in writing disasters, such as reportage, film and TV series script, and fictions. Though mostly the disasters were written through personal memories, each individual being written becomes the historical and cultural existence, therefore, becoming part of the collective memory. The literature plays a role in restate the past and present collective memory of human beings, and then contributes to construct of human culture.

Fourth, songs and music work as carrier of disaster memory. As we know, music has unique effect on the human body. In addition to giving people spiritual joy, encouragement and education in the form of literature and art, its unique method of treating trauma is also eye-catching. Therefore, in disaster relief and post-disaster rebuilding process, songs and music being written and sung in disaster-hit areas work well multi-functional. Ten years after Sichuan Earthquake, the songs created by the volunteers that encouraged the disaster survivors ever become the important disaster memory.

How to remember disasters in DRR education for children?

Currently, China's DRR education for children mainly pay attention to disaster knowledge spread, i.e. types of disasters, damages of disasters, precursor and features of disasters, causes of disasters, and regulation and frequency of disasters, etc., skills in responding to disasters, e.g. how to relieve, how to escape, how to rescue, and how to respond psychologically. Along with the development of China's DRR education for children, the forms of DRR education has been more and more enriched, including awareness raising publicity, lessons and lectures, experiential practice, drills, on-line games. However, the DRR education on disaster memory and how to remember disasters is still in a blank.

How to let children touch the history of disasters with their heart? This presentation puts forward the use of situational drama teaching methodology. In participating the situational drama play, children are guided to experience the feelings of disaster survivors and witness, to generate empathy through the experience and performance of children in the scene of disaster occurrence. In the process, the children will be led to think what might be done in that disaster situation and then what should be done when the disaster occurs again, so as to face up to and memorize the disaster and history, and will effectively realize the individual's precautions in disaster risk reduction. There are some pilots in using situational drama in DRR education for children in recently, e.g. child drama "Journey to the West (New Version on DRR)" co-directed by Save the Children and children's theater in Sichuan (2018), and "Hundred Schools Hundred Dramas" Competition organized by Education Administration in Beijing (2019), and also have space to improve and develop.

アブデシュ クマール ガングワル（RCE（持続可な開発のための教育に関する地域の拠点）スリナガル コーディネーター・代表）

Email: abdhesh.gangwar@gmail.com

持続可能な開発のための教育に関する地域の拠点（Regional Centre of Expertise (RCE)）メンバー、同スリナガル支部コーディネーター。防災、気候変動、持続可能性など様々な取り組みに参画。年々高まる災害の頻度や規模を踏まえ、RCE はアジア太平洋 RCD 防災・減災害ネットワークを立ち上げた。

学校を単に物的に安全なだけでなく常に全ての人々に幸せをもたらすような場所にするというプログラムも実施している。子供たちや教師が所属するコミュニティの安全を高め

ることを目指すものである。

東日本大震災の現場や人と防災未来センターを訪問したこともある。インドではそのように災害に特化したミュージアムはないが、マルチメディアで移動式の展示を作り、それを使って各地で防災意識の啓発を行っている。RCE スリナガルは、世界各地の RCE と共に、国連大学サステイナビリティ高等研究所の支援を得て、持続可能で気候に適合し災害に負けないコミュニティを作っていくことに努力している。緑の地球、青い空、災害の無い世界が私たちの夢である。

Abdhesh Kumar Gangwar (Coordinator and Focal Point, RCE Srinagar, India)
(Regional Centre of Expertise on Education for Sustainable Development)
Email: abdhesh.gangwar@gmail.com

I retired from Centre for Environment Education (www.ceeindia.org), then became a Consultant to Government of Uttar Pradesh, India on Disaster Management.

I am an active member of Regional Centre of Expertise (RCE) community (www.rce-network.org). RCE Srinagar I started of which I am Coordinator and Focal Point. I am also Convenor, Asia-Pacific RCEs Coordinating Committee 2019. I am engaged in Disaster Risk Reduction (DRR) preparedness, climate change and sustainability education, relief and reconstruction. Realizing the need of DRR preparedness considering the increasing frequency and magnitude of disasters we have launched 'Asia Pacific RCEs DRR Network'.

'Mehfooz' a School Safety, programme we have conceived aimed at not only providing physical safety but also total wellbeing, to everyone, all the time, everywhere, not just children. Child safety and promoting an enabling environment for children to grow and develop does not end with school. The Child is in the school only for some time. For the rest of the time s/he is at home, in the community. 'Mehfooz' aimed at safety of school children in schools and beyond. A child, besides in the school, has to be safe at home also, has to be safe everywhere. Safety of a child also includes safety of all his/her other family members and friends, and safety all the time. Though named as 'School Safety', the programme covers DRR preparedness in schools as well as villages involving students and teachers and the community and Panchayati Raj Institutions. Thus 'Mehfooz' School Safety programme encompasses safety of all, everywhere, and all the time.

I visited Japan's 2011 Tsunami ravaged areas and "The Great Hanshin-Awaji Earthquake" 5:46 AM 17 January 1995 museum in March 2012. India so far doesn't have any museum dedicated to disasters. However, we have created multimedia mobile exhibitions for taking them around for creating awareness. RCE Srinagar along with the Global RCE community and with support from United Nations University- Institute of Advanced Study on Education for Sustainable Development (UNU-IAS) have been striving at creating a sustainable, climate smart and disaster resilient community. Having a Green Earth, Blue Sky and Disaster Free World is our dream.

インドの災害を語り継ぐ

アブデシュ クマール ガングゥル
（ＲＣＥ（持続可な開発のための教育に関する地域の拠点）スリナガル）

2011 年 9 月 2 日の承認以来、RCE スリナガルは「災害レジリエンス、スマート気候と持続可能な社会」を実現するため、災害リスク軽減（DRR）、気候変動（CC）とサステイナビリティ教育に積極的に従事してきた。 RCE スリナガルのさまざまなプロジェクトは、サステイナビリティ高等研究について国連から賞を授与されている。RCE スリナガルは、2017 年 12 月に、第 9 回統営 ESD 国際フォーラム、RCE 統営、韓国トンヨン市で、「アジア太平洋地域の RCE DRR ネットワーク」を立ち上げた。

RCE スリナガルはウッタルプラデシュ（UP）州をサポートしてきた。あらゆる災害時に最初の応答者として働く歳入局の職員のための研修を構築した。UP のインドの人口は 17.5 パーセントで、複数の災害に対して最も脆弱である。

2 セットのトレーニングが開催された。最初の 1 つは、上級役員をマスタートレーナー（MT）としてトレーニングするための、州レベルの 5 日間のトレーナートレーニング（ToT）であった。次の一連のトレーニングは、MT をリソースパーソンとして使用してすべての Lekhpals をトレーニングするための地区レベルでの 3 日間である。合計 426 MT は、2019 年 6 月 17 日から 8 月 9 日までの 15 回の ToT でトレーニングされた。地区レベルのトレーニングは進行中で、2019 年 12 月末までに終了する。UP には 75 の地区と 14,220 の Lekhpal が雇用されている。すべての Lekhpals は、474 の地区レベルのトレーニングを通じてトレーニングされている。 2 つのリソース教材と 2 つのトレーニングモジュール（MT 用と Lekhpal 用）が用意され、すべての参加者に提供された。災害時には Lekhpal は現場に到達し、救援とリハビリテーションのために被害とニーズを評価する最初の対応者である。

2011 年 3 月 11 日の東日本大震災後、私は津波の被害を受けた地域を訪れ、被害と進行中の復興作業を目撃した。私が訪れたのは、2012 年 3 月 27～28 日に開催された「宮城県気仙沼での第 9 回 ESD セミナー」である。また、宮城県名取市と日和山、田んぼスクールプロジェクト、有形文化財「ほらぐち」、人と防災未来センター、国際復興プラットフォーム、アジア防災センターを訪れた。

インドでの災害、2001 年 1 月 26 日のグジャラート地震、2004 年 12 月 26 日のインド津波、2005 年 10 月 8 日のカシミール地震、2010 年 8 月 5 日のレークラウドバースト、2011 年 9 月 18 日のシッキム地震、2013 年 6 月のケダルナート・ウッタラーカンド洪水、2014 年 9 月のカシミール大洪水救済と「再構築」プログラム。学校が「学校災害管理計画」を作成し、村が「村の緊急時対応計画」を作成するのを支援している。

Telling Tales of Some Indian Disasters

Abdhesh Kumar Gangwar
RCE Srinagar, India (Regional Centre of Expertise on Education for Sustainable Development)

RCE Srinagar since its acknowledgement on 2 September 2011 has been actively engaged in Disaster Risk Reduction (DRR), Climate Change (CC) and Sustainability Education striving to achieve "disaster resilient, climate smart and sustainable communities". RCE Srinagar's various projects have been awarded by United Nations University-Institute of Advanced Studies in Sustainability (UNU-IAS).

RCE Srinagar formed and launched 'Asia Pacific RCEs DRR Network' during 9th Tongyeong ESD International Forum, 12-13 December 2017 at RCE Tongyeong, Korea.

RCE Srinagar has supported the State of Uttar Pradesh (UP) in organizing DRR capacity building trainings for the staff of their Revenue Department that acts as first responder during any disaster. UP has India's 17.5 percent population which is most vulnerable for multiple disasters.

Two sets of trainings were organized. The first one was State level, 5-day Training of Trainers (ToTs) to train senior officers as Master Trainers (MTs). The next set of trainings are 3-day at district level to train all the Lekhpals using MTs as resource persons. Total 426 MTs were trained during 15 ToTs from 17 June till 9 August 2019. District level trainings are in progress and will get over by the end of December 2019. UP has 75 districts and 14,220 Lekhpals employed. All the Lekhpals will be trained through 474 district level trainings. Two resource material books and two training modules, one for MTs and the other for the Lekhpals were prepared and given to all the participants. During disasters, a Lekhpal is the first responder to reach to the site, make damage and need assessment for relief and rehabilitation.

Post Japan earthquake, March 11, 2011, I visited the Tsunami ravaged areas and witnessed the damage and the reconstruction work in progress. My visit coincided with the "9th ESD Seminar for Building the Future in Kesennuma, Miyagi", 27-28 March 2012 where I participated. I also visited Natori City, Miyagi seashore and Hiyori-mountain, Rice Field School Project, Tangible Cultural Property "Horaguchike", "The Great Henshin-Awaji Earthquake" 5:46 AM 17 January 1995 museum, International Recovery Platform, and Asian Disaster Reduction Centre.

I have witnessed disasters in India, Gujarat Earthquake 26 January 2001, Indian Tsunami 26 December 2004, Kashmir earthquake 8 October 2005, Leh Cloudburst 5 August 2010, Sikkim earthquake 18 September 2011, Kedarnath Uttarakhand floods June 2013, Kashmir deluge September 2014 and involved in relief and 'Rebuilding' programmes. We are helping schools prepare their 'School Disaster Management Plan' and to villages prepare their 'Village Contingency Plan'.

シティ マグフィラ(晃月スクール協会)
Email: alhauraf@gmail.com

私は 2018 年 7 月に北スマトラ大学日本学科を卒業した。現在バンダアチェにある NGO Kougetsu School Association（KSA）でスタッフとして、また KSA が運営している Kougetsu School で日本語教師として働いている。この団体は兵庫県の一般社団法人チームミライズに支援を受け協力して、災害支援、教育、芸術、文化に関するプロジェクトを運営している。KSA は津波博物館、アチェ・ジャパン・コミュニティーアート・プロジェクト、NPO 地球対話ラボともプロジェクトを協働で行っている。

昨年、アチェ津波 14 年の際にドキュメンタリー映画"サバイバル"制作のプロジェクトリーダーを担当した。

Shiti Maghfira（Kougetsu School Association）
Email: alhauraf@gmail.com

I graduated from Japanese Literature, North Sumatera University on July, 2018. Now, I am working as a staff and Japanese teacher at Japan NPO which located in Banda Aceh, named Kougetsu School Association (KSA). This organization cooperate with Team Miraiz in Osaka, Japan. As a staff, I create and manage project about disaster, education, art, and culture. KSA also makes collaboration project with Tsunami Museum, Aceh Japan Community Art Project, Chikyu Taiwa Labo, etc. Last year, I was project leader to manage documentary film "Survivor" for 14th Aceh Tsunami Commemoration.

生存者

シティ マグフィラ（晃月スクール協会）

14 年前、2004 年 12 月 26 日にインドネシア西部にある島々が津波に襲われた。このスマトラ沖津波でたくさんの命が失われ、公共の基幹施設が損害を受けた。津波が襲う前、午前 7 時 58 分に震度 9.1 マグニチュードの地震が 10 分ほどつづいた。インドネシアそして世界の災害記録の中でも最も巨大な地震のひとつだと言われる。15 分後、スマトラの西海岸にあるアチェを津波が襲い、死亡者は 126,741 人にのぼった。

その津波から 14 年がたったアチェは、悲しみや苦しみをのりこえ、震災復興の一つとして、インフラや経済も発展し続けている。アチェの復興としては、アチェが自然の美しさを取り戻したというだけでなく、社会的な復興として、みながワルン・コピーでゆっくりコーヒーを楽しめるようになり、笑顔で皆生活できるようになったことがあげられる。

だが、14 年経っても、やはりアチェ社会が経験したスマトラ沖津波と地震の辛い思いは

いつまでも忘れられない。特に友人や親戚を失った人や大きな津波から命からがら助かった人には忘れられない記憶がある。その被災体験験は、それぞれのアチェの人の中に、さまざまなストーリーや思いとして残っているだろう。

一方、映画は鑑賞者に対し、簡単に情報を提供できる手段だと思うので、スマトラ沖津波から生き延びた人たちの話にもとづく体験を映像化にしようと思い、ドキュメンタリー映画を制作した。震災の記憶だけではなく、それぞれの生活についてもこのドキュメンタリーでは描きたかった。

ドキュメンタリー映画を制作するにあたって、スマトラ沖津波の生還者であるブンディヤさんを主人公にした。2004 年の津波に襲われたとき、流されたブンディヤさんは奇跡的に近くに流されてきた船に乗ることができた。ちなみに、ブンディヤさんを含めて 59 人の命を乗せた船は、家の屋根にひっかかり、彼らの命を救った。現在、バンダアチェ市のランプロ村にあるその船は、「Kapal di Atas Rumah（家の上にあがった船）」と名づけられ、震災遺構として保存されている。

ブンディヤーさんは、「ワ・コラック」（コラックおばさん。小ラックは彼女が売っているアチェ料理）としてみなに知られている。現在「Kapal di Atas Rumah（家の上にあがった船）」を訪れる観光客に、ブンディヤさんは自身の津波の経験や助かった話をしているので、このドキュメンタリー映画の主人公として選ばれた。自身の津波体験やその辛い思いを観光客に話してくれるのはブンディヤさんしかいない。このドキュメンタリー映画の上映にあたっては、鑑賞者には、津波によるあの悲しみを味わってもらいたいのではなく、神様から頂いた命のありがたさ、大切さを今一度かみしめてもらいたい。人生の幸福を得るためには、がんばらなくてはならないということをみなに伝えたい。

このドキュメンタリー映画を鑑賞したみなさんには、愛しい人に亡くなられても、負けない存在になってほしいというメッセージを伝えたい。スマトラ沖津波は、生き残ったアチェの人たちの社会に辛い思いや苦しみを与えたが、神様から頂いた命を大切にし、人生をもっと幸せにするためにがんばるしかないのだ。

Survivor

Shiti Maghfira（Kougetsu School Association）

Fourteen years ago, the tsunami struck the western part of Indonesia on the December 26th, 2004, causing the loss of many lives and of a great amount of infrastructure. The earthquake with a magnitude of 9,1 occurred at 7.58 am, and lasted for 10 minutes, making it one of the strongest in modern history. Less than 15 minutes after the earthquake occurred, the tsunami hit the coast of Aceh up to 6 kilometers inland as well as the surrounding islands and caused 126, 741 people died.

Now fourteen years after tsunami, Aceh can be said free from pain. The infrastructures are managed properly. The economy of the local people also starts growing. They can casually sip a cup

of coffee in the various coffee shop. Everyone can smile because Aceh has peaceful condition once again. The beauty of Aceh has returned in the front of our eyes.

Although fourteen years have passed, Acehnese still remember about the story of December 26th, about lost their loves one, or how they survived the tsunami. Acehnese people have their own story about that day.

Based on tsunami survivor story, we decided to making the story into a documentary film. Film is one of the interesting way to display a story fastly. Film is not just focus on one side, but we also can put in others side to make the film more colorful.

For this film, we chose one tsunami survivor, her name is Bundiyah, who survived tsunami 2004 in the ship above the house. Bundiyah is one of the survivor from 59 people on that ship. She could survive the tsunami because of went up to the ship. At the present, the ship is located at Lampulo, Banda Aceh, and became one of tsunami tourism site.

We chose Bundiyah, or also known as Wak Kolak, because of she still active as a story teller about her tsunami story at The Ship above The House tourism site. No one except her wants to share about how suffering their life on tsunami was. We are sure this film will show how sorrow the tsunami was, but also can teach us about how meaningful our life and thankful to the life, so we can be strong and positively to have a happy life.

This documentary film can be useful to many people who maybe have given up for life because of their pain of lost the loves one. Tsunami made the pain, but life wants you are to be alive to make a blessing and happiness.

Link documentary film: https://youtu.be/cA2wNCSR_9c
Director: Shiti Maghfira and Ahmad Ariska

アンディ フェルダナ（Gema Merapi コミュニティラジオ）
Email: andiferdana@gmail.com

メラピ山噴火の被災者。メラピ山に関する情報を提供するためのコミュニティラジオを設立。神戸大学、名古屋大学、メルボルン大学、神戸学院大学など多くの大学からの学生の見学を受け入れている。

Andi Ferdana (Gema Merapi Community Radio)
Email: andiferdana@gmail.com

I am a survivor from Petung village. to provide information related to Merapi we established community radio and I became the station manager. In our right, there are often students to learn about

Merapi such as Kobe University, Nagoya University, University of Melbourne, Kobe Gakuin University and many more.

メラピ山での災害との調和に生きる

アンディ フェルダナ（Gema Merapi コミュニティラジオ）

2010 年、メラピは非常に大きな噴火を経験した。この噴火は、1872 年以来の、あるいはさらに 100 年以上以来の最悪の噴火であった。1872 年にメラピは 1 億立方メートルの物質を放出し、2010 年には 1 億 4000 万立方メートルの物質を放出した。ペトゥンは被災した集落の一つである。ペトゥン集落は、スレマンリージェンシー、カンクリンガン地区のケプハルジョ村、またはメラピ山頂から 7 km の距離にあるメラピの南側にあり、噴火が発生すると火砕流によってすべて破壊されることとなっていた。しかし、住民は家、財産、家畜を失うにもかかわらず、噴火とメラピが脅威であると感じたことはなかった。メラピの住民は、メラピが欲望を持っていると考えており、住民がまず逃げなければならなかった。噴火後、政府は再建の局面に入いった。家を失った住民は 6 か月間スタジアムで避難し、その後 18 か月間仮設住宅に移動した。居住者が一時避難所に住んでいる場合、政府と居住者は民間部門の支援を受けて恒久住宅を建設した。住宅は 2012 年初頭に完成し、これはインドネシア記録博物館の建設カテゴリーにおいて最速の記録であった。ほとんどの住宅は被災者のためのものであった。過去には、2010 年の噴火により土地がすべて破壊された後、多くのペトゥンの住民がブリーダーや農民になり、その後、古い集落が観光地になった。火山ツアーとして知られているジープを使って旅行するほか、かつて噴火に見舞われたペトゥンの村では、住民も博物館を作った。この博物館は、一般の人々や観光客が、噴火を想起し、教育を提供することを目的としている。博物館に加えて、コーヒーショップもある。9 年後、スレマン地区政府は、メラピに非常に多くの観光客がいることを指摘した。メラピの噴火は災害であるが、住民はそれを自然なサイクルと考えており、収入と教育の両面で、災害の顔を有望な観光地に変えることができる。ペトゥンの住民はこのようにして災害と調和して生きている。

Living in harmony with the disaster at Merapi

Andi Ferdana（Gema Merapi Community Radio）

In 2010, Merapi experienced a very large eruption. The eruption was the worst eruption since 1872 or more than 100 years. In 1872 Merapi released 100 million cubic meters of material while in 2010 issued 140 million cubic meters of material. One of the hamlets affected was Petung. Petung Hamlet is located in Kepuharjo Village, Cangkringan Subdistrict, Sleman Regency or on the south

side of Merapi. Petung hamlet distance of 7 km from the summit of Merapi so that when an eruption occurs all destroyed by pyroclastic flows. Even though all were destroyed and residents lost their homes, property, and livestock, residents never felt that eruption and Merapi were a threat. For residents of Merapi, residents considered that Merapi was having a desire and residents had to step aside first. After the eruption was carried out the rehabilitation phase of reconstruction by the government. Residents who lost their homes were displaced at the stadium for 6 months after which they moved to temporary housing for 18 months. When residents live in temporary shelters the government and residents are assisted by the private sector to build permanent housing. Residential remained in early 2012 and entered into the Indonesian Record Museum in the category of the fastest and most buildings for disaster victims. In the past, many Petung residents became breeders and farmers after all of their land was destroyed due to the 2010 eruption, and then the old hamlet became a tourist destination. Many residents who switch professions to work in tourism midwives such as becoming a jeep driver for jeep tours. Travel using a jeep better known as the volcano tour. Besides that, in the village of Petung that was once hit by an eruption, residents also made a museum. This museum aims to remember and provide education to the public or tourists about the impact of the 2010 Merapi eruption that was so powerful. In addition to the museum, there is also a coffee shop. Nine years later, the Sleman district government noted that there were quite a lot of tourists in Merapi. Many people consider the eruption of Merapi a disaster but residents consider it a natural cycle and then can change the face of the disaster into a promising tourist spot, both in terms of income and teaching. Such Petung residents who live in harmony with disaster.

モハメド アリザマニ（イラン住宅財団 復興計画部長）
Email: Alizamani_110 @ yahoo.com

- 復興に関する研究と計画に 30 年間従事
- 1982 年から現在までイラン住宅財団所属、現在復興計画部長
- 過去 20 年間のイランの全ての災害復興に参画、記録を作成
- 都市・農村災害リスク軽減専門委員会委員
- 建築学修士

Mohammad Alizamani (Head of Reconstruction Planning, Housing Foundation of Islamic Republic of Iran, Tehran)
Email: Alizamani_110 @ yahoo.com

Professional Profile

- 30 years experiences in Reconstruction Research and Planning

- Rural Development Planning

Professional Experience

- Housing Foundation of Islamic Republic of Iran, Tehran
- 26 July 1982 - Present
- Head of Reconstruction Planning

Achievements:

- Highly involved at all post disaster reconstruction of the past 2 decades in Iran
- Documentation of the Bam 2003, Lorestan 2005 and Buinzahra 1962 Post-Disaster Reconstruction

Responsibilities:

- Reconstruction planning of the disaster affected areas
- Directing of the Urban and Rural Settlement Disaster Risk Reduction professional committee

Education

- Master of Art in Architecture

技術支援と建築材料展示の複合施設のバム地震被災地での設立

モハメド アリザマニ（イラン住宅財団）

自然災害の割合が高いため、イランは多くの重大な災害と再建を経験している。著者は多数の事例を文書化している。また、過去 30 年以上にわたり（復興を担当する組織で）過去の復興にも積極的に取り組んでいる。これらの経験から学んだ最も重要な教訓の要約は次のとおりである。

1. 1962 年のブイン・ザーラの地震：大規模な破壊と 12,000 人以上の死傷者が政府を驚かせた。イスラム以前の復興における外国の役割は非常に鮮明であった。この経験では、日本の専門家チームがイランに来て、国の脆弱性を研究し、脆弱性を軽減する解決策を提供した。政府は日本から派遣された専門家によって提供された戦略を実施し、脆弱性を減らすことにおいて良い進展があった。

2. 1972 年の Qir 市の地震：この経験は、イスラム以前の時代にも関連している。この経験では、政府は、復興プロセス中に被災地の伝統的慣行を近代化することを意図したが、復興に野心的な目標を組み込むことに失敗した。

3. ８年間の神聖な防衛における紛争地帯の再建：再建の初期段階では、明確な政策と統合された管理と政策はなかったが、政策と戦略の策定と政策立案につながる優れた知識と経験があった。再構成を管理するための統合システムを編集して、その後の災害に適用した。

4. 1990 年のマンジル地震：この経験では、戦争で荒廃した地域の再建に関する有益な知識と経験が、計画と政策立案の基礎を提供した。書面による復興計画が初めて作成された。建設管理、設計、監督、建設技術、財務管理などの分野で明確なポリシーが存在することにより、2 年以内に 20 万台を超えるユニットが完成した。一般市民の参加を重視することは、プログラムの最も重要なポイントの 1 つであり、成功要因であった。

5. 2003 年のバム地震：この壊滅的な出来事では、市の住民の 3 分の 1 近くが死亡し、この歴史的な都市の物理的構造の 90%以上が破壊された。政府は、復興における 3 つの具体的な目標を掲げた。都市のアイデンティティ、被災者の復興への参加、および建物とインフラストラクチャの強度と安定性である。上記を達成するために、7 ヘクタールの土地に技術サービスと材料の展示施設が建設された。基地には、コンサルタントやエンジニアが人々と一緒に工事の設計と監督を行う部門、建築材料を展示し人々に様々な選択肢を提供する部門、建築材料を作成する作業場の 3 部門があった。上記の 3 の部門とその実施措置に重点が置かれたことが復興の成功に寄与した。

6. 2006 年のロレスタン地震：この再建の最も重要な特徴は、人々が再建に広く参加したことと、政府の計画から仮設住宅の段階を省いたことで、恒久的な再建を迅速に展開できたことである。これにより、被災者たちは緊急避難所（テント）から恒久住宅に直接移動し、政府と人々は一時的な宿泊の費用を節約できた。

7. ケルマンシャー州の地震 2017：この再建の最も重要な特徴は、損傷した住宅だけでなく古い住宅の改修も行ったことと、サルエポルザハブの開発の成功でした。この再建では、深刻な経済変動と再建時の材料と労働のコストにもかかわらず、影響を受けたサルエポルエザハブの都市の建設密度はほぼ 3 倍になりました。

Establishment the Technical Services & building Materials Exhibition Complex in the Bam Earthquake (2003)

Mohammad Alizamani（Housing Foundation Consultant）

Due to the high rate of natural disasters, Iran has experienced numerous and significant disasters and reconstructions. The author has documented numerous cases. It has also been active in past reconstructions (in the organization responsible for reconstruction) for more than three decades. A summary of the most important lessons learned from these experiences is as follows:

1. The 1962 earthquake in Bouin Zahra: Massive devastation and more than 12,000 casualties surprise the government. The role of foreign countries in the reconstruction of the pre-Islamic period was very vivid. In this experience, a team of experts from Japan came to Iran to study the vulnerability of the country and provide a solution to reduce the vulnerability. The government implemented the strategies provided by Japanese expedition specialists, and there were good developments in reducing vulnerability.

2. The 1972 earthquake in the city of Qir: This experience is also related to the pre-Islamic period. In this experience, the government intended to modernize traditional practices in the disaster area during the reconstruction process, but failed to incorporate ambitious goals in the reconstruction.

3. Reconstruction of conflict zones in eight years of sacred defense: In the early stages of reconstruction, there were no clear policies and integrated management and policies, but there was good knowledge and experience that led to the formulation of policies and strategies and the establishment of a integrated system for managing reconstruction. And edited and applied to subsequent disasters.

4. The 1990 Manjil earthquake: In this experience, the useful knowledge and experience of reconstructing the war-torn areas provided the basis for planning and policy-making. The first written plan of reconstruction was prepared. The existence of clear policies in the areas of construction management, design, supervision, construction technology, financial management, etc. has led to the accomplishment of more than two hundred thousand units within two years. The emphasis on public participation was one of the most important points of the program and the success factors.

5. Bam Earthquake 2003: In this catastrophic event, nearly one-third of the city's residents died and over 90% of the physical structure of this historic city was destroyed. The government identified three specific goals in the reconstruction: the identity of the city, the participation of the affected population in the reconstruction and the strength and stability of the building and the infrastructures. To accomplish the above, a Technical Services & materials exhibition complex was built on 7 hectares of land. The base had three sections: offices for active consultants and engineers to design and supervise the construction along with people; building materials exhibition to be visited and provide people with a variety of material to select from; workshops for production of building material. The emphasis on the above three key axis and its implementing measures have contributed to the success of the reconstruction.

6. The 2006 Lorestan earthquake: The most important feature of this reconstruction was the high participation of the people in the reconstruction and omission of the temporary housing phase from the government's plans and the rapid deployment to the permanent reconstruction. This caused the affected people to move directly from emergency shelters (tents) to permanent housing, and the government and people would not bear the cost of temporary accommodation.

7. Kermanshah Province Earthquake 2017: The most important feature of this reconstruction was the renovation of the old residential units in addition to the damaged units and the success of the development of Sar-e Pol Zahab. In this reconstruction, the density of building the affected city of Sar-e-Pol-e-Zahab almost tripled, despite severe economic fluctuations and the cost of materials and labor at the time of reconstruction.

マニヴァン スヤヴォン(ラオスジェンダー開発協会)

Email: manivanh@gdalaos.org

マニヴァンはラオスのジェンダーと社会開発の専門家である。ジュネーブ国際開発高等

研究所にて開発とグローバリゼーションの分野でエクゼクティブ修士課程を修了し、「高地の人々の声：ラオス南部におけるタオイ山岳民族と地域参加型開発」というテーマで論文を発表した。２０１６年にジェンダー開発協会にディレクターとして勤務する以前は、ラオスのオックスファムで２０年以上勤務し、ジェンダー分野でコミュニティーベースのプログラム実現や、水力発電におけるジェンダーの及ぼす影響調査などに従事した。またこの間にプログラムマネージャーとして、田舎の多様な民族が共存する地域で数々の難しいプログラムの計画や実施をリードし、政府との信頼関係を築いた。

Manivanh Suyavong (Director, Gender Development Association, Lao PDR)

Email: manivanh@gdalaos.org

Manivanh is a Lao Gender and Social Development Specialist. She completed her Executive MA in Development and Globalization: Between Growth and Exclusion, at the Graduate Institute of Geneva. Her thesis: Voice of an Upland People – A look into the Taoy Ethnic Community and Participatory Development in Southern Laos. Prior to joining GDA as the Director in 2016, she worked for more than 20 years with Oxfam in Laos in community based program implementation, specialising in gender mainstreaming, community resilience and gender impact assessment in the hydropower sector. In her position as National Program Manager, she led the team in strategic planning, implementing complex programmes in remote areas with multi-ethnic groups, and developed relationships with relevant government ministries.

レジリエンス（回復力）の声：ラオス人女性とコミュニティ ベースの人道支援

マニヴァン スヤヴォン（ラオスジェンダー開発協会）

２００９年９月 28 日～30 日にラオス南部を台風カツナが直撃し、人々の記憶に残る中で自然災害による最も深刻な被害をもたらした。セコン、サラヴァン、アタプーとサヴァナケート県では、広範囲の洪水被害が強風と豪雨による鉄砲水と地滑りによって更に悪化し、一部の地域では、川の水が 28 センチも増水した。また、早期警告システムや災害予備が無かったため、家屋や食糧倉庫、水道システム、インフラや人々の暮らしが崩壊し、約 18 万１千人の人々が危険にさらされ、緊急人道支援を必要とした。

当時、ビエンチャンにある国際 NGO のオックスファム・オーストラリアでナショナルプログラムオフィサーとして勤務していた私と同僚は、緊急人道支援とコミュニティーベースの災害マネジメントの為に、サラヴァンとセコン県に派遣された。そこでの私達の目的は、米、衛生用品、キッチン用具、仮設シェルターのなどの配分だった。しかし、多民族の共存による言語のバリアー、ロジスティクス問題による米不足、支援対象の村の遠さにより時には５日間歩き、更にトラックやボートでアクセス不可能な場所に行く必要があったこと、ま

た地雷によるセキュリティ面での不安など、様々な困難に直面した。

台風カツナから１０年の月日が経とうとしている中、私の中では二つのことが思い出される。一つは、どんな困難の中でも生きることを諦めず、私たちのサポートに対し感謝の気持ちを忘れない人々との出会い。そして二つ目は、困難な状況から学んだレッスンだ。私のオックスファムでのこの経験は、草の根レベルの活動へ対するパッションの原点となり、現在のジェンダー開発協会のディレクターとしての仕事に繋がった。またこの台風カツナの経験から、ラオス政府は災害予備、管理、応答に対する政策やメカニズムを向上させる為のイニシアティブを進め、貴重な資源を投資してきた。

現在、ラオスジェンダー開発協会は、災害予防市民社会グローバルネットワークの「フロントライン：コミュニティーベースの災害予防プロジェクト」の国の調整機関を務め、また気候変動による危機が深刻になる中、ラオスは、災害予防に対する緊急時計画の改善を目指している。

蓮の花が沼から現れその美しさを世界に知らしめる様に咲くように、このポスターも、災害によって被害を受けた人々の苦しみを伝えることで、悲劇がポジティブな変化に生まれ変わることを願っている。災害から１０年が経とうとする今、このポスターが忍耐、成長、そして災害を共に克服したコミュニティの絆を表すことを願う。

Voices of Resilience: Lao Women in Community-Based Humanitarian Response

Manivanh Suyavong（Gender Development Association, Lao PDR）

From 28-30 September 2009, Typhoon Ketsana (Cat 1) hit Southern Laos causing some of the most severe damage from a natural disaster in living memory. Across Sekong, Salavan, Attapeu, and Savannakhet Provinces, widespread flooding was compounded by flash floods and landslides from heavy wind and rainfall, and rivers rose to 28 meters in some areas. With no early-warning or preparation, extensive damage to houses, food storages, water supplies, infrastructure, and livelihoods left an estimated 181,000 people at-risk and in need of immediate assistance.

As National Programme Manager at Oxfam Australia (in Laos), my team was deployed to Salavan and Sekong Provinces, to provide urgent humanitarian assistance and community-based disaster management. Our primary goal was distributing rice, hygiene and kitchen kits, and temporary shelters. Our mission faced challenge after challenge, as the diversity of ethnic groups created language barriers; logistical breakdowns left us with rice shortages; the remoteness of many villages meant some had to walk up to 5 days to reach areas inaccessible by truck or boat; and security obstacles from UXOs made coordination a protracted battle.

As the 10th year anniversary of Typhoon Ketsana approaches, I am reminded of two things: firstly, the countless interactions I had with people, who despite their suffering, were determined to survive and never hesitated to show their gratitude for our support. Secondly, I reflect on the lessons

learned and acknowledge the achievements that came from devastation. The experiences I had during my time at Oxfam ignited my passion for grassroots development and lead me to my current position as Director of Gender Development Association. Since Typhoon Ketsana, the Government of Laos has taken great initiative to improve policies, mechanisms, procedures, and invested valuable resources to support programs for disaster preparedness, management, and response.

Currently, GDA is the National Coordinating Organization for GNDR's Views from the Frontlines project on community-based DRR, and with the increasing threats posed by climate change, Laos strives for continued improvement in contingency planning on DRR.

As the lotus flower emerges from the mud to show the world its beauty, our poster will use photo imagery to recount the pain of those affected, but also the positive change that sometimes only tragedy can provide. As our journey of recovery comes full circle a decade later, our poster will represent perseverance, growth, and the bond shared by communities that overcome disaster.

オン ケ シン（マレーシアサインズ大学）
Email: keshinong@gmail.com

学際的でコミュニティに基礎をおく研究者。環境保全と無形文化遺産の保全に取り組んでいる。現地 NGO の環境教育に従事。国際交流基金が主催する「防災と環境の教育と創造性」のメンバーに選定されて以来、防災教育にも研究の幅を広げている。北マレーシア大学人文地理学科博士課程。コミュニティの参画、コミュニティ開発と環境政策を研究の基礎的な視点としている。

Ong Ke Shin (University Sains Malaysia)
Email: keshinong@gmail.com

Ong Ke Shin is a multidisciplinary community-based researcher committed to both environmental and intangible cultural heritage conservation. She is also a senior environmental educator for a local based NGO and embarks on her journey on disaster education after being selected as a fellow for "Disaster and Environmental Education + Creativity" under Japan foundation. She is currently a PhD candidate under School of Humanities, Geography Section at University Sains Malaysia. Her research interest primarily centered on community engagement, community development and environmental policy.

洪水の語り継ぎ、貴方の物語と私の物語：
ソーシャルメディアを通じた洪水の語り継ぎのクラウドソーシング

オン ケ シン（マレーシアサインズ大学）

洪水はマレーシアで最も破壊的な自然災害である。洪水が起こると、それが自然であろうと人為的であろうと、両方の組み合わせであろうと、貴重な命が失われ、家族が壊れ、インフラや個人資産が無駄になる。その深刻さと気候変動の拡大による洪水の再発の可能性が高いにもかかわらず、以前に洪水の影響を受けたコミュニティの意識と準備はなまぬるく、しばらくすれば、故意または無意識に忘れられます。洪水の痕跡が消えたとき、洪水の記憶は薄れ、そのような現象は犠牲者に絶え間ない損害と損失をもたらしてきた。

このパイロットプロジェクト「洪水の語り継ぎ、貴方の物語と私の物語」は、ソーシャルメディアを使用して、2017 年にクラウドソーシングによって行われたマレーシアのペナンで最も深刻な洪水の画像、ビデオ、ストーリーを収集し、その有効性を検証する可能性を探ることを目的としている。ソーシャルメディアは、洪水の保存、解釈、反映、および内省に国民を関与させる包括的なプラットフォームとして機能する。

最後に、洪水関連のストーリー、画像、ビデオをクラウドソーシングするためにソーシャルメディアを使用することの影響、直面する課題、制限、および教訓として役立ち、災害意識を高めるアプリケーションの可能性も提示される。

Tales of flood, Yours and Mine: crowdsourcing flood stories through social media

Ong Ke Shin（University Sains Malaysia）

Flood is the most destructing natural disaster in Malaysia. When flood happen, be it natural or man-made and/or combination of both, precious lives are lost, families broken, infrastructure and personal assets are wasted. Despite its severity and the high possibility of reoccurrence of flooding due to the escalating climate change, awareness and preparedness of communities previously affected by flood remained lukewarm and is often forgotten fleetingly, deliberately or subconsciously. Memories of flood faded when traces of flooding were effaced, such phenomenon brought about incessant damages and losses to the victims.

This pilot project “Tales of flood, Yours and Mine” aims to explore the possibility of using social media to recollect images, videos and stories of the most severe flood in Penang, Malaysia that took place in 2017 via crowdsourcing and to examine its effectiveness of social media to serves as an inclusive platform to engage the public in preserving, interpreting, reflecting and introspecting on flooding.

Lastly, the impacts, challenges faced and limitation of using social media to crowdsource flood related stories, images and video and the possibility of its application to serve as a lesson learnt and to increase disaster awareness will also be presented.

ニ ソエ（元アセアン サイクロン・ナルギス 人道問題タスクフォース調整室戦略的支援調整官）
Email: nyisoe24@gmail.com

1964 生、ヤンゴン大学卒後、ミャンマー外務省で各国在外公館に勤務、2008 年参事官/副局長。外務省退職後アセアン人道問題タスクフォース調整室で、戦略的支援調整官として 2010 年までサイクロン・ナルギス対策に従事。2012 から 2015 まで在ミャンマー英国大使館でミャンマー政府連絡調整官。2006 年から現在まで在ミャンマーオランダ大使館で政務アドバイザー。

Nyi Soe (Former Strategic Support Officer, Coordinating Office of ASEAN Humanitarian Task Force (AHTF) for Cyclone Nargis)
Email: nyisoe24@gmail.com

I was born in 1964 and studied at the Yangon University. After graduation, joined the Ministry of Foreign Affairs as a diplomat and served at various embassies at different capacities up to Counsellor/ Deputy Director till 2008. After resignation from the diplomatic service, joined the Coordinating Office of ASEAN Humanitarian Task Force (AHTF) for Cyclone Nargis as Strategic Support Officer till the end of project in 2010. From 2012 to 2015, worked as Government Liaison Officer at the British Embassy. I have been with the Netherlands Embassy from 2016 till now as Political Policy Advisor.

サイクロン・ナルギス：その後のほんとうのお話

ニ ソエ（元 アセアン サイクロン・ナルギス 人道問題タスクフォース調整室）

2008 年 5 月 2 日と 3 日に、サイクロン・ナルギスがベンガル湾から押し寄せ、大規模な人命の損失と、インフラ・財産・生活の破壊をもたらした。約 14 万人が死亡し、エーヤワディ管区とヤンゴン管区の住民の 3 分の 1 が影響を受けた。サイクロン・ナルギスは、これまでに世界で記録されたサイクロンの中で 8 番目の規模であり、ミャンマーの歴史上最悪の自然災害であった。 ASEAN-Emergency Rapid Assessment Team の勧告により、ASEAN 各国の外相は、国際社会からミャンマーへの支援の効果的な配分と活用を促進するために、ASEAN 主導の AHTF（ASEAN 人道的タスクフォース）と呼ばれる調整メカニズムを確立することに同意した。AHTF は、国際援助の流れを調整、促進、監視するための作業メカニズムとして、ヤンゴンに本拠を置く TCG（Tripartite Core Group）を設置した。ミャンマーが議長を務め、ASEAN 各国、政府、国連の代表者で構成されている。 AHTF をサポートするために、TCG の下で政府と国連の代表者と緊密に連携し、AHTF の秘書サポートを提供する調整事務所がヤンゴンに設立された。

サイクロン・ナルギスの最も困難な時期に、私はネピドーで外務省の ASEAN 部門の副局長を務めていた。荒廃の数日後、私はヤンゴンの外務省の支部で、外務副大臣が議長を務める三者コアグループを支援するよう指示を受けた。TCG で仕事をしながら、被災者への国際支援の流れを促進するために、さまざまな省庁との調整など、多くの会議に出席する必要があった。さらに、被災地への国際救援チームの渡航許可を得るために関係部署と連絡を取った。

しかしながら、困難な時期にわずらわしい仕事をしている間、私は悪夢に見舞われ、HIV の診断のために辞職を余儀なくされた。

この悲劇的なシナリオの後、私は休憩しなければならなかった。その後、2010 年初頭、AHTF 調整事務所は、定期的な評価業務を含む復旧再建活動の支援・促進を担当する戦略的支援担当官が必要であることを発表した（募集を行った）。（この職務に就いた私は）これらの活動を促進するだけでなく、世界銀行、米国、英国、ノルウェーなどのさまざまな国や国際機関からの資金についての報告書を作成することとなった。私はその仕事を、2010 年 9 月 30 日に ASEAN 人道的タスクフォースの業務が終了するまで続け、救助の初期段階から復旧と再建の段階に至るまでの支援資金についての全報告を完了させることができた。

今回の世界災害語り継ぎフォーラムでは、最悪のサイクロン・ナルギスからの救援と復興のために重要な機能を果たした組織が一致団結して行った業務の実務経験を踏まえて、災害の経験と教訓を各国からの参加者にお伝えすることとしたい。

Cyclone Nargis: A first hand Narrative of the aftermath

Nyi Soe
(Coordinating Office of ASEAN Humanitarian Task Force (AHTF) for Cyclone Nargis)

On 2 and 3 May 2008, Cyclone Nargis swept in from Bay of Bengal and resulting in large-scale loss of life and destruction of infrastructure, property and livelihoods. Almost 140,000 people were killed and one third of the inhabitants of Ayeyarwady and Yangon Divisions were affected. Cyclone Nargis was the eighth deadliest cyclone ever recorded in the world and it was the worst natural disaster in Myanmar's history. With the recommendation of ASEAN-Emergency Rapid Assessment Team, the ASEAN Foreign Ministers agreed to establish an ASEAN-led coordinating mechanism called AHTF (ASEAN Humanitarian Task Force) to facilitate effective distribution and utilization of assistance from the international community and incoming assistance to Myanmar. AHTF set up a Yangon-based TCG (Tripartite Core Group) as a working mechanism for coordinating, facilitating and monitoring the flow of international assistance. It is chaired by Myanmar and made up of representatives from ASEAN countries, the Government of Myanmar and the UN. To support AHTF, a Coordinating Office was established in Yangon to work closely with representatives from the Government and UN under the TCG and provide secretarial support for AHTF.

During the most difficult time of Cyclone Nargis, I was serving as the Deputy Director at the ASEAN Department at the Foreign Ministry. In Naypyitaw. A few days after the devastation, I got an instruction to serve at the branch office of the Foreign Ministry in Yangon to assist the Tripartite Core Group chaired by the Deputy Foreign Minister. While serving at the TCG, I had to attend various number of meetings such as coordination with different ministries for facilitation of the flow of international assistance to the victims in the affected areas. Moreover, I liaised with the concerned departments for having travel permission for international relief teams to the affected areas.

While working tediously during the hard time, I had a nightmare that I was forced to resign because of the diagnosis of HIV.

After this tragic scenario, I had to take a break. Then in early 2010, the AHTF Coordinating Office announced that they were in need of Strategic Support Officer to assist and facilitate rehabilitation and recovery activities including periodic review activities. Not only for facilitation to these activities, I had to do accountability reports for the funds from various countries and international organizations such as World Bank, the US, UK, Norway, etc. I was managed to do the accountability report for the funds provided for the initial stage of relief to the stage of recovery and rehabilitation till the end of the entire project called ASEAN Humanitarian Task Force on 30 September 2010.

Through my working experience with concerted efforts at the important organization for the period of relief and recovery from the deadliest Cyclone Nargis, I will be able to pass on the experiences and lessons from disasters to people from other countries at the forthcoming International Forum on Telling Live Lessons from Disasters if I am fortunate to be selected.

バルシャ シュレスタ（ネパール 国家復興本部 中央レベルプロジェクト推進ユニット）
Email: barsha.shrestha@pcampus.edu.np

学士（建築学）、修士（都市計画）。国家復興庁で保全建築士として勤務。18 の建築遺産（うち 7 は世界遺産）の再建の指導にあたっている。トリブバン大学建築学科非常勤講師。

Barsha Shrestha (Central Level Project Implementation Unit (CLPIU), National Reconstruction Authority, Government of Nepal)
Email: barsha.shrestha@pcampus.edu.np

Barsha Shrestha, holds bachelor degree in Architecture and MSc in Urban Planning. She is working as a Conservation Architect for the National Reconstruction Authority (NRA), a government agency instituted for post disaster reconstruction. She is responsible for looking after post-disaster reconstruction of 18 heritage sites of which seven are world heritage sites. Besides, she lectures as a part time lecturer in Department of Architecture of Tribhuvan University.

サンジャヤ ウプレティ（トゥリブバン大学工学院建築学科 准教授）
Email: suprety@ioe.edu.np

学士（建築学）、修士（都市計画）、博士（建築学）、職務経験 20 年。トリブバン大学工学部建築学科准教授。建築保全のコンサルタント/プランナー。現在、世界遺産を含む多くの建築遺産の再建と計画に参画している。

Sanjaya Uprety (Associate Professor, Department of Architecture, Institute of Engineering, Tribhuvan University)
Email: suprety@ioe.edu.np

Dr. Sanjaya Uprety, holds bachelor degree in Architecture, MSc in Urban Planning and PhD in Architecture and has over 20 years of experience. He works as Associate Professor in Department of Architecture in Institute of Engineering of Tribhuvan University. Besides, he works as consultant conservation architect and planner. Currently, he is involved with post disaster reconstruction and planning of several heritage sites (tentatively listed sites and world heritage sites like Pashupatinath Area, Lumbini, the birth place of Buddha and Ramagrama Area)

遺産保護のための努力：ネパール・ラニポカリにおける 2015 年ゴルカ地震復興について

バルシャ シュレスタ（ネパール 国家復興本部 中央レベルプロジェクト推進ユニット）
サンジャヤ ウプレティ（トゥリブバン大学工学院建築学科）

ネパールの 2015 年のゴルカ地震では、ネパールの重要な文化的、歴史的、宗教的遺産である約 2,900 の建物が壊滅的な被害を受けた。1664 年から 1669 年にプラタップ・マラー王によって、息子の早すぎる死を悼む妻を慰めるために造られた「ラニポカリ」（「女王の池」の意）もその一つである。池の中心には、1934 年の大地震の後「グンバズ様式」で再建された元々特徴的な「シハラ様式」のヒンドゥー教寺院（「バルゴパレシュワールマンディール」）があったが、2015 年のゴルカ地震で完全に破損した。

この池は、マラー時代の考古学に関する古代の知識と、伝統的な材料と技術を使用した水の供給・貯留・再補給を特徴とする配水システムが使われていたことの証である。このライブ遺産は、カトマンズ渓谷における文化と宗教のるつぼとして存続している。

2016 年 1 月 16 日に発表されたラニポカリの復興計画は、鉄筋コンクリート技術を駆使して、従来の文化的価値、伝統的なアイデンティティとユニークな建築物を、商業公園へと転換することを目的としたものであり、しだいに若者活動家、保護主義者、市民団体、地域コミュニティ団体などから抗議が高まり、大きな動きとなった。カトマンズ特別市当局と本件にかかる上位機関である政府考古学局のこのような方向性は、災害後の歴史的遺産の再建

に関するある種の国際標準に逆行するものであり、2017 年 8 月から 12 月にかけて、数十件を超える抗議が巻き起こった。抗議の声としては、第一に、古来の建築の知識に基づいて池と神殿を真に伝統的な形で保全することが求められた。第二に、古くからの生きた遺産を保全するため、遺跡を民間に貸し出すというカトマンズ特別市の計画にも反対の声があがった。このような抗議の声は当初は無視されていたが、結局、再建現場の閉鎖や法廷での訴訟、前例のないメディアの注目などに繋がった。政府は国民の圧力に耐えることができず、その真に伝統的な形で「ラニポカリ」を再建することとなった。

このポスター発表の目的は、災害後の復興の誤った取り組みから遺産を救うための国民の努力と、それがどのように前向きな政策への変更をもたらすことができるかを示そうとするものである。その最、使用される手法としては、価値の再構築のための歴史的文書の分析、ポスターによる訴え、その結果と良い形での結果である。スケッチ、写真、新聞の切り抜き、インタビューの抜粋、文書などがポスターの素材として使われる。これは、こっけいな大失敗に終わったかもしれない取り組みを将来世代に語り継ぐべき記憶として記録することに役立つであろう。

Struggle for Heritage Conservation: The Post Disaster Reconstruction of Ranipokhari in Kathmandu

Barsha Shrestha（Central Level Project Implementation Unit (CLPIU),
National Reconstruction Authority, Government of Nepal）
Sanjaya Uprety（Department of Architecture, Institute of Engineering, Tribhuvan University）

The devastating Gorkha earthquake-2015 in Nepal has affected about 2,900 structures with cultural, historical and religious heritage value. Among these, was the Ranipokhari (Queens Pond) built from 1664 to 1669 AD by King Pratap Malla to console his wife who was mourned by the untimely demise of their son. The originally iconic ‘Sikhara-style’ Hindu temple (‘Balgopaleshwor Mandir’) in the middle of the pond, rebuilt in Gumbaz style after the great Earthquake in 1934, was completely damaged during 2015 Gorkha quake.

The pond is a testimony of the use of ancient knowledge of Malla-era archeology, and water distribution system characterized by supply, retention, and recharge using traditional material and technique. This live heritage site endures as a melting pot of cultures and religions in the valley.

The post-disaster reconstruction initiation of Ranipokhari, on January 16, 2016, which was aimed at turning it to a commercial park replacing its cultural value, traditional identity and unique construction through reinforced concrete technology witnessed a gradually built massive protest from youth activists, conservationists, civil society and local community groups. Notwithstanding the ‘internationally agreed framework’ for the post-disaster reconstruction of heritage sites, such initiation by Kathmandu Metropolitan City (KMC) and approving agency, the Department of Archeology (DOA), triggered over dozens of protests between August and December 2017. The protestors

demanded, first, for authenticity in the conservation of the pond and the temple by resorting to traditional knowledge of construction. Second, they opposed the KMC's plan to lease out the heritage site to the private operator so that the age-old live heritage tradition can be conserved. The initial indifference to protestor's demand resulted, among others, in the padlocking of the construction site, legal suit in the court and unprecedented media attention. Government, not being able to withstand the public pressure, decided now to reconstruct 'Ranipokhari' retaining its authenticity.

This poster presentation aims at displaying the public struggle to save heritage from the mishandling of post-disaster reconstruction and how it can bring about positive policy and decision changes. In doing so, the method used is the historic document analysis for the value establishment, charting of protest events, its consequences, and the positive outcomes. Sketches, photographs, newspaper cuttings, interview snippets and texts are used as materials for the poster. The poster presentation is helpful in documenting the whole fiasco which may serve as a memory to the future generation.

ルペシュ シュレスタ(カトマンズ盆地保存トラスト)
Email: rupeshshrestha2005@gmail.com

トリブバン大学にて学士（建築学）、2014 年から 2016 年にかけてドイツ学術交流プログラムから奨学金を得て応用科学大学（ドイツ ケルン）にて修士（天然資源管理開発）。現在、ネパール大地震後の建築遺産再建プロジェクトに参画。研究テーマは、災害からの復旧、建築遺産の再建、災害に負けない都市づくり、防災・減災など。

Rupesh Shrestha (Kathmandu Valley Preservation Trust (KVPT))
Email: rupeshshrestha2005@gmail.com

Ar. Rupesh Shrestha completed his Bachelor's in Architecture from Tribhuvan University and Master of Science in Natural Resources Management & Development from University of Applied Sciences - Cologne (TH Köln) in 2014-2016 with scholarship from German Academic Exchange Service (DAAD). Currently, he is working in post-earthquake heritage reconstruction project in Nepal. His research interests are in post-disaster recovery, heritage reconstruction, urban resilience, disaster risk reduction and sustainable built environment.

モニュメントは崩壊し、モニュメントは再建する――よみがえる知恵、スキル、記憶

ルペシュ シュレスタ（カトマンズ盆地保存トラスト）

「カトマンズ盆地保存トラスト」は、ネパールで、2015 年の地震で破壊された 15 世紀から

18 世紀のパタン ダルバール広場のすべてのモニュメントを再構築する事業に取り組んでいる。ネパールでは、創造性の高い建築家、エンジニア、職人、アーティストが、パタンの天才の軌跡/場所の精神、感性、価値観、真正性を維持するチームとして集まっている。この有形遺産を作成する無形の側面はしばしば無視され、文書化されていない。ネパールでは新しい知恵が生まれている。それは、何世紀にもわたる哲学、宗教的、文化的価値観のプロセス、実践、融合から来るものである。

現在、対話、構築、修正、保存、強化が進行中である。遺産の保存は遺跡の囲い込みや保護を意味するのではなく、人々がモニュメントに触れたり、生きたり、歩き回ったり、礼拝したりできるように修正・保存することを意味するというのがネパールからの強いメッセージである。パタンは生きた都市である。それは、固有の文化と価値を持つ多層的な都市環境を持ち、有形遺産の保存に貢献している。

「カトマンズ盆地保存トラスト」の文書化や情報発信の過程は多様である。「これまでの作業の文書化」と呼ばれる本の制作や、復興のプロセスを示す掲示板、遺産の復興の背後にある本当の立役者を示す記録映画の作成、パタンのインタラクティブ地図を教育支援プロジェクトとして製作することなどである。全世界に伝えたい物語である。

Living heritage of Patan - rebuilding heritage inside Kathmandu valley

Rupesh Shrestha（Kathmandu Valley Preservation Trust (KVPT)）

KVPT is working in Nepal to reconstruct all the monuments of Patan Durbar Square dating between 15th to 18th century that was destroyed in the earthquake of 2015. No where else in Nepal can you find so many creative architects, engineers, craftsman and artists assembled and working as a team to preserve Patan's Genius loci / spirit of place, sensitivity, values and authenticity. The intangible aspect which creates this tangible heritage is often neglected and undocumented. New wisdom is being created in Nepal. It comes from process, practice and syncretism of centuries-old philosophies, religious and cultural values.

There are dialogues, constructions, modifications, preservation and strengthening ongoing – right at this moment. There is a strong message from Nepal that heritage preservation does not mean fencing or protecting the ruins rather it means modification and preservation so that people can touch the monuments, live, roam or worship inside. Patan is a living city. It has multi-layered urban environment with inherent culture and values which feeds into the preservation of tangible heritage.

The documentation and outreach process of KVPT is varied whether it be production of book called "documentation of work to date" or display boards showing the process of reconstruction or making documentary films showing the real hero's behind the reconstruction of heritage or creating an interactive map of Patan for school tours as educational outreach project. These attempts are telling stories which must be communicated to the whole world.

サルワル バリ(パッタン開発機構)

Email: bari@pattan.org

1953 年にムルタン生まれの Bari は、積極的な社会活動家である。彼はパタン開発機構を率いており、パキスタンの疎外された、恵まれない、過小評価されているコミュニティへの関心を高めるために貢献している。Bari は、1992 年スーパー洪水に被災したコミュニティを支援し、組織化されておらず人数も少ないボランティアグループから、全国 27 の地区で行動、研究、教育、動員に携わる数十人が所属する組織を作るまで、長い道のりを歩んできた。 Bari は、DRR、選挙、ガバナンス、労働者の権利、選挙と政治改革研究、擁護と民主化の分野で働くことにより、権威とみなされるようになった。The News、Dawn、Express Tribune、Daily Post のコラムニストでもある。1977 年にクエイドアザム大学で修士号（歴史学）を取得。イギリスに亡命した頃、サセックス大学開発研究所（IDS）の名門センターで学んだ。彼は、GNDR、ADRRN、全国人道ネットワーク、地域ガバナンスに関するグローバルネットワーク、アジア改革民主主義同盟(ARDA)を含むグローバル、地域、国内ネットワークのメンバーである。2007 年から 2008 年および 2016 年から 2018 年にかけて、選挙監視に関するパキスタンの CSO の最大のネットワーク-Free and Fair Election Network（FAFEN）を設立し、指揮している。

Sarwar Bari (Pattan Development Organization)

Email: bari@pattan.org

Born in Multan in 1953, Bari has been an active social activist. He heads Pattan Development Organization, which has been contributing to further the interest of the marginalized, the deprived and the underrepresented communities of Pakistan. Pattan has come a long way - from a group of few volunteers helping and organizing communities affected by the 1992 super floods to a well-organized team of dozens of committed personnel engaged in action, research, education and mobilization in 27 districts across the country. Pattan has grown to be considered an authority when it comes to work in the areas of DRR, elections, governance, labour rights, electoral and politics reforms research and advocacy and democratization. He is a columnist with The News, Dawn, Express Tribune, and Daily Post. He did his M. Sc (History) from Quaid-i-Azam University in 1977. During his days in exile in England, he studied at the prestigious center - Institute of Development Studies (IDS), University of Sussex. He has been an active member of global, regional and national networks including GNDR, ADRRN, National Humanitarian Network, Global Network on Local Governance, Alliance for Reforms and Democracy in Asia (ARDA). He founded and headed a largest network of CSOs of Pakistan on election monitoring - the Free and Fair Election Network (FAFEN) during 2007-2008 and 2016-2018.

民主化を通じたコミュニティのレジリエンスの構築

サルワル バリ（パッタン開発機構）

PATTAN は、1992 年のパキスタンのスーパー洪水の余波で、コミュニティと公共政策の両方のレベルで防災と備えを始めた最初の NGO である。それ以来、私たちは主に現場で活動を行い、NHN、ADRRN、GNDR が主要メンバーのネットワークを作っている。また、JICA、ADB、連邦洪水委員会、国連機関などと協力している。

われわれは神戸と仙台の防災大会に参加した。パキスタン全土には、200 以上の洪水に関する協会・組織があり、災害やガバナンスに関する多くの研究が行われている。現在、市民の視点からのリスクや危険に関する VFL 報告書(GNDR グローバル研究)を執筆しており、災害ガバナンスの現状についても整理している。

災害は大規模な破壊を意味している。しかし災害はパキスタンに有意義な変化の機会を創出するという意味もある。災害時には性別の役割が変わり、女性に対する制限が緩和される。同様に、地元の地主や影響力のある人は安全な場所に移動するので、カーストと階級の不平等は一時的に弱まる。驚くことに、正常性の回復に伴って古い秩序も戻ってくる。

この戦略的空白期には戦略的介入を必要とする。災害の後に、住宅と資産における女性の所有権を増やすことができた。例えば、1993 年に 300 件の低コストの洪水対応住宅を建設し、女性は同等の所有権を得た。私たちのプログラムは、コミュニティをベースとする災害への備えとマネジメントをするために、災害に陥りやすいコミュニティの周辺地域のボランティア（男性と女性）を増やすことをすすめている。さらに、彼らのリーダーシップとマネジメント能力を開発するために、私たちは村の組織に革新的なモデルを導入した。このモデルは、（1）リーダーの定期的な交替、（2）コンセンサスに基づいた意思決定（投票の代わりにすべてが同意するまで対話と議論を行う）、(3) PATTAN の役割を減少させること、という 3 つの柱から成り立っている。これには性別や階級の格差を平等化する優れた機能があり、対話を促進し、知識学習を強化し、相互理解を形成するとともに、共通の行動のための基礎を形作ることとなった。そして何よりも、参加型民主主義のための種をまくのに役に立った。このモデルの影響は、その後の地方選挙で明らかにされた。たとえば、各村では、コミュニティ全体（一般団体）が、女性を含むさまざまなポジションの候補者を満場一致で指名し、ほとんどの候補者が勝った。

教訓 : 災害リスクを減らすことは私たちの究極の目標でなければいけないが、災害が起こることを忘れてはならない。ハードなインフラだけでなく、性別を考慮した参加型の民主主義を打ち立てる「より良い復興」（ビルド・バック・ベター）」の機会を提供する必要がある。これにより社会レジリエンスが強化される。

ここでは以上のことについて写真とケーススタディを通じてモデルを紹介する。

Building Community Resilience Through Democratisation

Sarwar Bari（Pattan Development Organisation）

PATTAN was perhaps the first NGO who had initiated disaster mitigation and preparedness work both at community and public policy level in the aftermath of 1992 Pakistan's super floods. Since then we have been active in the field and became active member of leading networks including NHN, ADRRN and GNDR. Nationally we worked with JICA, ADB and Federal Flood Commission, UN agencies. We participated in Kobe and Sendai conferences on DRR. We formed more than 200 Flood Associations across Pakistan and conducted many studies on disaster and governance. Currently, we are writing VFL report (a GNDR global study), which will reveal citizen's perspective about risks and hazards but also it will tell about state of disaster governance.

Disasters mean massive destruction, but disasters also create opportunities for meaningful change in Pakistan. During disasters gender roles change and restrictions on the women are relaxed if not lifted. Similarly, caste and class inequalities are weakened as most of the local landlords and influential would move out to safer areas, though temporarily. Amazingly, the old order accompanies the return of normalcy.

This strategic void demands strategic intervention. In the aftermaths of disasters, we successfully increased women's ownership in housing and assets. For instance, in 1993, we built 300 low cost flood resistant houses and women got equal ownership. Our programme encouraged volunteers (male & female) from marginalized sections of disaster-prone communities for community-based disaster preparedness and management. Furthermore, in order to build their leadership and management skills and acumen we introduced an innovative model for Village Organisations, we had formed. This model stands on three pillars – 1, rotational leadership; 2, consensus-based decision making (instead of voting, hold dialogue and discussion till all agree); and, 3, diminishing role of PATTAN. This model acted as a great equalizer on gender and class disparities, encouraged dialogue, enhanced knowledge, mutual understanding and found new common grounds for common action. And above all it helped sow the seed for participatory democracy. The impact of this model manifested in the subsequent local elections. For instance, in each village the whole community (general body) unanimously nominated candidates for various positions including female quota seats. Most of their nominees won.

Lesson: While reducing disaster risks must be our ultimate goal, we must not forget that disasters do happen and do provide opportunities to "Build-Back-Better" not just physical infrastructures but also to build participatory and gender-based democracy. And this will strengthen social resilience too.

I will present our model in the said international forum through pics and a case study.

サジャ マジード（スリランカ東南大学）

Email: saja.aslam@gmail.com

サジャは 2004 年の津波で壊滅的な被害を受けたスリランカの南東海岸出身である。現在は、オルビルのスリランカ東南大学で講義を行っている。彼はクイーンズランド工科大学で災害復旧の博士号を取得した。2004 年の津波が村を襲って以来、8 年間人道支援や防災援助活動を行ってきた。彼はスリランカの 2 つの最大の NGO と協力し、災害管理の分野で豊富かつ実践的な知識を持っている。サジャは現在、災害管理、気候変動、参加型開発、エンジニアリングプロジェクト管理を教えている。

※：最新のアップデートと彼の過去の仕事については www.aslamsaja.com を参照されたい。

Saja Majeed (South Eastern University of Sri Lanka)

Email: saja.aslam@gmail.com

Saja is from the South-Eastern coast of Sri Lanka, which was devastated by 2004 Tsunami. He currently lectures at the South Eastern University of Sri Lanka in Oluvil. He just completed his thesis for his PhD at Queensland University of Technology in disaster resilience. He has been a humanitarian and disaster management aid worker for 8 years since 2004 Tsunami hit his village. He worked with two largest NGOs in Sri Lanka, bringing wealth of practical knowledge in the field of disaster management. Saja now teaches disaster management, climate change, participatory development and engineering project management.

NB：For latest updates and his past work: please visit www.aslamsaja.com.

2004 年の津波フィールドワーカーから 2019 年の防災博士号までの サジャの物語

サジャ マジード（スリランカ東南大学）

私はスリランカの美しい海岸沿いの Sainthamaruthu 村に生まれた。ここは、現在ではスリランカでも人口密度の高い都市の一つである。祖父と一緒にインド洋沿岸の学校に行った最初の日を今でも覚えている。私は週に数日ビーチに行って友達と遊んだり楽しんだりすることなしに過ごすことはほとんどなかった。このころちょうどスリランカの北部と東部で内戦が始まった。私たちは恐怖の中で生きていたが、生活は、多くの社会的な問題とともに 2009 年の終戦まで続いた。

2004 年 12 月 26 日は私のまちにとって最も暗い日であった。午後 1 時頃に、大学の食堂にいる仲間が、海水が Sainthamaruthu 村に入って約 3,000 人以上がなくなり、人口のほぼ半分が家を失ったという情報を教えてくれた。なぜ海水が私の村に来たのか、私は全く分からなかった。「津波」という言葉もそれまで誰も聞いたことがなかった。

皮肉なことに、私は 12 月 26 日に生まれた。村の隣人たちが亡くなった親戚を悼むため、今でも自分の誕生日を笑顔で祝うことはできない。私は、津波のような災害から人々や村を守るために何かしようと思っていた。数時間後には、私は学校に避難している人々の記録や浸水地域への救援援助のための組織づくり、被災者への食料や救援物資の配布などを手伝っていた。学校で災害支援センターを立ち上げ、睡眠をほぼ取らずに 24 時間運営してきた。

2006 年、私は勉強を終えた後にボランティア活動を行った。その後、RedR（災害救援を目的とする国際的 NGO）の防災プロジェクトマネージャーとして 5 年間にわたり活動を行った。そこでは防災の現場作業員の育成を立ち上げた。さらに、欧州委員会の災害対応プロジェクトに 3 年間参加した。私はこの分野にとても熱中し、修士号を取得することになった。修士論文のテーマは「津波早期警報」である。2013 年、博士課程に進学し、災害回復力の博士号を取得した。

災害のフィールドワーカーとして始まり災害管理についての深い理解に至ったという私の旅について、各国の皆さんにお伝えしたいと思う。

Disaster survivor to disaster researcher

－The story of Saja from 2004 Tsunami response worker to 2019 PhD in disaster resilience－

Saja Majeed（South Eastern University of Sri Lanka）

I was blessed to be born in a beautiful coastal village in Sri Lanka – ‘Sainthamaruthu’, now one of the densely populated city in Sri Lanka. I still remember the first day I went to school with my grandfather, which is on the coast of Indian ocean. I hardly spent my childhood without going few days in a week to the beach to play and enjoy with friends. This was also the period, when the civil war in the North and Eastern part of Sri Lanka started. We lived in fear, but life went with lots of social struggle until the end of the war in 2009.

On 26 December 2004, the darkest day for my city, which was overturned within a day. I had no idea – why the sea water came to my village as my fellow students in the canteen of the University told me at about one o’clock in the afternoon. No one heard this word – ‘Tsunami’ ever before. People told me until I went home that the sea water entered into my village and killed more than 3,000 people and left almost half of the population homeless.

Ironically, I was born on 26th December, I can’t still celebrate with smile, because people next to me in my village mourn for their lost relatives. I had a determination that I will do something to protect my people and my village from another disaster like Tsunami. No hours later, I was in the field helping to record people displaced in the schools, organizing all the relief assistance flooded into my village, and distributing food and non-food items to people. The days passed without sleep, a 24 hours operation of disaster assistance centers in schools.

I was offered a volunteer position in 2006, after I completed my studies. I was then promoted to

Project Manager for Disaster Management at RedR, which spanned for 5 years. I started to train field workers in disaster management. I then joined with European Commission for another 3 years in disaster response projects. I was so embedded into this sector, which led me to start a Master’s Degree. I chose ‘Tsunami Early warning’ for my research. I then joined as an academic in 2013, started my PhD in disaster resilience’. Now just submitted my thesis. A journey I started as a disaster worker, ended in a deep understanding of disaster management – I want to share to this world.

ラチャニーコーン ソンティップ（国際津波ミュージアム代表、NPO 法人 教育文化機構）

Email: ratchaneekorn.thongthip@gmail.com

国際津波博物館館長、津波記念館長。チュラロンコン大学で政治学の学士号と修士号を取得し、ラムカムヘン大学政治学科課程修了。2006 年より国際津波博物館館長、パンガー県津波記念館長。また、教育文化研究所（NPO）の学長として務めている。

Ratchaneekorn Thongthip (Director, International Tsunami Museum Institute for Education and Culture, NPO)

Email: ratchaneekorn.thongthip@gmail.com

Director, International Tsunami Museum, Director, Tsunami Memorial Museum. Received B.Ed. and M.A. in Political Science from Chulalongkorn University, and B.A. in Political Science, Ramkhamhaeng University. Working as Director of International Tsunami Museum and Director of Tsunami Memorial Museum, Phang-nga Province since 2006. Also working as President of Institute for Education and Culture (NPO).

津波博物館による語り継ぎ: 15 周年記念及び日タイの友情

ラチャニーコーン ソンティップ（国際津波ミュージアム、NPO 法人 教育文化機構）

2004 年 12 月 26 日、タイは史上最大の自然災害に見舞われた。スマトラ島北部の西海岸沖でマグニチュード 9.3 の巨大地震が発生し、インド洋周辺 14 カ国の海岸を壊滅させた巨大な津波が発生した。波はタイのアンダマン海岸を襲い、6 つの沿岸地域で前例のない死者数と被害があった。タイで最も被災を受けたパンガー県ではタイの津波博物館が 2 か所ある。国際津波博物館と津波記念館である。ここでは、学生リーダーが津波関連のイベントを熱心に支援している。2006 年にオープンした博物館の目的は、津波やその他の自然災害に関する認識を高めることである。非営利団体である教育文化研究所は国際津波博物館と津波記念博物館を運営しており、地域レベルでの顕著な社会貢献として認められている。教育

文化研究所で、国家社会福祉委員会、人間安全保障省及びタイ国民社会福祉協議会から賞を授与された。

年中無休で毎日 9 時から 21 時まで営業しており、どちらの博物館もほかの組織から直接の資金援助を受けていない。博物館の運営・管理は、多くの学術講演講師とソンティップ所長で構成される委員会によって運営されている。ちょっとした寄付もあり、そのおかげで博物館を管理するスタッフも雇用できている。博物館入場は、地元住民、子供、学校に対して完全に無料であり、寄付も地元の子供たちを支援するために使用されている。博物館では、津波メカニズムのアニメーションやビデオ、津波警報サイン、津波が環境に与えた影響、津波の生存者の話、早期警報システム、2004 年の大津波と同様の津波が過去にも起こったことを示すフラトン島の砂の層などの展示物が展示されている。博物館の訪問者は各国大使、海外大学の研修旅行や有名人などが含まれている。

在タイの日本大使館の紹介により、2017 年の世界津波博物館会議に博物館長が JICA から招かれ、東北大学国際災害科学研究所 Anawat Suppasr 准教授に会う機会を得た。彼は博物館に対する技術支援を続け、現在は博物館のアドバイザーである。2019 年には、津波に関する知識・情報を紹介する災害ツアーを開始し、津波被災地への旅行、災害体験の語り継ぎ、ジオパークの紹介などを行っている。知識の伝達、記憶の引き継ぎ、未来への備えの拠点としての津波博物館の役割を果たしている。

Tsunami storytelling from a museum:
The 15th memorial and friendship between Japan and Thailand

Ratchaneekorn Thongthip
(International Tsunami Museum Institute for Education and Culture, NPO)

On 26 December 2004, Thailand was hit by the greatest natural disaster in its history. A massive earthquake measuring magnitude 9.3 occurred off the west coast of Northern Sumatra, creating giant tsunami waves that devastated the shores of 14 countries around the Indian Ocean. The waves ravaged the Andaman Coast of Thailand causing unprecedented death and destruction in six coastal provinces. Tsunami museums in Thailand operating in two sites in Phang-Nga Province the most affected area in Thailand. The International Tsunami Museum and Tsunami Memorial Museum were formed by student leaders who were strongly committed to social work supporting tsunami-related events. Opening its doors in 2006, the museum's purpose is to increase awareness about tsunamis and other natural hazards. The Institute for Education and Culture, a non-profit organization operates the International Tsunami Museum and Tsunami Memorial Museum, which have recognized for its outstanding social contributions at the province level. The Institute for Education and Culture was awarded by the board of National Social Welfare and the Ministry of Social Development and Human Security as well as the National Council on Social Welfare of Thailand.

Open daily during 9:00-21:00 all year round, both museums receive no direct funding from other organizations. The museum management is administered by a committee comprised of a number of academic lectures and the Director Ms. Ratchaneekorn Thongthip. Small personal contributions allowed the hiring of an officer to take care of the museum. Most generously, entrance to the museum is entirely free for the local residents, children and school, and donation are used for supporting the local children. The museum shows the exhibits which include animations and videos of the cause of tsunami, tsunami warning sign, the impact of the tsunami on the environment, tsunami survivor stories, early warning systems, sand sheets of Phra Thong Island providing tangible evidence that the 2004 tsunami was not the first of its kind. The visitor of the museums includes ambassadors, international university study tours and notable celebrities.

By an introduction of Japan Embassy in Thailand, JICA invited the museum director to attend the World Tsunami Museum Conference in 2017 which the museum director got chance to meet Assoc. Prof. Anawat Suppasri, International Research Institute of Disaster Science at Tohoku University. He keeps supporting the technical assistance and is now one of the museum advisors. In 2019, the museum starts the Disaster Tour to show the knowledge and information about the tsunami, travel to the tsunami affected area, storytelling, telling live lessons and geopark. The Role of the Tsunami Museums as centers for knowledge transmission, passing-on the memories and prepare for the future.

マーレーン ムリー(太平洋津波ミュージアム代表)
Email: director@tsunami.org

マーレーン・ムリーは、2013 年から太平洋津波博物館の事務局長を務めている。その前は、ハワイ州津波教育カリキュラムプログラムの米国教育省助成金の主任研究員だった。博物館のための連邦、州、郡の補助金からいくつかのプロジェクトを運営している。ヒロのハワイ大学の経営学学士号を取得し、ホノルルの New Otani Kaimana Beach ホテルで 8 年間に営業や予約のディレクターとしてのビジター業界で幅広いキャリアを積んでいた。

Marlene Murray (Executive Director, Pacific Tsunami Museum) (Session Co-chair)
Email: director@tsunami.org

Marlene Murray has been the Executive Director at the Pacific Tsunami Museum since 2013. Prior to that she was the Principal Investigator for the U.S. Department of Education, grant, Hawaii Tsunami Education Curriculum Program. She manages several projects from federal, state, and county grants for the museum, as well as day to day operations. Marlene holds a B.A. in Business Administration from the University of Hawaii at Hilo and had an extensive career in the visitor industry, including eight years at the New Otani Kaimana Beach Hotel in Honolulu, as the Director of Sales and Reservations.

太平洋津波博物館が津波の記憶をどのように残しているか

マーレーン ムリー（太平洋津波博物館）

ハワイ州では、津波の死亡者数は他の自然災害の死亡者数の合計値よりずっと多い。歴史から見ると、ヒロは米国のどの地域よりも津波による死者と被害で苦しんできた。ハワイでは、津波教育の必要性に応えて、ヒロに設立された太平洋津波博物館は 1994 年に法人化され、過去 25 年間にわたって毎年数千人の住民や来館者にサービスを提供してきた。

ハワイ諸島に大きな影響を与えた最後の大津波は、ほぼ 60 年前に発生した。ハワイ諸島は、それ以来、2 世代以上にわたって、大津波による被害を経験することなく経済成長を続けてきた。ハワイ州の人口は増加しているが、特にハワイ島では人口が急増している。この地域社会にとって、観光業は重要であるが、ほとんどの観光客は津波の時にどうすれば良いか分かっていない。

ハワイでは何十年も大きな津波が起きていないため、もはや人々の頭の中に津波のイメージがない。一方、ヒロが再び津波の被害を受けるのは時間の問題だと科学者たちは考えており、リスクは高い。

毎年この博物館を訪れる何千人もの人々の中で、すべての事実や数字を覚えている人はほとんどいないであろうが、津波に関する信じられないような話は良く覚えている。この博物館は、津波の物語の人間的な部分に重点を置いて、生存者の物語と画像の展示をすることで、記憶を生かし続けるという目標を達成している。博物館は、5,000 以上の津波画像と世界中からの 600 以上の生存者の物語のビデオのコレクションを所有している。過去の津波で命を落とした人々の生きた記念碑としても機能している。博物館はまた、津波の出来事からの工芸品を展示し、物語を生かすことに役立てている。博物館では、歴史、津波の映像、科学的事実を含む有益な 25 分間のビデオが上映されている。しかし、最もインパクトのあるのは、鮮やかな描写で表現された生存者の経験に関する物語である。

心奪われる様な物語や画像を通じてこそ、教訓を学び記憶を生かし続けることができる。

How the Pacific Tsunami Museum Keeps Tsunami Memories Alive

Marlene Murray（Pacific Tsunami Museum）

Tsunamis have killed more people in the state of Hawaii than all other natural disasters combined. Hilo has suffered more death and destruction from tsunami waves in historic times than any other place in the United States. In response to the need for tsunami education in Hawaii, the Pacific Tsunami Museum was incorporated in 1994 and has provided that service to thousands of residents and visitors for the last 25 years.

The last major tsunami to significantly impact the Hawaiian Islands occurred almost 60 years ago. Since then, over two generations have grown up without ever having experienced a major tsunami, and the death and devastation that can occur. Additionally, the state, and especially Hawaii Island has

experienced a tremendous growth in population. Another very important and large sector in the community are the visitors to the islands. Most people do not know what to do in case of a tsunami.

Because a major tsunami has not occurred in Hawaii in decades, it is no longer at the forefront of people's minds. This presents a considerable risk since scientists agree that it is only a matter of time before Hilo is impacted again by a tsunami.

Out of the thousands who visit the museum each year, few will recall all the facts and figures, but what they will remember are the incredible stories. The museum accomplishes its goals of keeping the memories alive by creating exhibits with powerful survivor stories and images, placing a strong emphasis on the human component of the tsunami story. The museum has a collection of over 5,000 tsunami images and over 600 survivor story videos from all over the world. It also serves as a living memorial to those who lost their lives in past tsunami events. The museum also displays artifacts from tsunami events, with accompanying narrative which helps make the story "come alive." An informative 25-minute video is shown in the museum's theater which includes history, tsunami footage, and scientific facts. However, the most impactful aspect of the film are the survivor stories, with vivid descriptions of their experiences.

It is through riveting stories and images that we learn lessons and keep memories alive.

グエン ヴオン(GoViet)
Email: vuongnguyen0211@gmail.com

マーケティングとコミュニケーションの実務家。人々の生活の質の向上に資するデジタルの活用に強い情熱を有する。創造的でありながらデータ主導型の考え方の下、問題の解決に鋭くアプローチする。異なる目線で世の中を探訪し、支援を必要とするコミュニティに貢献することに夢中。

Nguyen Vuong (GoViet)
Email: vuongnguyen0211@gmail.com

A marketing and communication practitioner with strong passion about digital and its application to improve human experience of a better life. A creative yet data driven mindset that sharpen approach to solving problem. Keen on exploring the world in different lens and contributing to the community that need help.

災害対策・対応のためのバーチャルリアリティ

グエン ヴオン（GoViet）

ベトナム財務省と世界銀行が開催した「災害リスク軽減のための金融ソリューション」フォーラムで、Nguyen Huu Chi 財務副大臣は「ベトナムは、アジア太平洋地域において、台風、洪水、竜巻、干ばつ、地滑りなどの自然災害により大きな被害を受けた国である」と述べた。自然災害による経済被害は毎年 17 億米ドル以上にのぼり、自然災害で亡くなる死亡者数は世界 22 位である。

1999 年後半、国の中央部を襲った一連の豪雨によって引き起こされた洪水は、ベトナムが経験する今世紀で最悪の被害をもたらした。595 人が亡くなり、41,846 の家屋が洪水により破壊され、570 の学校が被害を受け、経済損失は 4 億 8,800 万米ドルと推定されるなど、トゥアティエンフエ（ベトナム中北部沿岸の省）の人々にとって忘れることのできないものとなった。洪水が発生した地域の社会、経済、環境に大きな影響を与えた最も恐ろしい災害と考えられている。

ベトナム中部の豪雨では、通常 5 月から 12 月まで平均して年に 10 回を記録しており、致命的な被害をもたらしている。政府は、深刻な被害を受けた人々を支援するために様々な資金を調達し、またそれにも限りがあるため、さらに国際支援も要請した。自然災害は、経済損失をもたらしただけでなく、地域の健康、また子供たちのような最も脆弱なグループの潜在的リスクを増大させている。

ベトナム中部は、その地理的特徴のせいで、自然災害から大きな被害を受けやすい。人々の生活は貧しく、自然災害が襲うたびに生存と生活を確保するために苦労する。人的被害と経済的被害のトラウマは、災害を一度も経験したことのない他の人にとっては想像できないものである。現在の世代の人々は Digital 4.0 の時代に足を踏み入れている。人々は、オンライン VR 博物館という強力なプラットフォームを通じて、自然災害の結果や根本的原因を自ら見て理解し、被災者たちと気持ちを共有すべきである。バーチャルリアリティ（VR）は、人々に引き込まれるような感覚を提供する技術であり、そのような方向にデジタル化が進化している。これを自然災害の博物館のアイデアに適用すると、VR 技術によって、ベトナム中部の人々に実際に起こった洪水や台風を追体験することができる。it will teach them much more about disasters and how to respond better than any guidebook or documents.人々は、災害をバーチャルに体験するための機能を使いながら、わが事として災害を疑似体験できる。オンライン VR 博物館は、そのユーザーに技術的な環境設定と周到に設計された流れを提供する必要はあるものの、災害やそれへの対応方法についてガイドブックやドキュメントよりさらに多くの事を教えてくれる。

Virtual Reality for Disaster Preparedness and Response

Nguyen Vuong（GoViet）

“Vietnam is the nation that was strongly damaged by natural disaster in Asia – Pacific as: typhoon,

flood, torado, drought, landslide, etc.”, said Deputy Minister of Finance Nguyen Huu Chi, in “Financial solution for Disaster Risk” forum held by Ministry of Finance and World Bank. These damages caused over US$1.7 billion every year and make Vietnam #22 worldwide in the number of people died because of natural disasters.

In late 1999, Vietnam experience the worst flood in a century, caused by a series of storms that brought heavy rain to the central part of the country. It brought unforgettable memories to people in Thua Thien – Hue (a province in North Central Coast of Vietnam), 595 people died, 41,846 houses were destroyed by the flood, 570 schools were damaged, economy loss was estimated upto US$488 million. This is considered as the most terrifying disaster heavily impacted society, economy, environment of provinces where the flood hit.

Heavy rainfall in Central Vietnam is recorded at 10 times per year on average, usually from May to December with fatal consequences. Government has raised several funds to support those who were severely impacted and further requested for international assistance due to limited resources. Natural disasters not only brought economy loss but increased potential risks to community health, especially children, the most vulnerable group.

Natural disasters tend to have severe impact on Central Vietnam due to the geographical feature of this land. The livelihood of people is poor and they struggle to secure it after each time natural disasters hit their land. The trauma of human losses and economy impact is somehow “unimaginable” to others who have never experienced that devastation. People of current generation is stepping to an era of Digital 4.0 and they should be encouraged to see for themselves and understand the consequences of natural disasters, the root causes and share empathy with those who suffered through a powerful platform as an online VR museum. Virtual Reality (VR) is the technology that gives people an immersive experience, that is what digital is evolving into. Applying to the idea of a museum of natural disaster, VR technology can simulate the flood, typhoon that actually happened to people in Central Vietnam. They can experience the disaster in their own terms with guide that helps them go through it safely. Though there are requirements of technology setup and well-designed flow for visitors of the online VR museum, it will teach them much more about disasters and how to respond better than any guidebook or documents.

丸林祐子（ライデン大学大学院 芸術社会研究科（オランダ）、博士研究員／九州大学大学院芸術工学研究院 SDGs デザインユニット、プロジェクト・コーディネーター）

Email: yuko.marubayashi@gmail.com

2015 年-現在：ライデン大学大学院芸術社会研究院 博士研究員
2014 年 10 月-2015 年 3 月：ライデン大学大学院芸術社会研究科 客員研究員
2012 年 2 月ー2013 年 3 月：ライデン大学大学院芸術社会研究科修士課程（映像写真学）修了

Yuko Marubayashi (PhD candidate, Leiden University, Center for the Arts in Society, Netherlands)

Email: yuko.marubayashi@gmail.com

September 2015- Present：PhD researcher, Centre for the Arts in Society, Leiden University
October 2014-March 2015：Guest researcher, The Faculty of Humanities, Centre for the Arts in Society, Leiden University
February 2012-March 2013：Master of Arts in Media Studies, Master's Program of Film and Photographic Studies, Leiden University

死者へ捧げる献立

丸林　祐子（ライデン大学大学院　芸術社会研究科）

発表者は、これまでに阪神淡路大震災の遺族証言研究を行ってきた。読解した震災遺族証言のなかに、死者への「供物」に関する証言が少なからず存在することに気がついた。これらの現存する遺族証言記録の事例から、博士研究の一環として、日本の民間信仰に基づく伝統的な葬送儀礼の一つである死者への「供物」の理論的変容について考察を進めてきた。

死者の魂を鎮めるために用意する「枕飯」の意味、また、五来重、田中宣一、山田慎也らが論じている葬送の潤滑な進行を邪魔しようとする邪霊に供する「枕団子」という意味は、さらに、死者または不在者に対して捧げる「お供え」や「陰膳」の意味合いは、現在の日本社会においてなお継承されている重要な葬送儀礼の一例である。また、波平恵美子の論ずる日本人の死者の観念によれば、日本人が伝統的に死者に対して供物を与えてきた文化的歴史があることも論じられている。この死者や邪霊に食べ物を供するという行為を、本発表では、阪神淡路大震災によって近親者を亡くした遺族に「死者への献立」を想起してもらい、その作り方を記録、報告することで、記憶の語り継ぎとしようという実験的試みを行う。この試みを媒介として、新しい震災遺族証言の形態の可能性を提示する。

Recipes for the Dead

An Attempt at Integrating Japanese Death Culture and Acts of Testimony

Yuko Marubayashi（Leiden University, Center for the Arts in Society）

The research subject for this session is largely related to my doctoral dissertation, in which I discuss the relation between testimonies of families of the deceased [遺族 izoku] of the 1995 Hanshin-Awaji earthquake, and Japanese specific phenomena of quietness and silence. To put it simply, my dissertation investigates alternative expression and representation of testimonies of izoku regarding the dead, and how those styles of testimonies are influenced by cultural customs of quietness and

silence.

The concrete case studies range from common written testimonies in publications to audio-visual testimonies such as documentaries and fiction films. Moreover, I will consider how bodily movement and sensations establish a form of testimony. To this end, I plan to include practices of performance such as workshops, creating memorials, holding rituals, etc. into alternative expression of testimony. This concept of the act as testimony is, for instance, clearly embodied by the practice of preparing and offering drink, food, and meals in shisha-kuyo [死者供養]. To understand the Japanese specific cooking culture embedded within shisha-kuyo in contemporary society, it is necessary to gain a structural framework of the roles of food in death culture, particularly in the rituals of sou-sou [葬送] in post-war Japan.

In current Japan, where the majority of people still follow the Buddhist style of wake and funeral, post-funeral memorial services are called nenki-hoyo [年忌法要], which take place regularly and repeatedly up to 33 or 50 years after the death. Another Japanese practice of this kind is the aforementioned shisha-kuyo, which have various forms but all aim to console the dead and help them to a better status or circumstance. In return, the dead protect and bring good luck to the living (Ikegami 2004; 2011). Thus, it is misleading to translate shisha-kuyo as memorial ceremony or ancestor worship; Ikegami defines it as "spiritual aid for the dead". Both practices are motivated by the concept of tsuizen-eko [追善回向], which means positive actions the living take for the dead that can make the dead a better being.

Among various materials used in the practice of wakes, funerals, nenki-hoyo and shisha-kuyo, I emphasize that food is the most important medium that enables maintaining mutual communication between the living and the dead, since food and drink can, in a very concrete way, represent an intimate, private relationship that the living and the dead used to share. My research on written testimonies by families of those who died in the Hanshin-Awaji earthquake clarified that, even 20 years after the deaths of their family members, they still continue cooking and serving them meals. It is clear that osonae and kagezen are living practices that re-enact the experience of sharing meals with someone who is already dead.

伊藤駿（大阪大学／NPO 法人日本教育再興連盟）

Email: s.ito@roje.or.jp

大阪大学大学院人間科学研究科博士前期課程修了、現在、大阪大学大学院人間科学研究科博士後期課程在籍中。日本学術振興会特別研究員、英国ダンディー大学研究員、NPO 法人日本教育再興連盟理事。

Shun Ito (Renaissance Of Japanese Education / Osaka University)
Email: s.ito@roje.or.jp

PhD candidate of Osaka University, JSPS Research Fellow, Researcher at University of Dundee, Scotland. Board member of Renaissance of Japanese Education.

中丸和(京都大学／NPO 法人日本教育再興連盟)

宮城県立仙台第二高等学校卒業、現在、京都大学総合人間学部在学中。NPO 法人日本教育再興連盟スタッフ。

Nagomi Nakamaru (Renaissance Of Japanese Education / Kyoto University)

Student of Kyoto University. A member of Renaissance of Japanese Education.

語り継ぎの担い手育成のための学生向けプロジェクトベースドラーニング

伊藤 駿（大阪大学／NPO 法人日本教育再興連盟）
中丸 和（京都大学／NPO 法人日本教育再興連盟）

【背景と目的】

これまで日本では多くの災害が発生し、語り部やミュージアムの活動などによってその伝承が行われてきた。しかしながら、記憶に新しい限りで災害が発生していない地域においては特に、なかなか災害が「自分ごと」となりにくく、災害が発生した際の対応が遅れたり、適切な防災・減災が行われていなかったりすることがある。東京や京都に事務所を置く弊団体も、大学生を中心に被災地支援や防災教育の活動を行っているが、被災した方のお話を伺うだけではどうしても他人ごとという感覚が抜けきらない学生も見られた。阪神淡路大震災を直接体験し、自分ごととして語り継ぐことができる方が減っていく中、語り継ぎを次世代にまで行っていくには、次世代の若者たちが災害を自分ごととして捉え、それを伝えていく必要があると考える。このようなことから、未災地の大学生を主なターゲットとして、次世代に震災を語り継ぎ、それを自分ごととしてさらに次世代へと伝えていくことを目的とした活動をしている。以下ではその活動の紹介を行う。

【方法】

特に教員志望や教育に関心がある大学生を対象に、被災地におけるプロジェクトベースドラーニングを行う。プロジェクトベースドラーニングの内容としては以下の通りである。

ⅰ）被災地におけるフィールドワーク

まずは被災地を訪問し、現地の方にインタビュー行なったり、ミュージアムを訪問して震

災について学生が学ぶ。また、その中で被災地の今の課題を学生に見つけてもらう。

ⅱ）被災地での課題について解決方法を考える

フィールドワークを通して見つけた課題についてグループに分かれて自分たちができることを考える。

ⅲ）考えた課題解決の方策を実施

グループごとに考えた課題解決方策を実施する。

ⅳ）大学生が震災・防災についての研究会やイベントの開催を行う

被災地における課題解決学習を通して学んだことを、今度は自らの言葉で周囲の人々に伝えていく研究会やイベントを行う。

この活動を通して、まずは学生が震災について知った後、被災地の課題の解決方策を考える中で、震災が他人ごとから自分ごとになるとともに、震災支援にも繋がる。また、教育に関心のある大学生が震災を伝承されるだけでなく、プロジェクトベースドラーニングを通して学んだことを研究会やイベント、教育現場にて自らの言葉で伝承する立場になることでさらに次の世代までも伝承が可能になると考えられる。

【結果】

以上の活動は、被災地を訪問し、現地の方のお話を伺ったり、ミュージアムを観覧するのみよりも、学生の中で震災支援や防災活動に対する主体性が向上した。

Project Based Learning for Training Youth to Tell History of Disasters

Shun Ito（Renaissance Of Japanese Education / Osaka University）
Nagomi Nakamaru（Renaissance Of Japanese Education / Kyoto University）

Nowadays, we are facing risk of disasters including earthquake, heavy rain and typhoon. Although people working for gathering attention to disaster management and transmission of experiences of disaster, people those who do not have experiences as victims of disaster cannot have relevance for disaster management. In our organization which is located in Kyoto and Tokyo, students who are working as volunteer also cannot have relevance to disaster. Then, we launch the project which aims to transmit the memory of disaster and make relevance to disaster in future. In this presentation, we introduce our work and result of transformation of students' mind to disaster management.

In the project, we focus on students who would like to be a teacher because they will have opportunity to transmit the memory of disaster to their pupils in classroom. Method of this project is "Project-Based Learning", which students are learning from the following process.

- Fieldwork for finding the problem of the area.
- Making solutions for the problem.
- Carrying out the solutions.

- Distribution through sharing students' experiences in this project to people in outside of disaster area.

As a result of the project, students working for participation to the community on their own initiative. In comparison with other method of learning, such as observation, conducting interview to people those who live in the disaster area, students feel their self-efficacy. For future project, we are conducting self-evaluation of students fulfillness in this project.

朝廣和夫（九州大学　芸術工学研究院　環境デザイン部門　准教授）

Email: asahiro@design.kyushu-u.ac.jp

1995 年　九州芸術工科大学　大学院芸術工学研究科　生活環境専攻　博士前期課程　修了
1995 年　㈱ アーバンデザインコンサルタント
1996 年　九州芸術工科大学環境設計学科環境論講座助手
2006 年　博士（芸術工学）（九州大学）
2009 年　九州大学大学院芸術工学研究院准教授　　現在に至る

Kazuo Asahiro (Associate Professor, Deepartment of Environmental Design, Faculty of Design, Kyushu University)

Email: asahiro@design.kyushu-u.ac.jp

1995　Graduated Graduate School of Design, Kyushu Institute of Design
1995　Urban Design Consultant Ltd.
1996　Assistant Professor of Department of Environmental Design, Kyushu Institute of Design
2006　Ph. D. in Design (Kyushu University)
2009　Associate Professor of Faculty of Design, Kyushu University

災害時における共助による農業支援について

朝廣　和夫（九州大学　芸術工学研究院　環境デザイン部門）

平時の里地・里山の保全と災害時の農業・農村の復旧・復興。近年、厳しい農林業生産環境、都市化により農山村の人口減少、高齢化は急速に進んでいる。一方、日本の 7 割近くを占める中山間地域は、自然景観だけでなく、農業、林業、そして、文化を支える重要な役割を果たしている。

近年、九州北部は平成 24 年 7 月九州北部豪雨、平成 28 年の熊本地震、そして、平成 29 年 7 月九州北部豪雨と度重なる災害に見舞われ、中山間地の農山村は、大変厳しい状況になっている。

ご紹介したい、福岡県八女市、うきは市、朝倉市、そして熊本県の西原村、山都町は、棚田や果樹園、畑地等の広がる風光明媚な土地柄で、長年、都市農村交流や観光で農地の保全、農業体験などの取組がなされてきた。先に述べた災害で多くの被害を被ったこれらの地域では、全国でも珍しい、農業ボランティアによる農業支援、農地・農業用施設の復旧活動が展開された。水路の土砂出し、農地の小石取り、機械の入らない農地での収穫、被災者の手が回らない作付け、棚田の石積みなどである。一般的に、災害ボランティアによる農業支援は、収益事業への支援となるため派遣されることはない。ボランティアスピリッツにも反するという声もある。農家にしても、大切にしてきた農地、生産エリアに一般の人が足を踏み入れることを許したり、復旧を依頼したりすることを良しとしない考え方が一般的である。一方、農家にとり、農地は生活の一部であり、日々の食料、健康、喜びの支えでもある。都市の消費者が、農村を支える形。これは、生産物を購入するだけでなく、様々なかかわり方があると考えられる。それは、平時の観光であるかもしれないし、災害時の農業ボランティアであるかもしれない。私は、忘れられがちな都市と農村の繋がりを、災害で顕在化した九州北部での活動と交流活動をご紹介し、皆様に問い、一緒に考える機会となることを願っている。

地域、コミュニティの力が減少している今、町の力を農山村とつなぎ、災害に強い新たなコミュニティの形成が課題と言える。これらの知見を語り継ぎ、今後の力と連帯につながることを期待する。

Support for Farmland Restoration through Mutual Assistance after Disasters

Kazuo Asahiro
(Department of Environmental Design, Faculty of Design, Kyushu University)

Today's topic is the conservation of agricultural mountain villages, especially, relationship between tourism in normal time and agricultural volunteer activities in disaster time. The activities of agricultural volunteers had been developed in the recent disasters in Northern parts of Kyushu.

In recent years, depopulation and aging are being got progress in mountain villages so that the harsh agricultural and forestry production and urbanization. On the other hand, these area plays an important role in supporting not only natural scenery but also agriculture, forestry, and cultural landscape conservation. Northern Kyushu have been suffered severe disasters such as the heavy rains in July 2012, 2017 and the Kumamoto earthquake in 2016.

Farmer in rural had not only being affected damage of crops and agricultural facilities, but also affected daily food and health. In generally, disaster volunteers have been not dispatched to agricultural support because it regards as the support for profitable businesses. However, it preserves the farmer's life, health and natural environment. If we want to maintain a sustainable and diverse farming and mountain village in the future, we need to have more involvement of volunteers after disaster.

In these damaged area, the agricultural volunteer carried out by several different sector. Those

activities were removal of sediment from water way, terraced paddy, tea field, green house and orchard. And harvest of rice and potato management support also had been seen.

Future issues are the systematization of agricultural volunteers and human resource development. Currently, Fukuoka Prefecture has started the manual publishing and the coordinator training seminar to establish an agricultural volunteer center at the Agricultural Cooperative (JA) when disaster happened in the future.

アンドゥルー ミッチェル（熊本大学）
Email: kumadaiquake@gmail.com

熊本地震体験プロジェクト（KEEP）は、外国人が地震体験を共有できるように、2016 年に熊本大学の大学院生によって開始された。 当初は一度限りのイベントとして想定されていたこのプロジェクトは、自然災害時に外国人が直面する独特の問題について他の人が学ぶことを目的として、これらの経験を日本中に広めるために拡張された。

ミッチェル・アンドリュー（mitchell.andrewneil@gmail.com）は現在、熊本大学の特別研究員である。去年、熊本大学で社会学の博士号を取得した。研究のテーマはポストフクシマの原発の政策やフクシマの社会と政治の影響であった。熊本地震の体験プロジェットの会長で、現在の研究テーマは外国人の熊本地震の体験である。

ハパ・ルイス（japa-luis@st.cs.kumamoto-u.ac.jp）は現在、熊本大学で修士号を取得している。 彼はコンピューターサイエンスおよび電気工学の学部に属し、研究のトピックは機械学習とデータマイニングである。 2016 年熊本地震を経験し、2017 年から KEEP のメンバーである。

フランシス・ワールギライ（fwargirai@gmail.com）は熊本大学の博士課程の候補者であり、彼の研究テーマはパプアニューギニアへの権力認識と政治参加に対する新しいインターネットメディア技術の影響に関するもので、2016 年から KEEP のメンバーである。

Andrew Mitchell (Kumamoto University)
Email: kumadaiquake@gmail.com

The Kumamoto Earthquake Experience Project (KEEP) was started by graduate students at Kumamoto University in 2016, so that foreigners could share their earthquake experience. Initially envisaged as a one-off event, the project was expanded to spread these experiences across Japan with the aim of helping others learn about the unique problems foreigners face during natural disasters.

Andrew Mitchell (mitchell.andrewneil@gmail.com) is a special researcher at Kumamoto University. He graduated from there in 2018 with a PhD in the social sciences. His topic of research was the social and political aspects of the Fukushima disaster. He has served as KEEP's president since

2016 and is currently doing further research into the foreign experience of the earthquake

Luis Japa (japa-luis@st.cs.kumamoto-u.ac.jp) is currently a Masters degree student at Kumamoto University. He belongs to the faculty of Computer Science and Electrical Engineering, and his topics of research includes Machine Learning and Data Mining. He experienced the 2016 Kumamoto Earthquakes and have been a member of KEEP since 2017.

Francis Wargirai (fwargirai@gmail.com) is a Doctoral Candidate at Kumamoto University. His research topic is on the impact of new internet media technology on power perceptions and political participation in Papua New Guinea. He has been a member of KEEP since 2016.

熊本地震における外国人居住者の経験

アンドゥルー ミッチェル（熊本大学）

2016 年 4 月、九州の熊本県は、2011 年の東日本大震災以来見られなかった 2 つの大きな地震に見舞われた。日本語を話すことができず、助けを得るのに苦労した人や、事実上すべての災害情報が日本語であったために何が起こっているのか理解できなかった人もいた。ほとんどの人は、地震の認識や災害訓練を受けていなかった。他の人は、食事や宗教のニーズを満たすのが難しいと感じた。しかし、次の地震がいつ発生するのか、次の食事がどこから来るのかわからないという恐怖と不確実性を共有した。

熊本地震体験プロジェクト（KEEP）は、地震を経験した人々の物語を記録し共有するために、2016 年 5 月に設立された。自分の経験だけでなく、自分の経験を伝えることで、人々が災害への備えを改善する方法を学べることを願っている。

私たちのプロジェクトのテーマは、2020 年の国際フォーラムのテーマにぴったりだと思う。メンバー全員が熊本地震を経験し、私たち全員が異なる経験を分かち合った。私たちは貴フォーラムでの議論に多くの貢献をすることができ、また自然災害を経験した人々の経験について多くを学びたいと思っている。

ポスターには、テキストと写真による地震のスナップショットと、ワークショップで人々がどのように災害に備えることができるかについてのアドバイスを掲載する。

Kumamoto Earthquake Experience Project (KEEP)

Andrew Mitchell（Kumamoto University）

In April 2016, Kumamoto prefecture in Kyushu, Japan, suffered two major earthquakes of an intensity not seen since the Tohoku earthquake of 2011. Many foreign residents found life especially tough. Some could not speak Japanese and struggled to get help, or could not understand what was happening as virtually all disaster information was in Japanese. Most had no earthquake awareness or

disaster training. Others found their dietary or religious needs hard to fulfil. All however shared in the fear and uncertainty of not knowing when the next earthquake would strike or where their next meal would come from.

The Kumamoto Earthquake Experience Project (KEEP) was formed in May 2016 in order to record and share the stories of those who experienced the earthquakes. By conveying their experiences, as well as our own, we hope that people can learn how to better prepare for disasters.

We think that the theme of our project fits well with the themes of the 2020 International Forum. All our members experienced the Kumamoto earthquake and we all had different experiences to share. We feel that we would be able to contribute a lot to the discussion at your forum and hope to learn much about the experiences of those who have also lived through natural disasters.

On our poster we will include snapshots of the earthquake though text and photos, as well as advice we give people in our workshops on how they can better prepare for disasters.

川崎梨江（広島大学大学院総合科学研究科）

Email: lie.or.rie@gmail.com

2013 年 3 月　同志社大学社会学部メディア学科卒業　学士（社会学）
2013 年 4 月　広島大学大学院総合科学研究科人間存在研究領域博士課程前期入学
2016 年 3 月　広島大学大学院総合科学研究科人間存在研究領域博士課程前期修了
修士（学術）
2016 年 4 月　広島大学大学院総合科学研究科 21 世紀科学プロジェクト群リスク研究
博士課程後期入学（現在に至る）

Rie Kawasaki (Graduate School of Integrated Arts and Science)

Email: lie.or.rie@gmail.com

Mar 2013　Doshisha University
Apr 2013　Hiroshima University Graduate School of Integrated Arts and Sciences
Humanities and Science of Art Master's program
Mar 2016　Art Master's program completed, Master's degree (Arts)
Apr 2016　21st Century Science Project Risk Studies Doctoral course, Hiroshima University
Graduate School of Integrated Arts and Sciences,
Doctoral program (up to present)

2014 年の広島土砂災害の被災者へのインタビューの分析

本研究では、被災者の証言を今後の防災にどのように活用するかを検討するために、災害体験の「個人化」に焦点を当てる。

通常、体験や記憶は時とともに風化していく。しかし、個人的コンテキストとともに解釈された体験や情報は「個人化」され、長期間記憶される。

本調査では、2014 年 8 月 20 日に広島市で生じた集中豪雨による土砂災害の被災地を対象地域とし、最も被害が大きかった安佐南区の八木・緑井地区に居住する 19 名の被災者を対象に、発災から 3 年目と 5 年目の 2 度にわたりインタビューを実施し、証言内容の変化を分析した。そして、この「個人化」のモデルを検証することで、被災者の体験や証言を今後の防災にどのように活用していくかを検討した。

「発災期」は、自分の身の回りのことで手一杯の状態である。しかし、「復旧・復興期」では、広範囲の周囲の状況を、口伝えやマス・メディアの報道などから知る。そして、共有されやすい表層的な体験や情報によって、被災者同士が共感し合い、一体感をもつ傾向がある。しかし、「平常期」に移行すると、表層的な体験や記憶は風化していく。一方で、語りの主語を不特定多数の“被災者”ではなく“自分”に変えて被災体験を再解釈するようになる。これが「個人化」のメカニズムである。

2 度の被災者インタビューのテキスト分析の結果、同じ条件において抽出された語が、3 年目のインタビューでは 38 語あったのに対し、5 年後には 15 語となっていた。この結果から、発災から間もない時期には、被災者たちは共有されやすい表層的な言葉や表現で語るが、時間が経過すると、その人にしかわからない、「個人化」された体験や記憶が語られていることがわかった。

悲惨な出来事が生じると、身を以て体験したという本物性を求めて、人びとは被災者の体験談を求める。しかし、被災者は聞き手に共有してもらえるように、表層的な体験や記憶を語る。その結果、共有されやすい表層の記憶ほど想起する機会が多くなるため、ますます「個人化」した体験は語られなくなる。しかし、被災者の語りにリアリティをもたせるのは、「個人化」されたエピソードのはずである。ただし、「個人化」された体験や記憶は、「個人化」されているがゆえに共有されにくい。今後は、「個人化」された体験や記憶を共有するための表現方法の効果の有無や程度について検討していく。

Study of Survivors' Storytelling about Sediment Disaster in Hiroshima, 2014

Rie Kawasaki, Atsushi Hikita（Graduate School of Integrated Arts and Science）

In this study, we focused on “personalization” of disaster experience and examines how to use the storytelling of survivor for future disaster prevention. Experiences and memories are usually weathered with time. However, they interpreted with personal context are remembered for a long time.

In contract, even if people suffer the same disaster, personal experience and memories tend to remain over time.

We interviewed 19 survivors living in the Yagi and Midorii districts of Asaminami Ward, the most damaged area. We interviewed the survivors twice. The first is the in 3 years and the second is the 5 years after disaster.

The survivors don’t know the full extent of the damage during the “Disaster period” immediately after the disaster. However, when they move to “Reconstruction and Recovery period”, they will know the situation throughout the disaster areas through word to mouth and media reports. They have a sense of unity through superficial experiences and information that easier to share. However, as they move into the “Normal period”, the superficial memory will be weathered, and they change the narrative subject to “self” instead of an unspecified number of “survivors” and re-interpret the disaster experience. This is the “personalization” mechanism.

As a result of text analysis of these two interviews with the survivors, the number of common words in the 1st interview was 38, but in the 2nd interview it was 15. In other words, the superficial memories that easy to share are no longer spoken, and personalized experiences and feeling are still spoken.

When a miserable event occurs, people seek out the narratives of the person who actually experienced the event. They tend to talk about superficial experiences and memories as shared by the audience. Then, the more easily shared the superficial memories, the more opportunities to remember, and they don’t talk about personalized experiences. However, if people who are not disaster survivors want to know the superficial experience and information, it is not necessarily to talk by survivors. The survivors’ reality actually should be a personalized episode. In contract, personalized experiences and memories are difficult to share because they are personalized. We will continue to examine the existence and extent of the effects of expression methods of sharing personalized experiences and memories.

森康成（北淡震災記念公園震災の語り部ボランティア）
Email: jyoyama@hera.eonet.ne.jp

Mori Yasushige (Volunteer Story Teller, Hokudan Earthquake Memorial Park in Awaji)
Email: jyoyama@hera.eonet.ne.jp

1995 年の大震災 における 淡路島での個人的な体験

森　康成（北淡震災記念公園震災の語り部ボランティア）

語り部をしていると、震災前の地震に対する認識はどうかと聞かれることがある。ここで

はその話から始めて、地震の体験、家の再建、語り継ぎという内容を時系列で述べてみたい。

地震の 2 年前から前年にかけて家を 2 つの理由でリフォームした。一つは母親が身体障がいで歩行困難になったためで、築 40 年の木造の家をバリアーフリー化し、寝室横にトイレを造った。2 つ目は築 70 年木造の家が少し傾き、すき間風が入るようになっていたのをジャッキで揚げて、内装も改めた。少し傾いていたのは、地辷地帯にあるせいなのか、後でわかったことだが、断層と言われていることが影響していたのかもしれない。地震のことなど全く頭になかった。小さな家なら 1 軒建つかもしれない 800 万円以上かかった。そのリフォームの直後のため、両親の寝室には棚の物や箪笥をのけており、地震でも落ちたり倒れたりするものがなく、けがもしなかった。

地震が 1 月 17 日の明け方に発生し、古い家は一瞬でつぶれるかと思うくらいの大きな音をたてた。私は逃げ道確保だと常に考えているため、揺れている間に障子を開け、何とか縁側のガラス戸を開けるところまで行った。その時、瓦がガラガラ落ちていた。妻は揺れが収まって布団から出てきた。幸い家は立っていた。別棟から出て来れない両親は、余震が怖かったが中へ入り、母親の方は抱きかかえて助けた。3 棟の家は、屋根瓦が落ち、傾き、内部は柱が折れ天井が落ちかけになっていた。2 棟は全壊判定で、2 月に入り取り壊した。その後、農業倉庫と、壊れかけの台所棟で 2 年間生活をした。

地震後、近所のお年寄りが次のように話してくれた。私の家は 3 方が切り立った崖になった昔は城があったと言われる山の上に立っていた。「昔、カンドラの所が落ちたと言いよったけど、城山のこの横も両方とも落ちているのは地震だったという話もじいから聞いたことがある。」という話である。それはいつ頃の事なのかも分からない。このたびの地震でも一つの崖が落ちた。ここから野島断層方向に数百ｍ離れた小高い山の所の崖がカンドラという。今回、近所のその方向の家も数軒全壊になった。

家の再建を家族で相談し、断層のあるような所ではよくないだろうと、200ｍ近く離れた土砂災害もあまりなさそうな段々畑を数枚切土して宅地に替え、震度 7 に耐えられるというプレハブ系の家を建てた。費用はすべて自前とローンである。

勤めていた野島断層に一番近い高等学校で日本で初めてといわれる高等学校の防災科目が 1999 年に開講され、その科目を 2000 年から 12 年間担当した。

今は北淡震災記念公園で震災の語り部をし、そこの断層の横に立つ家で、私自身の家と断層の話もしている。

A Personal Story of Catastrophe of the 1995 Earthquake in Awaji Island in Japan

Mori Yasushige（Volunteer Story Teller, Hokudan Earthquake Memorial Park in Awaji）

“What was your preparation for an earthquake before the 1995 earthquake?” I will begin with the answer to this question. The events unfold two years before the 1995 earthquake. From this time until 1994 we were in the process of renovating our house for two reasons. One was the direct response to the invalidity of my mother. We had made part of our 40-year-old house a kind of barrier free. The

other was that another older house suffered from tilting. Tilting was probably caused by or affected by the fact that our property was located on a fault, which became a point of discussion after the earthquake. We had no inclination that we were about to experience a huge earthquake event.

The earthquake happened on the early morning of January 17. My number one priority was to secure a safe route of exit. As the building shook, violently swaying from left to right I managed to crawl to open the paper sliding door, reaching the corridor glass sliding doors, and open one of them. Outside, roof tiles were falling.

Fortunately, the house was not felled. My parents still hadn't emerged from the other house. Being worried of the aftershocks, I went into the house and carried out my mother in my arms accompanied with my father. Thanks to the renovation, things had been still away, it became unlikely that objects could fall from a shelf or a wardrobe falling over.

Our houses were located on a hill top. After the earthquake, an old man from our neighborhood told me a story. "My grandfather told me that two of the three cliffs at your hill collapsed due to an earthquake." One of the cliffs also collapsed in 1995 as a result of the earthquake. Some of the houses in my neighborhood were completely destroyed. It is said that the houses stood on a fault line connected to the Nojima Fault Line which appeared in the immediate aftermath of the 1995 event.

Our two houses were registered as totally damaged. For 2 years we lived between a farm building and a kitchen house. For our new house, we chose a flattened terrace field located 200 meters from the site of the previous house.

At a senior high school nearest to Nojima Fault, 3 disaster mitigation classes were introduced to the school curriculum in 1999. I started teaching one of them in 2000, and taught for a further 12 years.

Now, I do a kataribe, storyteller at the Hokudan Earthquake Memorial Park.

浅利満理子（3.11 メモリアルネットワーク）
Email: info@311support.com

2012 年 6 月　　（前身）石巻ビジターズ産業ネットワーク 設立
2017 年 11 月　　3.11 メモリアルネットワーク 設立
会員数：個人会員 442 名／登録団体 68 団体（2019 年 11 月 22 日時点）

Mariko Asari (3.11 Memorial Network)
Email: info@311support.com

June 2012　　Establishment of Ishinomaki Visitors Industry Network (predeceasing bocy)
November 2017　　Establishment of 3.11 Memorial Network
Individual Members: 442 / Corporate Members: 68 as of 22 November 2019

東日本大震災被災地における民間伝承ネットワークの取り組み紹介

浅利　満理子（3.11 メモリアルネットワーク）

2011 年 3 月 11 日に東北太平洋沿岸を中心に発生した地震、津波、原子力災害の被災地では、未災地あるいは将来の世代に向けて震災を伝える活動が行われてきた。一方で、時間の経過とともに、資金不足や高齢化等を理由に活動継続が困難になったり、震災学習プログラムの参加者減少といった課題も明らかになってきた。こうした現場の課題を受け、将来にわたる伝承を支える仕組みとして、2017 年、伝承の担い手や関係者からなる民間の広域連携組織・3.11 メモリアルネットワークが発足した。発足から約 2 年間で、会員も 400 名／60 団体以上に増加し、特に被害の大きかった岩手・宮城・福島の 3 県を中心に広域で連携し、協働企画の実施や人材育成に取り組む基盤構築が目指されている。

設立当初より人材の育成を掲げており、震災当時小中学生だった世代の若者が語りを行う機会の創出や、原爆被害を伝える継承者を広島から招く交流会の開催など、低頻度の巨大災害に備え、世代を超えた継承に取り組み始めている。

今回のポスター発表では、3.11 メモリアルネットワークの発足経緯や活動内容を紹介するとともに、超広域にわたる被災　各地の個別の取り組みが結びつき地域と世代を超えて連携・交流が広がりつつある事例を通じて、民間の担い手をはじめ多様な主体からなるネットワークの意義や課題を整理する。

Introduction to the Approach of a Non-governmental Network of Community Organizations Devoted to Preserving & Disseminating Information Relating to the 2011 Great East Japan Earthquake & Tsunami

Mariko Asari（3.11 Memorial Network）

In areas affected by the Great East Japan Earthquake, activities have been carried out to convey the experience of the earthquake to unaffected areas or future generations. On the other hand, over time, issues such as difficulty in continuing activities due to lack of funds and aging, and issues of reducing the number of participants in earthquake disaster learning programs have become clear. Therefore, as a scheme to support those activities, in 2017, the "3.11 Memorial Network", a private, wide-area cooperative organization consisting of people responsible for preserving and disseminating and related parties, was established. In the two years since its establishment, the number of members increased to more than 400 people / 60 organizations. The "3.11 Memorial Network" is collaborating over a wide area, especially in the three prefectures of Iwate, Miyagi, and Fukushima, which were particularly damaged, to build a foundation for collaborative planning and human resource development.

The “3.11 Memorial Network” has been aimed at developing human resources since its establishment. The “3.11 Memorial Network” is designed to prepare for the occurrence of infrequent catastrophes, such as creating opportunities for young people who were elementary and junior high school students at the time of the earthquake to talk, and holding exchange meetings that invite successors from Hiroshima to tell about the damage of the atomic bomb. We are beginning to work on succession beyond.

In this poster presentation, I will introduce the history and activities of the 3.11 Memorial Network. Also, we will introduce examples of disasters over a wide area, as well as cases in which individual initiatives in each region are linked, and cooperation and exchanges are spreading across regions and generations. I will discuss the significance and issues of the network consisting of various actors including private players.

中川政治（公益社団法人 3.11 みらいサポート）
Email: info@311support.com

2011 年 5 月　（前身）一般社団法人石巻災害復興支援協議会 設立
※その後、2012 年に改称、2015 年に公益法人へ移行、2019 年に改称
2015 年 1 月　総務省の地方創生に資する「地域情報化大賞」特別賞受賞
2017 年 12 月　石巻南浜津波復興祈念公園における市民の伝承活動が 3 団体共同で国土交通省「手づくり郷土賞」受賞
2018 年 8 月　復興大臣から感謝状受贈

Masaharu Nakagawa (3.11 Future Support Association)
Email: info@311support.com

2002 MA, Graduate School of Human and Environmental Studies, Kyoto University
2007- Director in Jordan office and Haiti Office, Nippon International Cooperation for Community Development
2011- Volunteer work in Ishinomaki just after Great East Japan Earthquake
2012 Managing Director, Ishinomaki Future Support Association
2014 Kawata Awards, Japan Society for Disaster Information Studies

東日本大震災時の避難行動可視化の取り組み

中川　政治（公益社団法人 3.11 みらいサポート）

東日本大震災で壊滅的な被害を受けた宮城県石巻市南浜・門脇地域において、2011 年 3 月 11 日当日の詳細な避難行動を 100 人の生存者から聞き取り、津波シミュレーションと組み合わせ、避難を促す映像として可視化した。

被災地域から移住した生存者にコンタクトして丁寧な避難行動の聞き取りを行い、ヒアリング項目の設定、避難者位置情報の可視化手法等について東北大学災害科学国際研究所と共同研究を行った。

この地域では、死者 389 名、行方不明 150 名の被害があったが、生存者の証言や津波シミュレーションによれば、津波が堤防を越えた後は、3~4 分間で高台を除くエリアが約 7m の津波で覆われたものの、地震から津波襲来までは約 1 時間あったため、早期避難により全員が助かった可能性があった。

100 名の聞き取り内容を動画で可視化した結果、学校や施設での迅速な避難の例が再確認出来た一方、地震直後は揺れの継続や片付けによる即時避難の阻害や遅れ、高台や内陸からの浸水区域に向かう移動、高台避難後の低地への再帰還、家族や知人を探しまわる行動など、多くの教訓が一目でわかる結果となった。

学校や大企業、町内会での避難訓練に参加しない住民には防災教育を啓発する仕組みが不足しており、南海トラフ地震などの巨大災害が想定されている日本において、住民の避難行動を促す取り組みが求められている。

南浜地域には、国・宮城県・石巻市によって、犠牲者を追悼し、津波避難の教訓を伝える復興祈念公園を整備予定であり、将来の災害から命を守る取り組みの一つとしてこの公園内に位置する民間展示施設において、本研究成果の発信を継続してゆく。

Visualization of evacuation behavior patterns in the 2011Tohoku Tsunami

Masaharu Nakagawa（3.11 Future Support Association）

The giant tsunami of March 11th 2011 took 3 - 4 minutes to flow over the existing floodwalls and flood the Minami-Hama District of Ishinomaki City to a height of approximately 7m (excepting high ground). However, since there was a duration of about one hour from the initial earthquake to the actual arrival of the tsunami, one can posit that all lives in the area could have been saved by speedy and early evacuation.

Realization into video of the evacuation behavior patterns of approximately 100 of the survivors brings to light such issues as the small number of people who initiated evacuation promptly directly after the quake, and also people who only evacuated to high ground after they had observed the tsunami from close by. This method effectively exposes many important lessons to be learned regarding evacuation procedure, from instances of speedy evacuation to schools and other designated facilities, to cases where some returned to low-lying and flood-prone areas from high

ground, some people returning again to high ground afterwards, and some spent time searching for family and friends.

The Great East Japan Earthquake & ensuing tsunami on March 11th 2011 caused catastrophic damage to the Minami-Hama District of Ishinomaki City, resulting in 389 deaths and 150 missing presumed dead.

After carefully interviewing approximately 100 survivors of the 3.11 disaster regarding their feelings and thoughts while evacuating after the quake and the routes they took in their evacuation, their evacuation behavior patterns for the 60 minutes after the quake were then visualized in conjunction with a tsunami simulation (joint design by IRIDeS International Research Institute of Disaster Science, Tohoku University).

The resulting evacuation behavior pattern video has proved an excellent tool for emphasizing the importance of correct and speedy evacuation, being shown at the privately-run tsunami information center in the Minami-Hama District which is visited by over 17,000 people yearly. It is to be hoped that the method will continue to be used to analyze the influence of societal relationships between family, other members of the community and local ventures on evacuation behavior, and also be of use in promoting evacuation procedures in the event of other large-scale disasters such as the possibly imminent Nankai Trough Earthquake.

田中正人（追手門学院大学）

Email: m-tanaka@otemon.ac.jp

1969 年京都市生まれ。1995 年神戸大学大学院工学研究科修了。博士（工学）。現在，追手門学院大学地域創造学部教授。

Masato Tanaka (Otemon Gakuin University)

Email: m-tanaka@otemon.ac.jp

Masato Tanaka is a Professor of Urban Planning and Disaster Recovery at Otemon Gakuin University, Osaka, Japan, and a Director at Urban Research and Planning Associates, Inc., Kobe, Japan. He was the recipient of the Paper Award of the City Planning Institute of Japan in 2008, the Paper Award of Institute of Social Safety Science in 2009, and the Architectural Institute of Japan Award for Encouragement in 2010. His current research interests include Disaster Recovery Process, Risk Management and Community-based Planning, and Territorial Design.

江川未紗（追手門学院大学）

1999 年神戸市生まれ。現在，追手門学院大学地域創造学部 2 年。

Misa Egawa (Otemon Gakuin University)

Misa Egawa is a student at Department of Regional Development Studies, Otemon Gakuin University. Her current research interests include Volunteer Activities in Disaster Area and Risk Communication.

避難行動を日常化する

田中　正人，江川　未紗（追手門学院大学）

気象災害は，地震や火山噴火と異なり，事前予測の確度がきわめて高い。我が国では，その予測は気象庁や自治体を通じて逐次発信される。よって，気象災害の多くは発災前の避難行動が可能である。にもかかわらず，過去の洪水，土砂災害事例における「避難率」は総じて低い。そのため，政府はこれまで避難情報を幾度となく改定してきた。しかしながら情報伝達の表現を今以上に洗練したとしても，その効果には基礎的な限界があるように思われる。過去の調査結果はそのことを示唆している（内閣府 2010，国交省 2019）。ではどうすればよいのか。

2011 年の紀伊半島大水害は，死者・行方不明者 98 名の人的被害をもたらした。その主要な被災地，十津川村の K 集落で被災した一人暮らしの O さん（70 代女性）は，いったん村外の親戚宅で避難生活を送るも，住み慣れた元の場所で再び暮らすことを決めた。住まいは急峻な斜面地にある。今では，雨が降り続くとすぐに近くの知人宅に「避難」する。梅雨や台風の時期は頻繁に行き来することになる。それは「避難」というよりは，日常の訪問と言ってよい。

2014 年の広島豪雨は死者 77 名の犠牲者を出した。安佐南区 Y 地区で被災した T さん（80 代女性）は，もともと娘夫婦と一緒に暮らしていた。自宅は床上浸水の被害に見舞われ，水害リスクの少ない場所へ移転することになった。しかし彼女はどうしても元の場所に戻りたいと主張した。親子が出した結論は，避難勧告が出たらすぐに娘夫婦の家に行くという約束だった。以後，その約束は果たされ，彼女は定期的に娘夫婦宅を訪問する。

同じく広島豪雨で被災した M さん（60 代男性）は，妻と二人暮らしである。被災前は防災のことなどまったく考えもしなかった。今では避難準備情報が出ると，車で妻と一緒に自宅から離れたショッピングセンターに行き，コーヒーを飲んだり買い物をしたりする。

彼ら彼女らの避難行動は，すでに日常生活に織り込まれている。散歩に出かけるように，繰り返し知人の家に，娘夫婦の家に，あるいはショッピングセンターに，危機が迫る手前

の段階で「避難」する。避難行動は，日常化されることによって確実になる。避難情報の洗練は確かに重要である。しかし，いざという緊急時に焦点化した方法には限界がある。実際の避難行動につなげるためには，脱「避難行動」化，すなわち日常化することが求められる。

Making Evacuation Behavior a Daily Routine

Masato Tanaka, Misa Egawa（Otemon Gakuin University）

Unlike earthquakes and volcanic eruptions, meteorological disasters can be predicted with high probability. Therefore, evacuation action before such disaster occurs is possible. Nevertheless, the “evacuation rate” is generally low. In order to increase the “evacuation rate”, the government has revised the evacuation information expression method several times. However, no matter how refined the expression is, the effect seems to have fundamental limitations.

For example, the heavy rain in West Japan in 2018 resulted in 232 dead and missing people. Its “evacuation rate” is said to be only 4.6%. In response to this, a “warning level” was added in parallel with the conventional “evacuation advisory” and “evacuation instruction”. However, according to a research by the Ministry of Land, Infrastructure, Transport and Tourism (2019) regarding this disaster, the reasons for not evacuating were: “Home is considered safe” “Nearby residents were not evacuating” Etc. On the other hand, there are little response of "I do not recognize evacuation advisories". In other words, the low “evacuation rate” is not mainly due to the fact that evacuation information is not transmitted.

Therefore, this study investigated changes in evacuation awareness and evacuation behavior among people who actually experienced disaster. The research areas are Totsukawa village in Nara prefecture, which was affected by the 2011 landslide disaster in the Kii Peninsula, and Hiroshima city, Hiroshima prefecture, which was affected by heavy rain in August 2014.

There was something in common between their actions that experienced severe damage. It is to make evacuation behavior a daily routine. For example, the behaviors are to stay at a low-risk acquaintance's house or to go to a shopping center with few hazards. Those “evacuations” are inevitably more frequent because it takes place much earlier than the crisis is imminent. In other words, those “evacuations” are repetitive and periodic. In order to promote appropriate evacuation behavior, it is considered necessary to incorporate the behavior into daily life.

中村洋介（兵庫県立大学大学院　減災復興政策研究科）
Email: y.nakamura0717@gmail.com

2002 年 4 月　西宮市立西宮高等学校　入学
2005 年 3 月　西宮市立西宮高等学校　卒業
2006 年 4 月　大阪教育大学　教育学部　中学校教員養成課程数学専攻　入学
2010 年 3 月　大阪教育大学　教育学部　中学校教員養成課程数学専攻　卒業
2010 年 4 月　西宮市立学文中学校　勤務
2019 年 4 月　兵庫県立大学大学院　減災復興政策研究科
減災復興政策専攻博士前期課程　入学

Yosuke Nakamura (Graduate School of Disaster Resilience and Governance , University of Hyogo)
Email: y.nakamura0717@gmail.com

Apr 2002 – Mar 2005	Nishinomiya High School
Apr 2006 – Mar 2010	Osaka Kyoiku University
Apr 2010	Teacher at Gakubun Junior High School
Apr 2019	Graduate School of Disaster Resilience and Governance, University of Hyogo, enrolled in the early part of the Doctoral Program

震災 25 年 語り継ぐ学校防災 ーその時学校では何が起こっていたのかー

中村 洋介，前林 明日香，浦川 豪，森永 速男
（兵庫県立大学大学院　減災復興政策研究科）

1995 年に発生した阪神・淡路大震災から 25 年が経過しようとしており、様々な立場で被災した人達が高齢化している。彼らの体験を若い世代へ伝承する方法を検討することが喫緊の課題である。ここでは、被災地の学校現場を対象とする。学校現場では、初動体制の確立、避難所開設・運営、教育再開等に係わる現場で起こった現実とそこでの難しい判断が存在していたはずである。特に、難しい判断を行った当時の教員のほとんどは、教育現場から退いており、その経験が個人の記憶となっている。

ここでは、学校現場で何が起こっていたのかを明らかにし、多くの人と共有するために、まず、当時の西宮市の教職員の方々にインタビュー調査を行った。当時の様々な校種、役職、立場の教職員を対象に、当時の様子や体験のありのままを語っていただいた。それらの語りから「避難所における教職員の振る舞い」「教育再開に向けての動き」「災害時に迫られる判断」「災害前に準備できること」などを明らかにできつつある。そこで得られた手法をもとに、当時の神戸市の教職員の方々にも同様のインタビュー調査に展開し、そのインタビューを映像として記録する。その語りから得られた現実は学校の立地に影響していることも考えられ、学校の立地している地域の被害状況等とも重ね合わせて分析する。

それと同時に、現場で役立つ学校防災マニュアルを検討し、阪神・淡路大震災の現場で起こった語りの映像等から現場の現実を想像し、マニュアルによる災害対応業務内容から学校の危機管理能力向上に役立てる。そういった内容を踏まえた、阪神・淡路祭震災を経験していない教員への防災教育教材作成を目指している。

Dissemination of various kinds of Experience at Educational Site
－The Case Study of the Great Hanshin-Awaji Earthquake－

Yosuke NAKAMURA，Asuka MAEBAYASHI，Go URAKAWA and Hayao MORINAGA
（Graduate School of Disaster Resilience and Governance , University of Hyogo）

25 years have passed since the 1995 Great Hanshin-Awaji Earthquake. People affected by various situations are aging. It is an urgent task to consider how to pass on their experiences to the younger generation. This time, the school site in the affected area is targeted. At the school site, there must have been the reality and difficult judgments that occurred in the field related to the establishment of an initial action system, the establishment and operation of shelters, the resumption of education, and the like. In particular, most of the teachers at the time who made difficult judgments were retired from the field of education. These experiences are getting each memory of them.

First, we interviewed the teachers of Nishinomiya City at that time, in order to clarify what was happening at the school site and share it with many people. We had teachers of various school types and positions at that time talk about their experiences at that time. For these stories, “behavior of teachers at shelters”, “movement toward resuming education”, “judgment to be made at the time of disaster”, “preparation before disaster”, etc. are being clarified. Based on the technique obtained there, we interviewed teachers in Kobe at that time and recorded the interview as a video. The reality clarified from the narrative seems to have a great relationship with the location of the school. Therefore, we analyze the damage situation in the area where the school was located.

At the same time, we consider school disaster prevention manuals that are useful in school settings. We think that it can be used to improve the crisis management ability of the school by imagining the actual situation from the interview video and connecting it with the disaster response work in the manual. We are aiming to create teaching materials for disaster prevention education for teachers who have not experienced the Great Hanshin-Awaji Earthquake.

宮定章（兵庫県立大学 減災復興政策研究科 研究員）
Email: m-comi@bj.wakwak.com

1999 年 3 月　大阪大学工学部建築工学科　卒業

2002 年 3 月　大阪大学大学院工学研究科建築工学専攻　博士前期課程　修了
2012 年 3 月　神戸大学大学院　自然科学研究科　博士後期課程　修了　（工学博士）
2003 年 4 月～2004 年 7 月 都市基盤整備公団　（団地リノベーション担当）
2000 年～現在　　認定 NPO 法人まち・コミュニケーション代表理事
2012 年～2016 年 復興大学 石巻ワンストップセンター （東北大学・石巻専修大学・学都仙台コンソーシアム）
2015 年 4 月～2016 年 3 月 NPO・まちづくり論（専修大学人間社会学部 非常勤講師）
2017 年 4 月～現在　　災害復興研究論（神戸学院大学現代社会学部 非常勤講師）
2016 年 4 月～現在　　専修大学社会科学研究所 研究員
2016 年 4 月～現在　　日本福祉大学 研究員

2003 年　防災功労者内閣総理大臣表彰
「ボランティアと地域住民の連携による震災対応と復興へのとりくみ」

Akira Miyasada (Researcher, Graduate School of Disaster Resilience and Governance, Governance, University of Hyogo)
Email: m-comi@bj.wakwak.com

Apr 1995-Mar 1999 Bachelor of Division of Global Architecture, graduate School of Engineering, Osaka University
Apr 1999-Mar 2012 Master of Department of Architecture, graduate School of Engineering, Osaka University
Apr 2006-Mar 2012 Doctor of Department of Architecture, graduate School of Engineering, Kobe University
Apr 2003-Jul 2004　Urban Infrastructure Development Corporation (in charge of housing estate renovation)
Apr 2000-Now　Authorized NPO corporation town communication representative director
Apr 2012-Mar 2016　Reconstruction University Ishinomaki One Stop Center (Tohoku University, Ishinomaki Senshu University, Gakuto Sendai Consortium)
Apr 2015-Mar 2016 Part-time lecturer (NPO / Machizukuri theory), Faculty of Human Sociology, Senshu University
Apr 2015-Mar 2016 Part-time lecturer (NPO / Machizukuri theory), Faculty of Human Sociology, Senshu University
Apr 2017-Now Kobe Gakuin University Faculty of Contemporary Social Studies Part-time lecturer
Apr 2016-Now Researcher, Nippon Fukushi University

Apr 2004　Awarded Prime Minister of Disaster Management Service

Responding to earthquake disasters and working on reconstruction through cooperation between volunteers and local residents

災害に負けない地域づくり
～備えあれば憂いなし 神戸市長田区認定 NPO 法人まち・コミュニケーションの事例～

宮定　章（兵庫県立大学　減災復興政策研究科）

阪神淡路大震災では、神戸市長田区は、大きな被害を受け、128 名の命を、建物による圧死や、火災により奪われた。人々が幾世代にもわたって築きあげてきた地域社会や日々の暮らしを凄まじい力で破壊された。

一方、悲惨な災害の経験でありましたが、毎日を大切に生きること、自然との共生など、普段は気づかないことにも、大事さを感じる機会でもあった。私達の地区は、災害で家屋の 8 割が延焼し、離れ離れになった被災者が、少しでも多く元住んでいた地区に戻ろうと、協力しあい地域づくりに関わってきた。

その後、地域づくりを行う中で、ネットワークができ、世界の方々と交流をする機会が増え、被災地同士の視察・交流をしてきた。多くの気づき、学びがあった。そこで、伝える事の大切さを学び、伝える活動を 25 年間、続けてきた。

発表内容としては、大きな被害を受けた長田区での住民とボランティアが協働したコミュニティ活動支援を基礎とした、住民自らの語り継ぎ、小中学生への震災体験学習、語り継ぐことによりコミュニティへの効果、記憶の継承のための災害遺構の保存、被災地同士の交流を伝え、次世代の担い手へ繋がることを目指したい。

例えば、小中学生の震災体験学習を通じた小中学生の学習とその後の実践活動への効果の事例を紹介する。また、語り継ぐ機会を持つことにより、被災者がどのように辛い経験であった災害を受け止めていくことになるか、心境の変化、その後の日常生活への効果を紹介する。具体的には遺族が、語り継ぎに向けて、どのように回復してきたのかを事例で示す。記憶の継承のための災害遺構の保存に対する地域住民の受け止め方の被災者一人一人の差異を示すことにより、災害を受け止めるには多くの時間がかかること、そこには語り継ぎの交流が重要なことを示す事例を紹介する。

昨今の災害が頻発する世界の中で、語り継ぐ交流のネットワークを実践することにより、各被災地の地域社会が、災害への備えを強め、防災や地域づくりに役立っていることを示すことにより、次世代の命を守るための発表を行う。

Telling disaster prevention like cherry blossoms(SAKURA)
～ Prepare first, Safety and Lively life later, for disaster. ～

Akira Miyasada

（Graduate School of Disaster Resilience and Governance, Governance, University oh Hyogo）

In the Great Hanshin-Awaji Earthquake, Kobe City Nagata Ward was severely damaged, and 128 people were killed by building destruction and fires. The community and everyday life that people had built for generations was destroyed with tremendous power.

On the other hand, while it was a tragic disaster experience, it was also an opportunity to feel the importance of things not being noticed normally, such as living carefully and living together with nature. In our district, 80% of the households moved out due to the disaster, and the survivors who have left their homes have been aiming to return to the district where they lived.

Opportunities (field visits and exchanges) to interact with people around the world have increased as the survivors and volunteers from outside collaborated to create communities for recovery from the disaster, which lead to a lot of growing awareness and learning. We have learned about the importance of conveying experiences and have been carrying out exchange activities for 25 years.

The contents of the report will be based on community activity support in which the residents in Nagata Ward collaborated. The aims of these activities are to lead to the next generation of leaders by passing on the stories of the residents themselves, learning about earthquake disaster experience for elementary and junior high school students, communicating the effects on the community, preserving disaster remains for the sake of memory succession, and exchanges between affected areas.

For example, we will introduce an example of the effects of elementary and junior high school students' learning through earthquake disaster experience learning and subsequent practical activities. In addition, we will introduce how disaster survivors will be able to receive disasters that have been a painful experience by having the opportunity to pass on stories, changes in their feelings, and subsequent effects on daily life.

Specifically, I will show how the bereaved family has recovered against the emotions from the damage.

By showing the differences in the way each survivor and local resident perceives the preservation of disaster remains for the sake of memory succession, some examples will be introduce showing the importance of passing-on exchanges, along with the long time it takes for the effect of the disaster.

折橋 祐希（兵庫県立大学大学院減災震災制策研究科 博士前期課程）
Email: yuki.orihashi@gmail.com

平成 26 年 3 月　兵庫県立大学経済学部応用経済学科　卒業
平成 26 年 4 月　凸版印刷株式会社　入社
平成 29 年 2 月　一身上の都合により退職
平成 29 年 11 月　兵庫県立大学大学院減災復興政策研究科　客員研究員(～平成 30 年 3 月)

平成 30 年 4 月　　兵庫県立大学大学院減災復興政策研究科　修士課程　入学
令和 2 年 3 月　　兵庫県立大学大学院減災復興政策研究科　修士課程修了見込

Yuki Orihashi (Graduate School of Disaster Resilience and Governance, University of Hyogo)
Email: yuki.orihashi@gmail.com

2010 – 2014 Department Applied Economics, Faculty of Economics, University of Hyogo
2014 – 2017 TOPPAN PRINTING Co., LTD
2017 – 2018 Visiting Researcher, Graduate School of Disaster Resilience and Governance, University of Hyogo
2018 – present Graduate School of Disaster Resilience and Governance, University of Hyogo

喜田 悠太郎（兵庫県立大学大学院減災復興政策研究科 博士前期課程）

平成 26 年 4 月　　神戸学院大学現代社会学部社会防災学科　入学
平成 30 年 3 月　　神戸学院大学現代社会学部社会防災学科　卒業
平成 30 年 4 月　　兵庫県立大学大学院減災復興政策研究科　修士課程　入学
令和 2 年 3 月　　兵庫県立大学大学院減災復興政策研究科　修士課程修了見込

Yutaro Kida (Graduate School of Disaster Resilience and Governance, University of Hyogo)

2014 – 2018 Department of Social Studies of Disaster Management of the faculty of Contemporary Social Studies, KOBE GAKUIN UNIVERSITY
2018 – present Graduate School of Disaster Resilience and Governance, University of Hyogo

阪神間における災害デジタルアーカイブの構築とそのプロセス
～ 1938 阪神大水害と 1995 阪神・淡路大震災を例に ～

折橋　祐希、喜田　悠太郎、浦川　豪、森永　速男
（兵庫県立大学大学院震災制策研究科）

過去の災害や我々が経験した事象に目を向け、そこから教訓を引き出し、社会的な記憶として保存・継承することは非常に重要なことである。しかし、残されている資料の多くはアナログ媒体であり、個人の所有、記憶で留まるものも多数ある。また、当時の被災体

験者は年々減少している。本取り組みでは、兵庫県下で発生した 1938 年の阪神大水害と 1995 年の阪神・淡路大震災に注目し、過去の災害に関する写真等紙媒体の情報と、被災者の記憶に基づいて災害デジタルアーカイブを構築した。また、地域の中学生・高校生・大学生が参画し、経験者や伝承者との口述のコミュニケーションやフィールドワークを通して、防災教育のプロセスも実施した。

阪神大水害の事例においては、国土交通省六甲砂防事務所らがチラシやポスター、新聞掲載などで被災体験者などに情報提供を呼びかけた。これらの情報に加え、災害に関する情報、有識者からの情報、中学生・高校生のフィールドワークで得た情報も情報源とした。阪神・淡路大震災の事例では、主に復興期における活動に注目した。研究機関等が持つ災害の被害に関する情報、行政が持つ避難所等の情報、復興支援活動者から提供されるエピソードおよび写真を情報源とした。こうした情報をもとに、デジタルマップアプリケーションを作成した。クラウド GIS を活用し、位置が特定できる写真には、絶対位置情報を付与した。位置の特定が曖昧な写真には、この辺り（エリア）として表現した。これらは、災害の全体像をより俯瞰的に表すだけではなく、個人が持つ写真をはじめとした多くの情報にまつわる物語を可視化した。

本取り組みにおける災害デジタルアーカイブの構築は、収集した情報の保存だけが目的ではなく、活用されることを想定している。いわゆるオープンデータのような形で公開され、多くの人が様々なアイデアをもとにアプリケーションや各種コンテンツとして展開していくことが望まれる。

The Construction and its Process of Digitally Archiving Records of The Great Hanshin Flood in 1938 and the 1995 Great Hanshin-Awaji Earthquake

Yuki Orihashi, Yutaro Kida, Go Urakawa, Hayao Morinaga
(Graduate School of Disaster Resilience and Governance, University of Hyogo)

It is very important to pay attention to past disasters and events that we have experienced, draw lessons from them, and preserve and inherit them as social memories. However, most of the remaining materials are analog media owned and stored privately. The number of people experiencing disasters in the past has been decreasing year by year. In this paper, we focused on the Great Hanshin Flood in 1938 and the 1995 Great Hanshin-Awaji Earthquake that occurred in Hyogo Prefecture and constructed digital archives of these two disasters using information on paper media such as photographs related to them and memories of the victims. In addition, local junior high school, high school, and university students participated in the disaster prevention education process through oral communication and fieldwork with experienced persons and lore of the disasters.

In case of the Great Hanshin Flood, the Rokko Sabo Office of the Ministry of Land, Infrastructure, Transport and Tourism gathered information from the victims using flyers, posters and newspapers.

In addition, information on disaster itself, information from experts, and information obtained from fieldwork for junior and senior high school students were used to construct the archive. In the case of the Great Hanshin-Awaji Earthquake, we focused mainly on activities during the reconstruction period. We collected information on damages from research institutions, information on evacuation shelters and episodes and photos provided by activists in reconstruction process. Based on this information, a digital map application was created. For photos that can be located, we used Cloud GIS to give absolute position information. An area information is assigned for photographs where the location is ambiguous. These digital archives not only provide a bird's-eye view of the entire disaster, but also visualize a story about a lot of information, including photos of individuals.

鈴木比奈子（防災科学技術研究所）
Email: hinasuzuki@bosai.go.jp

現職　国立研究開発法人 防災科学技術研究所 マルチハザードリスク評価研究部門 特別技術員
専修大学大学院 文学研究科 地理学専攻博士後期課程 在学中
専修大学大学院 文学研究科 環境地理学専攻修士課程修了（地理学）

Hinako Suzuki (National Research Institute for Earth Science and Disaster Resilience)
Email: hinasuzuki@bosai.go.jp

Master of Geography,
Technical Staff, Multi-hazard Risk Assessment Research Division,
National Research Institute for Earth Science and Disaster Resilience

地域の災害経験の共有－災害記念碑デジタルアーカイブマップの公開－

鈴木　比奈子*1、谷川　亘*2、内山　庄一郎*1、浦本　豪一郎*3
（*1 防災科学技術研究所、*2 海洋研究開発機構、*3 高知大学）

災害記念碑（以下、石碑）は地域の災害情報を伝承する資料のひとつである。伝承する災害種別は様々で日本全国に存在し、中には 1380 年に建立されたものも確認されている。石碑の内容は慰霊や鎮魂を示すもの、地域の被害の記録や将来への災害教訓などが記載されているほか、設置された地点自体が過去の津波や洪水の到達点などを示す情報となりうる点にも資料的価値がある。そのため以前より、石碑の情報は災害や地域などの単位で調査、集約されてきた（例えば卯花，1991；武村ほか，2014；徳島県教育委員会，2017 など）。近

年では、石碑の 3 次元モデルを作成し、現状を保存するデジタルアーカイブも取り組まれている（例えば谷川ほか，2016）。そこで徳島県、高知県、宮城県、岩手県の沿岸地域の石碑の情報を地図化し、Web-GIS を用いて「災害記念碑デジタルアーカイブマップ（https://dil-db.bosai.go.jp/saigai_sekihi/）」として公開した。背景地図は地理院地図を使用し、ESRI 社製 ArcGIS ONLINE Story Map Shortlist を使用した。石碑の地点は経緯度情報から取得した。表示は災害事例ごとに表示を分け、地図上またはサムネイルから石碑を選択し、写真と石碑の情報（石碑名称、碑文または概要、所在地、災害名称、建立日、碑の種類、調査機関）を閲覧することができる。石碑の詳細情報は地図から「地震津波碑デジタルアーカイブサイト（ http://www.jamstec.go.jp/res/ress/tanikawa/）（谷川，2019）」へリンクし、石碑の 3 次元モデル等を閲覧することが可能である。

デジタル技術と地域に伝承されてきた資料を組み合わせることで、例えば過去の浸水実績や津波浸水予測データなどの予測データと重畳して閲覧するなど石碑のもつ情報を現在の防災に活かすことや存在を多くの人に周知する方法となる。自然災害伝承碑の地図記号が制定され、2019 年より国土地理院 2 万 5000 分の 1 地形図や地理院地図上に表示されることとなった。今後、情報の追加をはじめ、外部との連携を進めていきたい。

Sharing communities' disaster experiences
－Disclosing digital archive map of disaster monuments－

Hinako Suzuki*1, Wataru Tanikawa*2, Shoichiro Uchiyama*1, Goichiro Uramoto*3
（*1 National Research Institute for Earth Science and Disaster Resilience
*2 Japan Agency for Marine-Earth Science and Technology
*3 Kochi University）

Disaster monuments (hereinafter referred to as stone monuments) are a medium used to convey historical information about local disasters. They are located throughout Japan and tell the stories of different types of disasters. The oldest was built many centuries ago, in 1380. Stone monuments are valuable as information media, not only because the words carved on their surface commemorate the victims, express mourning, provide a record of local damage and warnings of future disasters, but also because the site on which the monument was built can itself mark the reach of a past tsunami or flood. These stone monuments have therefore been investigated and categorized by type of disaster or region (Uhana 1991; Takemura et al., 2014; Tokushima Prefectural Board of Education 2017). Digital archives have been under development in recent years, aiming to preserve current knowledge by producing 3D software models of stone monuments (Tanikawa, et al. 2016). We have mapped the data on stone monuments in coastal areas of Tokushima, Kochi, Miyagi, and Iwate Prefectures and published a Digital Archive Map of Disaster Monuments (https://dil-db.bosai.go.jp/saigai_sekihi/) using Web GIS. We employed a digital map provided by the Geospatial Information Authority of

Japan (GSI) as a background map, combined with the ArcGIS ONLINE Story Map Shortlist (Esri Japan Corporation, Tokyo). Information on the location of stone monuments was obtained from latitude-longitude data. Disasters are displayed individually on the screen. Pictures of and the information carried by each stone monument (monument name, epigraph or its summary, location, disaster name, date of construction, type of monument, and investigation agency) can be browsed by selecting the desired monument on the map or from thumbnails. Detailed information, including 3D software models of stone monuments, is made available by linking the map to the website of the Digital Archive Site of Earthquake Tsunami Monuments (http://www.jamstec.go.jp/res/ress/tanikawa/) (Tanigawa 2019).

A combination of current digital technologies and the material handed down in each region enables us to know the presence of the stone monuments and to apply the information they contain for contemporary disaster prevention: for example, by superimposing data on past flood data or on predictive data for tsunami flooding. A map symbol marking a natural disaster monument has been registered and has been displayed on the Topographic Map 25,000 and GSI maps since 2019. We intend to add more information and promote cooperation with external partners.

荒井勲（NPO ひまわりの夢企画）
Email: Himawari8739@jewel.ocn.ne.jp

ボランティアグループ「ひまわりの夢企画」
NPO 法人ひまわりの夢企画（10 年間）
人と防災未来センター「語り部」ボランティアを 16 年継続

Isao Arai (NPO Sunflower's Dream)
Email: Himawari8739@jewel.ocn.ne.jp

Volunteer Group Dream of Sunflower
NPO Dream of Sunflower (10 years)
Story-telling Volunteer of DRI for 16 years

あなたにも出来る被災者支援

荒井　勲（NPO ひまわりの夢企画）

1995 年、阪神淡路大震災が起きた時に、神戸の住民として被災者から支援者になろうと立ち上げたのが「ひまわりの夢企画」というボランティア団体だった。

その後 NPO 法人化し、中越地震、東日本大震災、熊本地震などで、被災者支援活動を続けてきた。しかし会員の高齢化のため、現在は法人格を返上して、法人格の無い NPO として、出来る範囲の支援を続けている。

私達の被災者支援活動は 25 年を迎える。

色々とオリジナルな被災者支援活動が数多くある。この多様な支援活動の手法を公開し、語り、次の世代へ繋いでゆくことが私達の使命と考えている。

今回の Tell-net のイベントでは、事例写真を公開する。その写真によって、関連国の関係者にも支援活動の手法を伝えたい。

Handmade support for survivors

Isao Arai（NPO Sunflower's Dream）

In 1995, when the Great Hanshin-Awaji Earthquake occurred, a volunteer organization called “Sunflower Dream Planning” was launched as a Kobe resident to become a supporter from the victim.

Since then, the Sunflower Dream Planning became an NPO and had continued to support victims of the Chuetsu Earthquake, the Great East Japan Earthquake, and the Kumamoto Earthquake. However, due to the aging of the members, the legal status is now raised, and as a non-corporate NPO, we continue to support as much as possible.

Our disaster relief activities will be 25 years old.

There are many original disaster relief activities. We believe that our mission is to publish, talk, and connect the experiences of those activities to the next generation of various support activities.

Case photos will be made public at this Tell-net Forum. The photos convey the methods of support activities to those in the relevant countries.

稲垣文彦（公益社団法人中越防災安全推進機構）
Email: inagaki@cosss.jp

長岡技術科学大学大学院工学研究科博士後期課程修了　博士（工学）
2005 年　中越復興市民会議事務局長
2009 年　中越防災安全推進機構復興デザインセンター長
2015 年　同機構震災アーカイブス・メモリアルセンター長
2018 年　同機構統括本部長（現職）
ほかに日本災害復興学会理事等

Inagaki Fumihiro (Chuetsu Organization for Safe and Secure Society)

Email: inagaki@cosss.jp

Ph.D in Engineering, Nagaoka University of Technology
Board member, Japan Society for Disaster Recovery and Revitalization
2005 Secretary General, Chuetsu Reconstruction Citizen Committee
2009 Director, Reconstruction Design Center,
2015 Director, Earthquake Archives Memorial Center, Chuetsu Organization for Safe and Secure Society
2018 Executive Director, Chuetsu Organization for Safe and Secure Society (incumbent)

中越メモリアル回廊のための取り組み

稲垣 文彦（公益社団法人中越防災安全推進機構）

中越メモリアル回廊は「中越まるごとアーカイブ」をキーワードに被災した現場をなるべく現状のまま残すことで、震災経験の風化を防止することを目的としている。回廊施設として 4 施設 3 パークを被災各地に震災の記憶を伝える場として整備し、震災アーカイブの収集・活用の拠点としている。

4 つの拠点施設は、それぞれに特徴を持った施設となっている。「長岡震災アーカイブセンターきおくみらい」は、中越メモリアル回廊のゲートウェイを担っており、回廊の中核施設と位置づけられている。きおくみらいで、震災の全体像を知り、より詳細な情報を他の施設で学んでもらう仕掛けを意図している。「おぢや震災ミュージアムそなえ館」は、防災教育を担っている。震災の経験から得た教訓をわかりやすく伝え、日頃からの備えに生かすことを目的に、災害から 3 日後、3 ケ月後、3 年後とフェーズを区切り、そのフェーズ毎に必要な備えがわかる展示の工夫をしている。「川口きずな館」は、震災をきっかけに生まれた人と人との絆（住民同士、住民と外部者等）を伝える役割を担っている。震災当時の過去の絆を伝えるだけではなく、現在進行形で広がり続ける絆を伝えている。「やまこし復興交流館おらたる」は、故郷の歴史と文化や復興の歩みを伝える役割を担っている。住民が震災で甚大な被害を受けても、山古志に戻り、故郷を再生した歩みを住民自身の語りで伝えている。

3 メモリアルパークは、震災の象徴的な場所に設置されている。「震央メモリアルパーク」は、中越地震の本震震源地に位置し「はじまりの公園」として設置されている。ちなみに、この震源は、震災 1 周年のイベントの中で、地域住民が GPS を使って探し当てた。震源地は棚田の中心に位置し、現在ではその田んぼで「震央米」と名付けられた米の作付が行われ、名産品としてよろこばれている。「妙見メモリアルパーク」は、大規模な土砂崩落により数台の車を巻き込んだ被災現場近くに位置し「祈りの公園」として設置されている。毎年の 10 月 23 日には、設置されている献花台にいくつもの花が手向けられている。「木籠メモリアルパーク」は、中越地震最大の土砂崩落により発生した河道閉塞によってできた水没集落の

近くに位置し「記憶の公園」として設置されている。現在では、公園近くに住む地域住民が、交流施設「郷見庵」を設置し、外部から来た観光客に、震災の教訓を伝えている。

Initiatives taken for the CHU-ETSU Earthquake Memorial Corridor

Fumihiro Inagaki（Chuetsu Organization for Safe and Secure Society）

Niigata Chuetsu earthquake occurred on October 23, 2004. A feature of this earthquake is a ground disaster. Damage of hilly and mountainous areas has become a major issue of reconstruction. Because the area was heavily damaged, many people left local area after the earthquake disaster. Therefore, population decline and aging has progressed rapidly. In this region, regional development was also the issue of reconstruction and revitalization.

In order to hand down the lessons learned from the disaster to next generation, The CHU-ETSU Earthquake Memorial Corridor has been established in the affected areas.
We planned so that the specialized agencies and local residents work together. Chuetsu Organization for Safe and Secure Society aims to be a hub organization to connect them. In this paper, we will explain the efforts of earthquake-related collection utilization in . The CHU-ETSU Earthquake Memorial Corridor.

高田知紀（神戸市立工業高等専門学校都市工学科）
Email: t-takada@kobe-kosen.ac.jp

職歴
2013 年～現在 神戸市立工業高等専門学校
2016 年～現在 都市工学科 准教授
2014 年～16 年 都市工学科 講師
2013 年～14 年 都市工学科 助教
最終学歴
2013 年 東京工業大学大学院社会理工学研究科 博士課程修了、博士(工学)

Tomoki Takada (Kobe City College of Technology)
Email: t-takada@kobe-kosen.ac.jp

WORK EXPERIENCE
Kobe City College of Technology, Kobe (2013-present)
Associate Professor, Department of Civil Engineering (2016 - present)

Lecturer, Department of Civil Engineering (2014 - 2016)

Assistant Professor, Department of Civil Engineering (2013 - 2014)

EDUCATIN

PhD in Engineering, Tokyo Institute of Technology, Tokyo, Japan 2013

妖怪伝承を知的資源として活用した防災教育プログラム

高田　知紀（神戸市立工業高等専門学校都市工学科）

妖怪伝承のなかには，地震や津波，洪水，水難事故といった災害と関連するものが多数存在する．そのなかでは，妖怪の働きが，災害の誘発要因，災害の予兆前兆，災害状況の説明，災害の回避方策，災害履歴の伝達，という 5 つの類型で語られる．リスクの伝達装置としての妖怪伝承の構造をふまえ，社会実験として，子どもたちが新たな妖怪を考え出す作業を通じて，地域の多様な危険を認識し，その対策を検討する「妖怪安全ワークショップ」を展開した．その成果として，子どもたちが経験したことのないような大規模自然災害のリスクも適切に把握し，危険を回避するための方法を導き出すことができた．

A Study on Education Framework for Disaster Risk Reduction by Utilizing “Yokai” as Intellectual Resources

Tomoki Takada（Kobe City College of Technology）

The purpose of this study is to suggest an education framework for disaster risk reduction by utilizing Yokai, namely Japanese traditional monsters. In the pre-modern Japanese society, people understood that mysterious phenomenon are caused by work of Yokai. In addition, Yokai lore often tells us how to act when tsunami, earthquake, flood are occurred. Work of Yokai relating natural disaster can be classified in occurrence factor, omen, situation description, prevention scheme and disaster history transduction.

In this study, we conducted “Yokai Safety Workshop” as a social experiment, based on a role of Yokai lore as a social device to transmit disaster risks. Through the work to create new Yokai, the children who participated in the workshops were able to recognize the risks in the region and suggest how to avoid disaster risks.

東山陽次（雲仙岳災害記念館）

Email: gakugei@udmh.or.jp

2014 年熊本大学大学院自然科学研究科修了。2018 年より雲仙岳災害記念館で勤務。現在まで、教育普及、ワンダーラボのイベント企画、企画展示の製作等に従事。専門は火山岩岩石学・地球化学。学芸員資格。日本火山学会所属。いのりの灯事業や教育プログラムを通してボランティア語り部ガイドとの交流を行っている。

Yoji Higashiyama (Mt. Unzen Disaster Memorial Hall)

Email: gakugei@udmh.or.jp

I got my master's degree from Kumamoto University in 2014. I have been working at Mt.Unzen Disaster Memorial Hall since 2018. I am currently in charge of the projects of Wonder Lab and exhibition planning. My specialties are Petrology and geochemistry. I am a member of the Volcanological Society of Japan. Certificated Curator. I also work together with the narrating guides through the praying ceremony and educational program.

雲仙岳噴火災害の長期的な語り継ぎとその課題

東山　陽次（雲仙岳災害記念館）

本発表では、雲仙岳噴火災害から２８年が経過する中、火山災害や防災に関する学習体験の中核施設として位置づけられる雲仙岳災害記念館のこれまでの取り組みについて発表する。具体的に、従来ある災害伝承が市民にどのように伝わり、どのような課題があるのか、そして現在取り組んでいる新たな取り組みを紹介する。課題として取り上げると、(1)語り部ガイドの高齢化と特定のガイドへの負担、(2)スタッフを含め若者への教育不足、(3)ボランティア募集の枠組みや教育体制の制度不足、などがある。災害当初から、語り部ガイドは当時を語る上で災害伝承の担い手として役割を果たしてきたと考えられ、同時に雲仙岳災害記念館では、災害時の臨場感や状況が理解しやすい展示の工夫などを行ってきた。しかし、語り部ガイドの高齢化や復興を含む被災地の変化などから、次第に語り部の認知度が薄れ、災害の風化が進み、災害伝承の新しい方法の検討が求められてきた。そこで、当館では今年から新たな試みとして、小学生高学年から中学生を対象とする火山ジュニアマイスタースクールを始め、将来の地域の防災を担う若者を育てるための様々なプログラムを実施している。

Passing Down the History of the Damages Caused by Mt.Unzen Volcano and the Issues at Hand

Yoji Higashiyama（Mt. Unzen Disaster Memorial Hall）

In this presentation, I will brief about how the lesson from the disaster of Mt.Unzen Eruption was passed down amongst the citizens and the issues that we currently face, evaluating through the projects taken in Mt.Unzen Disaster Memorial Hall, the core facility dedicated for education of volcanic disasters, 28 years after the happening of Mt.Unzen Eruption. I will also introduce to you one of the projects we are currently working on for solving one of the issues.

Starting from the issues that we have at hand, these 3 are some of the issues that we are currently facing: 1) The aging and limited staffs as narrating guides 2) The younger audiences, including staffs, lack knowledge regarding volcanic disasters, 3) The lack of a system for recruiting and training volunteers, and etc.

Right after the happening of the disaster, the narration guides played one of the largest role in the educating the lessons of the disaster to the public. Accompanying the narrations with the exhibitions at Mt.Unzen Disaster Memorial Hall, the public was able to truly understand the disasters through a close simulation of the experience. However, as the narration guides gradually age and the disaster areas were restored, it became necessary to consider new methods in continuing the education of the volcanic disasters. As one of the plans to tackle this problem, we have started a project that will begin this year, targeting elementary upperclassmen to middle school students. These students will be educated to become capable of making the right judgement and take actions during the actual happening of a disaster through “volcano junior master school,” where we will hold many more programs to achieve such goal.

ポスターセッション発表ポスター/
Poster Session Presentations

1. リープ ダム：「災害に強い住宅を全ての人々にーメコン川沿い集落における災害に強い住宅建設に向けたコミュニティの教訓 1
Leap Dam： *RESILIENT HOUSING FOR ALL – Incorporating community lessons in building disaster resilient housing of the Mekong river communities*

2. ジャン イ：「中国の文脈での災害記憶」 2
Jiang Yi：*Remembering Disasters in China's Context*

3. アブデシュ クマール ガングゥル：「インドの災害を語り継ぐ」 3
Abdhesh Kumar Gangwar：*Telling Tales of Some Indian Disasters*

4. シティ マグフィラ：「生存者」 4
Shiti Maghfira：*Survivor*

5. アンディ フェルダナ：「メラピ山での災害との調和に生きる」 5
Andi Ferdana：*Living in harmony with the disaster at Merapi*

6. モハメド アリザマニ：「技術支援と建築材料展示の複合施設のバム地震被災地での設立」 6
Mohammad Alizamani：*Establishment of the Technical Services & building Materials Exhibition Complex in the Bam Earthquake (2003)*

7. マニヴァー スヤヴォン：「レジリエンスの声：コミュニティが主体となった人道支援におけるラオス女性」 7
Manivanh Suyavong：*Voices of Resilience: Lao Women in Community-Based Humanitarian Response*

8. オン ケ シン：「洪水の語り継ぎ、貴方の物語と私の物語：ソーシャルメディアを通じた洪水の語り継ぎのクラウドソーシング」 8
Ong Ke Shin,：*Tales of flood, Yours and Mine: crowdsourcing flood stories through social media*

9. ニ ソエ：「サイクロン・ナルギス：その後のほんとうのお話」 9
Nyi Soe ：*Cyclone Nargis: A first hand Narrative of the aftermath*

10. バルシャ シュレスタ / サンジャヤ ウプレティ：「遺産保護のための努力：ネパール・ラニポカリにおける 2015 年ゴルカ地震復興について」 10
Barsha Shrestha / Sanjaya Uprety：*Struggle for Heritage Conservation: The Post Disaster Reconstruction of Ranipokhari in Kathmandu'*

11. ルペシュ シュレスタ：「モニュメントは崩壊し、モニュメントは再建する―よみがえる知恵、スキル、記憶」 11
Rupesh Shrestha：*Living heritage of Patan - rebuilding heritage inside Kathmandu valley*

12. サルワル バリ：「民主化を通じたコミュニティのレジリエンスの構築」 12
Sarwar Bari：*Building Community Resilience Through Democratization*

13. サジャ マジード：「2004 年の津波フィールドワーカーから 2019 年の防災博士号までの サジャの物語」 13
Saja Majeed：*Disaster survivor to disaster researcher ―The story of Saja from 2004 Tsunami response worker to 2019 PhD in disaster resilience*

14. ラチャニーコーン ソンティップ：「津波博物館による語り継ぎ: 15 周年記念及び日タイの友情」 14
Ratchaneekorn Thongthip：*Tsunami storytelling from a museum: The 15th memorial and friendship between Japan and Thailand*

15. マーレーン ムリー：「物語を共有する:太平洋津波博物館が津波の記憶を引き継ぐ方法」 15
Marlene Murray：*Sharing Stories: How the Pacific Tsunami Museum Keeps Tsunami Memories Alive*

16. グエン ヴオン：「災害対策・対応のためのバーチャルリアリティ」 16
Nguyen Vuong：*Virtual Reality for Disaster Preparedness and Response*

17. 丸林祐子「死者へ捧げる献立」 17
Yuko Marubayashi：*Recipes for the Dead - An Attempt at Integrating Japanese Death Culture and Acts of Testimony*

18. 伊藤駿 / 中丸和：「語り継ぎの担い手育成のための学生向けプロジェクトベースドラーニング」 18

Shun Ito / Nagomi Nakamaru：*Project Based Learning for Training Youth to Tell History of Disasters*

19. 朝廣和夫：「災害時における共助による農業支援について」 19
Kazuo Asahiro：*Support for Farmland Restoration through Mutual Assistance after Disasters*

20. アンドゥルー ミッチェル：「熊本地震における外国人居住者の経験」 20
Andrew Mitchell：*Kumamoto Earthquake Experience Project (KEEP)*

21. 川﨑梨江 / 匹田篤：「2014 年の広島土砂災害の被災者へのインタビューの分析」 21
Rie Kawasaki / Atsushi Hikita：*Study of Survivors' Storytelling about Sediment Disaster in Hiroshima, 2014*

22. 森康成：「1995 年の大震災 における 淡路島での個人的な体験」 22
Yasushige Mori：*A Personal Story of Catastrophe of the 1995 Earthquake in Awaji Island in Japan*

23. 浅利満理子：「東日本大震災被災地における民間伝承ネットワークの取り組み紹介」 23
Mariko Asari：*Introduction to the Approach of a Non-governmental Network of Community Organizations Devoted to Preserving & Disseminating Information Relating to the 2011 Great East Japan Earthquake & Tsunami*

24. 中川政治：「東日本大震災時の避難行動可視化の取り組み」 24
Masaharu Nakagawa：*Visualization of evacuation behavior patterns in the 2011Tohoku Tsunami*

25. 田中正人 / 江川未紗：「避難行動を日常化する」 25
Masato Tanaka / Misa Egawa：*Making Evacuation Behavior a Daily Routine*

26. 中村洋介：「震災 25 年 語り継ぐ学校防災 ーその時学校では何が起こっていたのかー」 26
Yosuke Nakamura：*Dissemination of various kinds of Experience at Educational Site ―The Case Study of the Great Hanshin-Awaji Earthquake ―*

27. 宮定章：「災害に負けない地域づくり～備えあれば憂いなし 神戸市長田区認定 NPO 法人まち／コミュニケーションの事例～」 27
Akira Miyasada：*Telling disaster prevention like cherry blossoms (SAKURA) ～ Prepare first, Safety and Lively life later, for disaster～"*

28. 折橋祐希 / 喜田悠太郎：「阪神間における災害デジタルアーカイブの構築とそのプロセス～1938 阪神大水害と 1995 阪神・淡路大震災を例に～」 28
Yuki Orihashi / Yutaro Kida：*The Construction and its Process of Digitally Archiving Records of The Great Hanshin Flood in 1938 and the 1995 Great Hanshin-Awaji Earthquake*

29. 鈴木比奈子：「地域の災害経験の共有－災害記念碑デジタルアーカイブマップの公開－」 29
Hinako Suzuki：*Sharing communities' disaster experiences - disclosing digital archive map of disaster monuments*

30. 荒井勲：「あなたにも出来る被災者支援」 30
Isao Arai：*Handmade support for survivors*

31. 稲垣文彦：「中越メモリアル回廊のための取り組み」 31
Fumihiro Inagaki：*Initiatives taken for the CHU-ETSU Earthquake Memorial Corridor*

32. 高田知紀：「妖怪伝承を知的資源として活用した防災教育プログラム」 32
Tomoki Takada：*A Study on Education Framework for Disaster Risk Reduction by Utilizing "Yokai" as Intellectual Resources*

33. 東山陽次：「雲仙岳噴火災害の長期的な語り継ぎとその課題」 33
Yoji Higashiyama：*Passing Down the History of the Damages Caused by Mt.Unzen Volcano and the Issues at Hand*

リープダム
Leap Dam

Incorporating community lessons in building disaster resilient housing of the Mekong river communities

UN HABITAT
FOR A BETTER URBAN FUTURE

RESILIENT HOUSING FOR ALL



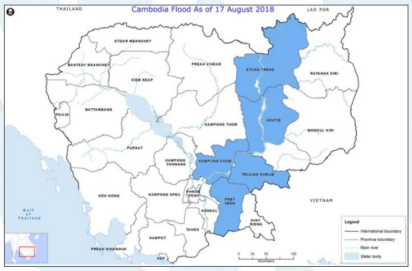


BACKGROUND

Cambodia is one of the world's most vulnerable countries to natural disasters and the country has suffered repeatedly from floods, storms and strong winds which has caused the loss of lives and destruction of livelihoods.

In 2018, due to the heavy rainfall from ***Tropical Storm SON-TINH***, the Sepa-Nam Noi dam in Lao PDR collapsed affecting 62,317 households, causing 16 deaths, and forced 5,398 households to evacuate in the five downstream provinces in Cambodia.

The rural poor communities near the Mekong river have suffered the destruction of their houses. Many families have been forced to evacuate their homes to the shelters with no sufficient food and access to clean water and sanitation.



As a response to the flooding, UN-Habitat in Cambodia with the support from the Government of Japan has been implementing the "***Project for Improving Living Environment and Disaster Prevention Capacity in Cambodia***" since April 2019. The project aims to complete the full reconstruction and repair of over 200 houses by March 2020 that will benefit over 2,000 families.

PROJECT

With the generous fund from the Government of Japan (JPY 100,000,000), the "***Project for the Support for Improving Living Environment and Disaster Prevention Capacity in Cambodia***" (Total duration: 12 months) aims to reconstruct housing to respond to the immediate need for safe shelters in the flood-affected communities Tbong Khmom Province. The project focuses on providing housing that is resilient to disasters using environmentally sustainable materials. Final beneficiaries are:

At least 200 households (1,000 persons based on average family size of 5) supported with core shelters

Approximately 2,148 households (10,740 persons based on average family size of 5) in total get benefit from hazard maps, community development support, and livelihood assistance

Approximately 50 construction workers in the flood-affected community get benefit from trainings on resilient construction methods

Approximately 50 national and subnational government officials will get benefit from capacity building on policy development skills of disaster risk management policies

ACTIVITIES

This project activities contribute to the implementation of National Housing Policy, which was formulated by the Ministry of Land Management and Urban Planning and Construction with the technical support of UN-Habitat to promote sustainable housing sector.

1. Conduct field recovery assessment in target province and select community organization and involvement of all relevant actors
2. Conduct detailed mapping of shelter (material) needs and safe areas (flood map) in target communes
3. Reach consensus with communities and affected families on which households will be assisted and on the safe locations for rebuilding houses, including sanitation facilities (toilets), based on the flood risk information collection and mapping – ***Selection of 200 households***
4. Identify low cost and local materials that can be used to construct resilient houses
5. Select community carpenters, masons, and skilled workers to participate in the housing construction and train them in disaster resilient construction methods – ***50 artisans (including youth)***
6. Community mobilization for housing construction – ***200 households***
7. Design and construct resilient houses using local low -cost materials – ***200 housing units***
8. Integrate disaster risks reduction elements into local plans
9. Conduct lessons learned workshop and disseminate the results at national level – ***100 people***

PEOPLE'S PROCESS

UN-Habitat has been taking a unique approach called ***"People's Process"*** that involves the participation of the community members in housing reconstruction and the use of their knowledge and skills. The People's Process brings about a paradigm shift moving from a model of control by authorities to one of support to people — this is done through a participatory community development methodology built around 5 steps.



KEY PARTNERS

UN-Habitat has a strong track record providing shelter and WASH assistance in Cambodia, which works closely with the Royal Government of Cambodia, Ministry of Land Management; National Committee on Disaster Management (NCDM); Provincial committees on Disaster Management (PCDM); Local Authorities; NGOs; and Communities.

UN-Habitat is also a member of Humanitarian Response Forum and Shelter Working Group that actively works to produce Low Cost Resilient Housing Construction Guidelines and for build back better to communities most severely hit by flood and cyclones in 2014 .

Photos from the field © UN Habitat Cambodia








ジャン イ
Jiang Yi

Keep Memories Alive



Situational Drama in
DRR Education for Children

Painting of The Dancer, by Henri Matisse (1869-1954)

Designed by Jiang Yi , 2019

アブデシュクマールガングワル
Abdhesh Kumar Gangwar

RCE Srinagar

TeLL-Net 2020

2020 International Forum on Telling Live Lessons from Disasters
24-26 January 2020 Kobe, Japan

Tales from Indian Disasters

Indian Tsunami

26 December 2004
07:58 hrs, 9.3 Richter Scale

Undersea (depth 30 km)
Waves 30 m high
Deaths 18,045

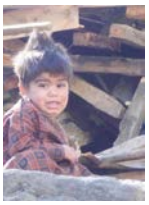




Kashmir Earthquake

8 October 2005
09:20 hrs, 7.6 Richter Scale

Deaths 945, Injured 6,149
Houses damaged 92,608
Population affected 4,50,000




Leh Cloudburst

6 August 2010
00:00 - 00:30 hrs

Deaths 255
Missing 29
Houses damaged 1,500






Kedarnath Uttarakhand floods

16-17 June 2013

Deaths 5,700






'Mehfooz' School Safety

Safety of all Everywhere All the time






Design: Rambabu

Photo Credits: Abdhesh Kumar Gangwar, G.S. Bedi, CEE Himalaya, RCE Srinagar

シティ マグフィラ
Shiti Maghfira



SURVIVOR

Fifteen years ago, the tsunami struck the western part of Indonesia on the December 26th, 2004, causing the loss of many lives and of a great amount of infrastructure. The earthquake with a magnitude of 9,1 occurred at 7.58 am. After the earthquake occurred, the tsunami hit the coast of Aceh caused 126, 741 people died and left a memory that has became a tsunami tourism site in the Lampulo, Banda Aceh, Boat on the Rooftop.









This village is named Gampong Lampulo and really close to the shore. This is where I used to selling breakfast. We call it TPI (fish auction). At that time, many anglers stopped by. When they came back from the sea, loading and unloading fish, I sold the breakfast for them there.









When earthquake happened, I sat here. After the earthquake stopped, I went home. Then returned to the port once again. A boat came from the sea and the crew yelled, “The tide is coming. The tide is coming.” It was very high. The color was black. I ran to my neighbor house and went to the second floor. At that moment, a boat somehow hooked on the top of the house.









There were 59 people on the boat. We spend 9 hours here. There is a wisdom under this calamity. We do not carry our properties. We only bring our charity. This is what I can conclude that our life is just a moment. Now fifteen years after tsunami, the infrastructures are managed properly. The economy of the local people also starts growing. Everyone can smile because Aceh has peaceful condition once again.

PHOTO : AHMAD ARISKA
TEXT : SHITI MAGHFIRA

DESIGN : AMONDAYA CREATOR

LIVING IN HARMONY WITH DISASTER AT MERAPI.

アンディ フェルダナ
Andi Ferdana

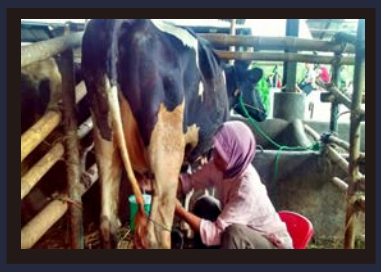
This Poster Contains the Desription of Petung Citizens “Before And After Eruption 2010"

find me : andi_ferdana | andiferdana@gmail.com

BEFORE ERUPTION 2010

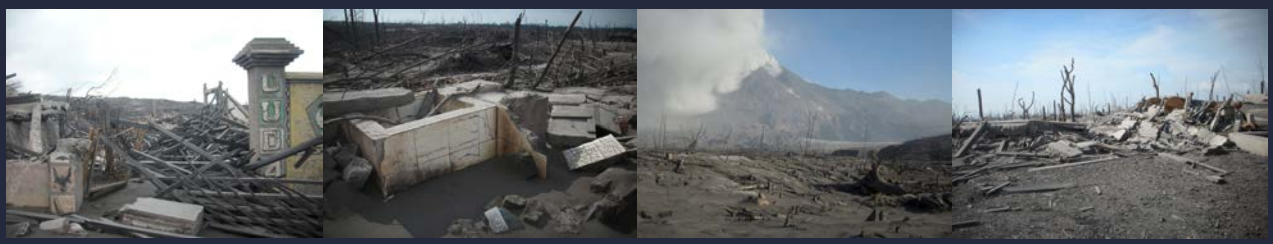






Petung vilages is 7 Km from the peak of Merapi. Before the eruption of residents raising livestock, have a cofffe garden so that it becomes a tourist village.

ERUPTION 2010



Petung exposed to pyroclastic flow and thann all destroyed and residents must move to relocation.

AFTER ERUPTION 2010



Residents who moved to relocation made their old village a tourist destination. For residents of Merapi is not a threat, they can coexist with Merapi in harmony.

モハメド アリザマニ
Mohammad Alizamani

2020 INTERNATIONAL FORUM ON TELLING LIVE LESSONS FROM DISASTERS, 24-26 JANUARY 2020. KOBE, JAPAN

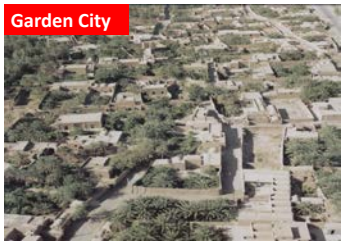
The role of Technical Services & Building Materials Exhibit Complex in Bam Earthquake(2003)

BAM BEFORE THE EARTHQUAKE









BAM AFTER THE EARTHQUAKE



Bam earthquake- Total damaged Units

Magnitude: 6.6 (R.Sc.)-Date: December 26- 2003- 26721 Dead

URBAN RESIDENTIAL & COMMERCIAL UNITS	To Be Reconstructed	25562
	To Be Repaired	828
RURAL RESIDENTIAL UNITS	To Be Reconstructed	24332
Total		50722



KEY GOALS

PRESERVATION OF IDENTITY + **PARTICIPATORY RECONSTRUCTION** + **PHYSICAL RESILIENCE**

THE PROBLEM
HOW TO REALIZE THESE GOALS?

THE IDEA

ESTABLISHING TECHNICAL SERVICES & MATERIAL EXHIBIT COMPLEX

1. CREATING A SUITABLE SPACE FOR INTEGRATED PROCESS IN DESIGNING THROUGH THE VICTIMS, DESIGN CONSULTANTS
2. EXHIBITION OF BUILDING MATERIALS FOR THE LOCAL PROFESSIONALS, ARTISANS AND TECHNICIANS
3. PRODUCING DOORS, WINDOWS, FIXTURES AND JOINERY ELEMENTS
4. PROVIDING HOUSING APPROPRIATE SAMPLES PROPOSING ARCHITECTURAL & STRUCTURAL PATTERNS

Technical Services & Building Materials Exhibit Complex

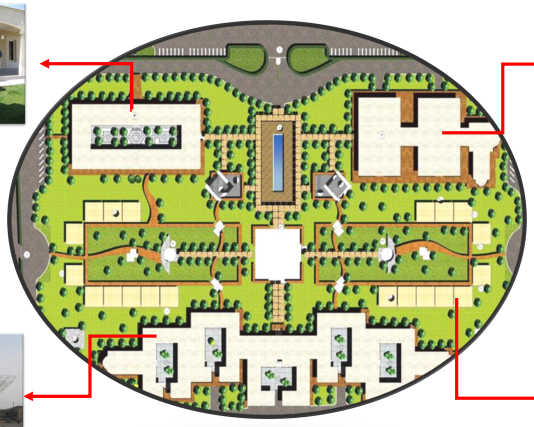
Participatory Design



- URBAN & ARCHITECTURAL PRINCIPLES
- SPECIAL BUILDING CODES

Building Materials Workshops





Building Materials Exhibition



Architectural patterns & building technology



BAM AFTER THE RECONSTRUCTION

RECONSTRUCTION OPERATIONS	
CREDIT AMOUNT (By Government & donors)	1.7 billion $
RESIDENTIAL UNITS	5.2 million m2
RECOVERED AGRICULTURE AREA	625 ha.
EDUCATIONAL BUILDINGS	194 units
GOVERNMENTAL BUILDINGS	81 units
RELIGIOUS BUILDINGS	52 units
HOSPITAL & HEALTH CENTER	35 units)20000 m2(





Background: From **28-30 September 2009, Typhoon Ketsana** hit Southern Laos causing some of the most severe damage from a natural disaster in living memory. Across **Sekong, Salavan, Attapeu, and Savannakhet** Provinces, widespread flooding was compounded by flash floods and landslides from heavy wind and rainfall, and rivers rose to 28 meters in some areas. With no early-warning or preparation, extensive damage to houses, food storages, water supplies, infrastructure, and livelihoods left an estimated **181,000** people at-risk and in need of immediate assistance.

マニヴァースヤヴォン
Manivanh Suyavong

Voices of Resilience: Lao Women in Community Based Humanitarian Response









As National Programme Manager at Oxfam Australia (in Laos), my team was deployed to Ta Oy and Samoui Districts in Salavan Province, and Kalum District in Sekong Province to provide urgent humanitarian assistance and community-based disaster management. Our primary goal was distributing rice, hygiene and kitchen kits, and temporary shelters.

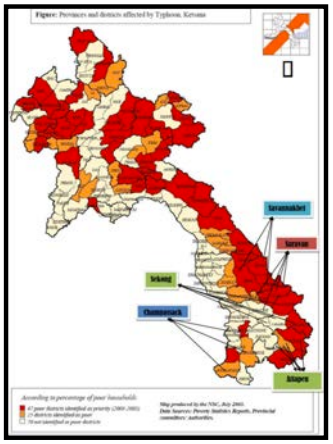
Our mission faced challenge after challenge as the diversity of ethnic groups created severe language barriers; logistical breakdowns left us with rice shortages; the remoteness of many villages meant some had to walk up to 5 days to reach areas inaccessible by truck or boat; and security obstacles from UXOs made coordination an uphill battle.

As the 10 year anniversary of Typhoon Ketsana approaches, I am reminded of two things. Firstly, the countless interactions I had with people who despite their suffering, were determined to survive and never hesitated to show their gratitude for our support. Secondly, I reflect on the lessons learned and acknowledge the achievements that came from devastation. The experiences I had during my time at Oxfam ignited my passion for grassroots development and lead me to my current position as Director of Gender Development Association. Since Typhoon Ketsana, the Government of Laos has taken great initiative to improve policies, mechanisms, procedures, and invested valuable resources to support programs for disaster preparedness, management, and response.



Our journey through recovery comes full circle; representing perseverance, growth and the bond shared by communities who overcome disaster







オンケシン
Ong Ke Shin

TALES OF FLOOD YOURS AND MINE

crowdsourcing flood stories through social media

Ong Ke Shin
PhD Candidate, Universiti Sains Malaysia
Fellow, Japan Foundation HANDs Program 2017/2018
keshinong@gmail.com

Background

Flood is the most destructive natural disaster in Malaysia. When flood strikes Penang, be it natural or man-made, precious lives are lost, families broken, infrastructure and personal assets are wasted. Despite its severity and the high possibility of reoccurrence of flooding due to the escalating climate change, awareness and preparedness of communities previously affected by flood remained lukewarm. Memories of flood faded, forgotten fleetingly, deliberately or subconsciously when traces of flooding were effaced.

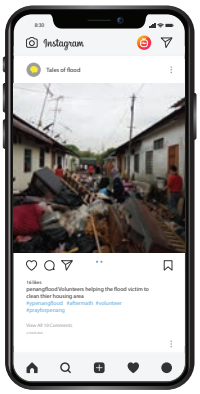
Objectives

This pilot project "Tales of flood, Yours and Mine" aims to

- explore the possibility of leveraging social media to recollect memories of the most severe flood in Penang, Malaysia that took place in 2017 via crowdsourcing
- to provide a virtual platform to engage the public in preserving, interpreting and reflecting and remembering on flooding
- better understand how public perceive flood.

Problem statement

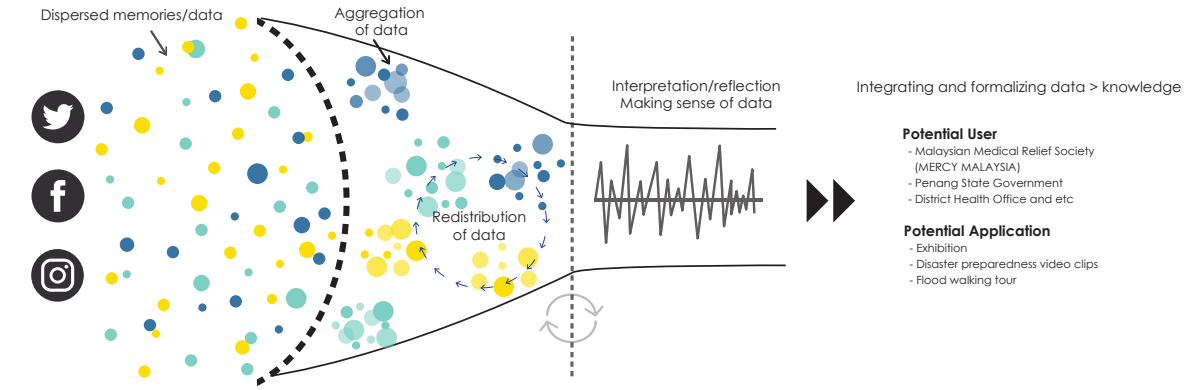
Growing interest in and active contribution on social media provide a new approach for flood victims and witnesses to record and construct disaster memory. The 2017 disastrous flood that occurred in Penang, Malaysia left tremendous traces and valuable records in social media, yet loads of these informal public generated data remain unstructured and dispersed, therefore underexplored.



Why Crowdsourcing

- "Process of leveraging public participation in or contributions to projects and activities." (Hedges & Dunn, 2018)
- Foster civic participation and discussion by engaging public that is not part of a formal institution
- Collect bottom up resources, amplifying citizen's voices.

Conceptual framework



Sources: Adapted from the crowd capital perspective (Prpić, Shukla, Kietzmann, & McCarthy, 2015)

Application of the framework to crowdsource flood memories in Penang, Malaysia

Constructing the crowd	Acquisition	Assimilation	Harnessing crowd capital
Who? • Social media user • Flood victims • Flood witnesses • Public Type of content • Photo • Video • Written narrative	**How?** • Invite and engage potential participant • Submit stories / photos through social media • Data mining • Interaction, exchange between participants • Identify emerging theme #tagging • Prompt to trigger response	**Then?** Making sense of the information • Value creation • Value capture • Curate, process and contextualize information • Periodizing emerging and interesting content	**How?** • Invite and engage potential participant • Submit stories / photos through social media • Data mining • Interaction, exchange between participants • Identify emerging theme # tagging • Prompt to trigger response

Challenges

The challenges faced executing this on-going pilot project is

- While the aim is to provide an inclusive platform for citizens to share their stories, relying on social media exclude non – social media users
- Users' information privacy concern limits participation and data collection
- Time consuming to create and maintain active crowd (Martí, Serrano-Estrada, & Nolasco-Cirugeda, 2019)

Acknowledgements

The author wishes to thank Universiti Sains Malaysia, The Japan Foundation Tokyo, The Japan Foundation Kuala Lumpur , Mercy Malaysia and Secretariat of TeLL-Net for supports rendered

References

Labour intensive to process, validate and interpret large volume of dataHedges, M., & Dunn, S. (2018). Introduction. Academic Crowdsourcing in the Humanities, 1–12. https://doi.org/10.1016/b978-0-08-100941-3.00001-2

Martí, P., Serrano-Estrada, L., & Nolasco-Cirugeda, A. (2019). Social Media data: Challenges, opportunities and limitations in urban studies. Computers, Environment and Urban Systems, 74(May 2018), 161–174. https://doi.org/10.1016/j.compenvurbsys.2018.11.001

Prpić, J., Shukla, P. P., Kietzmann, J. H., & McCarthy, I. P. (2015). How to work a crowd: Developing crowd capital through crowdsourcing. Business Horizons, 58(1), 77–85. https://doi.org/10.1016/j.bushor.2014.09.005

Cyclone Nargis: A First Hand Narrative of the Aftermath (Presented by Nyi Soe, Myanmar)

ニソエ
Nyi Soe

The Worst Natural Disaster in Myanmar

Myanmar is the largest country in mainland Southeast Asia with a total land area of 676,578 square kilometers and a population of 51.5 million. Its long coastline of about 2,000 km covers almost the entire coast of the Bay of Bengal. As a country prone to heavy rainfall, floods occur regularly during the mid-monsoon period (June to August) in areas traversed by the rivers.

On 2 and 3 May 2008, Cyclone Nargis, category 4 cyclone, swept in from the Bay of Bengal and made landfall in Myanmar's Yangon and Ayeyarwady Regions, resulting in large-scale loss of life and destruction of infrastructure, property and livelihoods. Approximately 140,000 people were killed or unaccounted for following the Cyclone. One third of the inhabitants of Ayeyarwady and Yangon Regions, 2.4 million people were affected. The Cyclone struck 37 townships, covering an area of 23,500 square kilometers, a landmass slightly smaller than the country of Haiti. Globally, Cyclone Nargis was the eighth deadliest cyclone ever recorded and it was by far the worst natural disaster in Myanmar's history. Strong winds and heavy rain caused the greatest damage in the Ayeyarwady Delta where a storm surge compounded the impact of the cyclone.

Cyclone Nargis had a substantial long-term impact on people's livelihoods and resulted in enormous physical losses, including the destruction of homes and critical infrastructure such as roads, jetties, fuel supplies, electricity and water and sanitation systems. A large proportion of water supplies were contaminated and food stocks were damaged or destroyed. The damage was most severe in the Delta region also known as the country's rice bowl, where the effects of extreme winds were compounded by a 3-4 metre storm surge, devastating most of the fertile areas and submerging countless villages. Cyclone Nargis caused devastation to the environment of the two regions where local livelihoods are heavily reliant on the natural resource base. It destroyed 38,000 hectres of natural and replanted mangroves, submerged over 63 percent of paddy fields and damaged 43 percent of fresh water ponds. Immediate action was required to address the basic humanitarian needs of the Nargis-affected population given the immensity of human suffering and the social and economic toll the disaster had on families and communities. An early recovery programme that could ensure that transition into medium and long-term recovery was an urgent need to focus on the restoration of livelihood, assets of the poor and essential services.



Source: ASEAN Secretariat

National Response and International Assistance

Though the National Disaster Preparedness Central Committee (NDPCC) was activated the next day and assigned rescue, relief and rehabilitation tasks to ministers and deputy ministers, the scale of the devastation quickly proved overwhelming and supply stocks existing within the country were limited and soon exhausted. In this context, it was vital that the international community be granted access to bring in relief for the Cyclone-affected communities. The government's reaction to the international assistance sparked confusion and it said that it would only accept bilateral aid and welcomed donations of cash and emergency aid but was not ready to receive search and rescue teams or journalists from foreign countries.



Coordinating Mechanism for International Aid

Amidst the chaos and confusion ASEAN took the lead in braking down the communication and trust barriers that were preventing the flow of aid and international relief workers into the country. The Secretary-General of ASEAN personally persuaded the leaders of Myanmar to permit the entry of relief workers in to the country to assist Cyclone survivors in the spirit of ASEAN Agreement on Disaster Management and Emergency Response (AADMER) so ASEAN-Emergency Rapid Assessment Team (ASEAN-ERAT) was permitted. He was then urged by the governments and organizations around the world to broker agreements with Myanmar to open up space for humanitarian assistance. As a result, the ASEAN led mechanism was agreed and the ***ASEAN Humanitarian Task Force (AHTF)*** was established. Aid and relief workers from international community as well as medical teams were allowed. After the establishment of ASEAN Task Force, ASEAN-UN International Pledging Conference attended by representatives from 51 countries was successfully held on 25 May.

Message on Cyclone Nargis and is aftermath

- The devastation of Cyclone Nargis was ***enormous***.
- Imagine the ***enormity*** of the Cyclone : killed 140,000 people and affected 2.4 million people.
- Estimated damage : US$ 4 billion
- Winds up to 215 km/h and 3.5meter storm surge which travelled 40 km up the 2 regions and the tide was like a monster.
- ***Unpreparedness*** & ***Negligence*** on the effective early warning system.
- Lessons learnt from this tragic experience : **must not underestimate the natural disasters.**
- One big challenge : ***Resilience from the people*** living in remote areas.
- ***Disaster awareness and DRR trainings*** : a "must" for areas prone to disasters.
- ***Updating early warning systems*** : vital in the struggle to prevent disasters and save lives.
- Blessing in disguise : A few years after Cyclone Nargis, 2010 General Elections: ***political change began to open Myanmar up to the outside world.***

HTF set up a Yangon based ***TCG (Tripartite Core Group composed of representatives from ASEAN, Myanmar and United Nations)*** as a working mechanism for coordinating, facilitating and monitoring the flow of international assistance to Myanmar. To support the ASEAN led coordinating mechanism, a Coordinating Office was established to work closely with representatives from the government and UN under the TCG. The first meeting of TCG agreed to conduct a Post-Nargis Joint Assessment (PONJA) to determine the full scale of the impact of Cyclone Nargis and requirements for both immediate humanitarian assistance needs and medium-to longer-term recovery. In early 2009, TCG launched the Post-Nargis Recovery and Preparedness Plan (PONREPP) to provide a platform for the transition from emergency relief and early recovery towards medium-term recovery. The TCG set 3 levels of coordinating mechanisms:

1) Recovery Forum: focused on strategy and policy with wide stakeholder membership;

2) Recovery Coordination Centre : technical coordinating unit at the operational level and aimed to exploit opportunities for enhanced coordination of funding;

3) Recovery Hub : coordinating unit at the field level both at township and village levels.

The TCG set out a three-year framework to guide recovery efforts following Cyclone Nargis provided a platform for transition from emergency relief and early recovery towards a medium-term recovery with three themes: productive lives, healthy lives and protected lives. commissioned a series of interim assessments refers to as Periodic Reviews to gauge the status of relief and recovery and revolving needs of the Cyclone affected population and could implement up to Periodic Review IV.

The TCG was successful in building trust and confidence in the post-Nargis humanitarian relief and recovery effort and facilitating cooperation between the Myanmar Government and the international community. The TCG has been lauded as an innovative example of a body that ASEAN and other regional associations around the world could replicate in response to future emergencies. The mandate of the AHTF and TCG were extended to the end of July 2010 by the ASEAN Summit and the ASEAN led coordinating mechanism completed on 31 July 2010.



Lessons Learnt

High-level government leadership is critical to the success of any disaster response especially in the case of large-scale disasters. Myanmar's high-level natural disaster coordinating body called the National Disaster Preparedness Central Committee was established in 2005 in accordance with the Hyogo Framework for Action. A key strength of the NDPC was that it was positioned at the highest level of government and its strong leadership helped ensure continuity throughout the recovery process and the smooth transition from one phase to another, from relief to early recovery, early to mid-term recovery and eventually to long-term development.

Post-Nargis experiences underline the need for any other ***countries to be prepared for disaster but also to possess the knowledge and skills to respond***. Methods and needs for assessing needs, damage and loss, community-based monitoring systems, aid tracking systems and all the other tolls and mechanisms required for post-disaster relief and recovery efforts ought to be readily available prior to disasters. Training for assessment teams should be conducted on a periodic basis and their capacity needs enhanced and supported so that they can be easily dispatched when the need arises.

Effective assessment and monitoring are vital to guiding the coordination and implementation of aid programmes and ensuring that relief and recovery efforts reflect the needs of the affected community. According to periodic reviews, the affected population must be active participants in surveys and results must be grounded in meaningful consultation. The initiatives were part of wider efforts to ensure that the post disaster relief and recovery programmes were people-centred and focus squarely on the needs of the affected communities.

The aftermath of disaster like Cyclone Nargis provided an entry point to integrate DRR (Disaster Risk Reduction) into relief and recovery programmes. Several studies have concluded that ***investing in DRR initiatives is more cost-effective than conducting post-disaster activities***. DRR is valuable because it encompasses a multi-hazard risk reduction approach to ensure sustainable development. The outcomes of implementing DRR in Nargis-affected areas: enhanced engagement by communities in DRR measures; improved capacity to disseminate and act on early warning; strengthened locally-adapted mitigation measures in vulnerable areas; integration of disaster mitigation into current recovery and reconstruction efforts; and improved preparedness, mitigation policies and response mechanisms among national and local institutions.

Cyclone Nargis made ASEAN to challenge its collective response to a major disaster in a Member State. The experiences helped ASEAN better understand the nature of humanitarian architecture after a major-scale disaster and how DRR initiatives can mitigate the impact of a disaster. It was the ***first time for ASEAN to work so closely with the United Nations at the operational level*** in the coordination of a joint humanitarian effort in response to on the worst natural disasters to strike the region in decades.

Applying the lessons from Cyclone Nargis requires ***recovery and development efforts to focus on the protection, restoration and enhancement of the environment in Nargis-affected areas,*** particularly forests, land and freshwater resources. Investing in sound environmental management can provide a more sustainable basis for livelihoods and food security and build resilience to future disasters and climate change.



Source: ASEAN Secretariat

Cyclone's impacts were exacerbated by earlier damage to the environment, including deforestation and degradation of mangroves, over-exploitation of natural resources such as fisheries, and soil erosion. The heavy loss of life as a result of the storm surge was primarily due to prior loss of about 75 percent of the original mangrove cover n the Delta which could have served as buffer against the storm surge.

Experiences from Cyclone Nargis clearly demonstrate ***the vicious circle in which pre-existing environmental degradation increased vulnerability, turning a natural hazard into a major disaster.*** The disaster resulted in in further environmental damage, jeopardizing the sustainability of livelihoods and ecosystem functions.

The areas of affected by Cyclone Nargis illustrated the interdependent linkages between the environment, livelihoods and disaster vulnerability. The driving forces of degradation in the Delta and Yangon Region are closely related to people's livelihoods and their natural resource management practices as well as the way in which government policies are implemented. Low input and unsustainable farming practice, lack of awareness and knowledge, deforestation and over-exploitation of forest resources, over harvesting of fisheries, weak land use planning, inadequate information on natural resources are the key factors for environmental degradation.

Last but not least, Cyclone Nargis provided opportunity to the Government of Myanmar which was a military regime in power for twenty years to have cooperation with international community not only with the regional associations and international organizations but also with donor countries especially the western world and a few years later, ***political change began to open Myanmar up to the outside world.*** In 2010 Myanmar citizens voted for their first elected leaders in two decades and the political opening pushed the country to collaborate with neighboring countries and international partners.

Struggle for Heritage Conservation:

Post 2015 Gorkha Earthquake Reconstruction of Ranipokhari in Kathmandu, Nepal

バルシャ シュレスタ
Barsha Shrestha

サンジャヤ ウプレティ
Sanjaya Uprety



Introduction/ Background

The devastating Gorkha earthquake-2015 in Nepal has affected about 2,900 structures with cultural, historical and religious heritage value. Among these, was the Ranipokhari (Queens Pond) built from 1664 to 1669 AD by King Pratap Malla to console his wife who was mourned by the untimely demise of their son. The originally iconic 'Sikhara-style' Hindu temple ('*Balgopaleshwor Mandir')* in the middle of the pond*, rebuilt in Gumbaz style after* the great Earthquake in 1934, was completely damaged during 2015 Gorkha quake. The popular myth is that the pond was constructed filling it with holy waters from 51 different holy pilgrimages of Nepal and India.



Ranipokhari Complex
(Source: Creative Commons, 2014)



Temple in Shikhara Style by Pratap Malla
(Source: Study Report of Ranipokhari Restoration, 2018)



Temple reconstructed by Jung Bahadur Rana
(Source: Study Report of Ranipokhari Restoration, 2018)



Ranipokhari before earthquake
(Source: Creative Commons, 2006)

Heritage Value

The pond is a testimony of the use of ancient knowledge of Malla-era archeology and water distribution system of medieval city of Kathmandu which is characterized by:

- Construction of several wells in pond bed for water supply, recharge and drainage with sand and black cotton soil, construction of dykes using traditional bricks (Ma Appa) in lime mortar
- The live heritage site serves as a melting pot of various cultures and religions in the Kathmandu valley; Bhai Tika (festival for brother), Chat Puja (worship to Sungod by Terai people)



During Chatth Festival
(Source: The Kathmandu Post, 2015)



During Bhaitika Festival
(Source: Creative Commons, 2010)

Civic /Community Protest



Ranipokhari after earthquake
(Source: Creative Commons, 2016)



Under-construction in 2016
(Source: Kantipur, 2016)



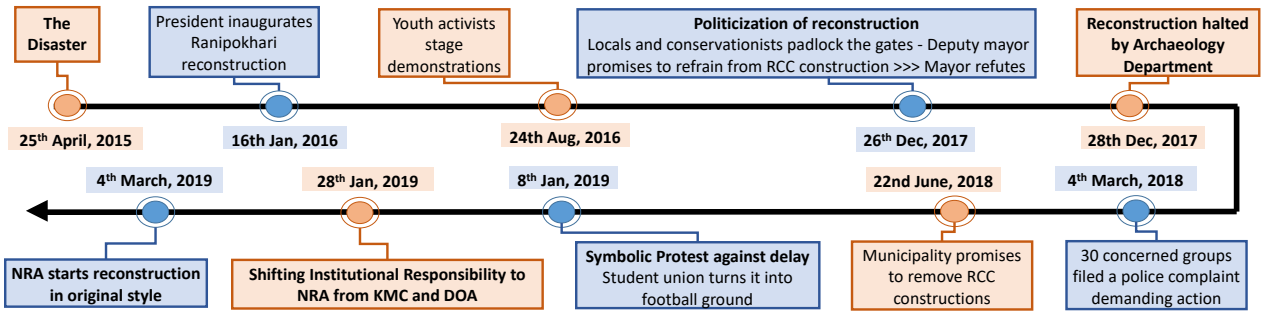
Use of bull dozer and excavator
(Source: The Himalayan Times, 2017)



Breaking gate in Mayor's presence
(Source: The Himalayan Times, 2017)

Heritage Risk

- Loss of traditional wisdom of water urbanism and cultural faith
- Planning to turn the pond complex into a commercial park using RCC construction of pond bed, dykes, temple
- Use of bulldozer and excavators for removing of debris-loss of traditional bricks 'ma appa'



Impact

Activists and conservationists united for authenticity in heritage reconstruction >>>> Activism led Government to change its reconstruction approach to authentic conservation of several other heritage sites in the valley

Lessons Learnt

Civic protests can be instrumental in bringing positive decision and policy changes to save heritage from mishandling of post-disaster reconstruction



Protest as football ground
(Source: The Himalayan Times, 2019)



Protest by gifting grass to Deputy Mayor
(Source: The Kathmandu Post, June 2018)



Protest by activists
(Source: Glocal Khabar, September 2016)



Reconstruction by the NRA
(Source: The Kathmandu Post, November 2019)









DOA- Department of Archaeology; KMC – Kathmandu Metropolitan City; NRA – National Reconstruction Authority

ルペシュ シュレスタ
Rupesh Shrestha

Living heritage of Patan -
rebuilding heritage inside Kathmandu valley

Submitted by:-
Mr. Rupesh Shrestha, B.Arch, M.Sc.
Affiliation: Kathmandu Valley Preservation Trust- Nepal
email: rupeshshrestha2005@gmail.com

Abstract

Monuments fall & monuments rise. That is a reality. It is also true that during the rise - wisdom, skills, memory come alive and contribute to something which can be truly remarkable.

Kathmandu Valley Preservation Trust (KVPT) is working in Nepal to reconstruct all the monuments of Patan Durbar Square dating between 15th to 18th century that was destroyed in the earthquake of 2015. No where else in Nepal can you find so many creative architects, engineers, craftsman & artists assembled and working as a team to preserve Patan's Genius loci/spirit of place, sensitivity, values & authenticity. The intangible aspect which creates this tangible heritage is often neglected & undocumented. New wisdom is being created in Nepal. It comes from process, practice and syncretism of centuries-old philosophies, religious and cultural values.

Real heroes - the newar craftsmen

Newar craftsman who are indigineous people of Kathmandu valley are creating unique items from materials like brick, timber, stones and metal. Heritage of Patan are not just temples and monasteries but also the craftsmen with their extra ordinary skills - which they didnt acquire by studying in a vocational school or taking course in a training institute. Most craftsmen working here is able to do his/her work, by copying & looking up to his father, who was doing this same work. Again his father learned it from his grandfather. This skill dates back to many generations. The craftsmen are also - **living heritage of Patan.**

Knowledge revival and transfer

- Although 2015 earthquake was a calamity, it has also given an opportunity to revive the craftsmen's skills & livelihood.
- Gender stereotype is decreasing and females are increasing taking part in reconstruction and in some cases learning the crafts which traditionally only men were doing
- The concept of Build Back Better and Safer is being translated into the construction sites

Rebuilding with community



This is an ancient 200 years old community building & rest house called Om Bahal sattal located in Patan city. This building was heavily damaged after 2015 earthquake in Nepal. Date:- May 13 2019



Community of Om Bahal is rebuilding its heritage with support from Nepal Government and technical support from KVPT. Newar craftsmen & community play a pivotal role in rebuilding. Date:- July 28 2019

- Young generation are enthusiastic about heritage & culture.
- There is a lack of skilled manpower which also means knowledge transfer is ongoing to create skilled manpower to continue rebuilding works. Young craftsmen are being trained & they can practice their new skills in coordination with the skilled craftsman.

Message

There are dialogues, constructions, modifications, preservation and strengthening ongoing – right at this moment. There is a strong message from Nepal that heritage preservation does not mean fencing or protecting the ruins rather it means modification and preservation so that people can touch the monuments, live, roam or worship inside. Patan is a living city. It has multi-layered urban environment with inherent culture and values which feeds into the preservation of tangible heritage.





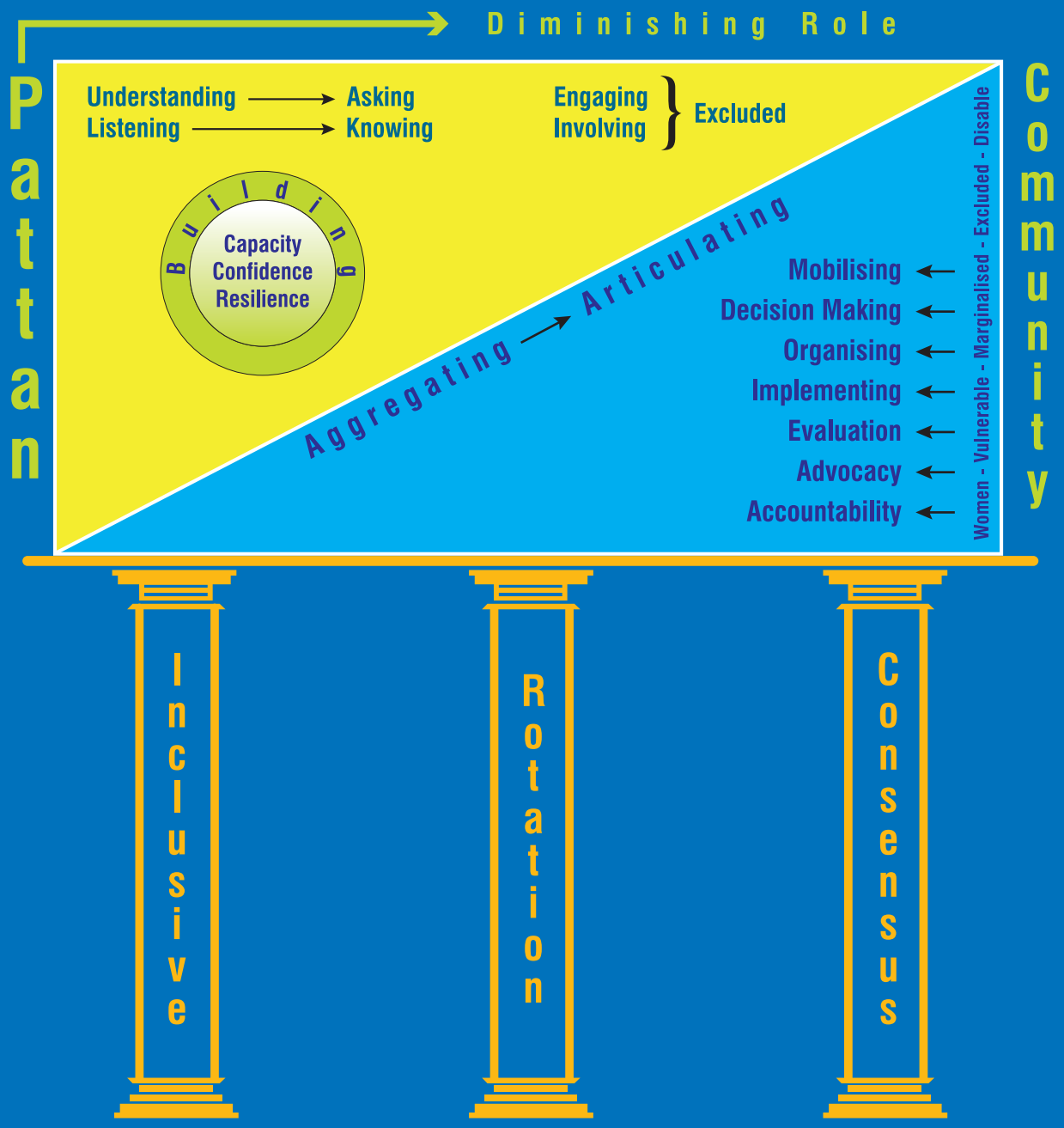






サルワルバリ
Sarwar Bari

Building Local Resilience Through Democratisation



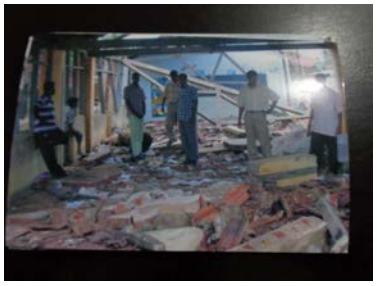
House 5, St.58, F-10/3, Islamabad, Pakistan. Email: info@pattan.org www.pattan.org

サジャ マジード
Saja Majeed

Disaster survivor to disaster researcher

The story of Saja from 2004 Tsunami response worker to 2019 PhD in disaster resilience

2004 Tsunami in the East coast of Sri Lanka





2005-06 Tsunami Response

2006-10 Humanitarian crisis in the middle of Tsunami recovery





2010-13 Post-war recovery and rehabilitation





2013-16 Teaching/Research on disaster risk reduction

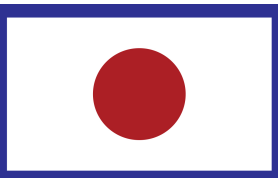




2016-19 PhD studies on building community resilience to disasters

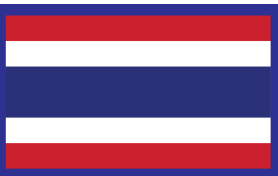






ラチャニーコーン ソンティップ
Ratchaneekorn Thongthip

INTERNATIONAL TSUNAMI MUSEUM
KHAOLAK.THAILAND



Tsunami storytelling from a museum
The 15th memorial and friendship between Japan and Thailand
津波博物館による語り継ぎ: 15周年記念及び日タイの友情







On 26 December 2004, Thailand was hit by the greatest natural disaster in its history. A massive earthquake measuring magnitude 9.3 occurred off the west coast of Northern Sumatra, creating giant tsunami waves that devastated the shores of 14 countries around the Indian Ocean. The waves ravaged the Andaman Coast of Thailand causing unprecedented death and destruction in six coastal provinces. Tsunami museums in Thailand operating in two sites in Phang-Nga Province the most affected area in Thailand. The International Tsunami Museum and Tsunami Memorial Museum were formed by student leaders who were strongly committed to social work supporting tsunami-related events. Opening its doors in 2006, the museum's purpose is to increase awareness about tsunamis and other natural hazards. The Institute for Education and Culture, a non-profit organization operates the International Tsunami Museum and Tsunami Memorial Museum, which have recognized for its outstanding social contributions at the province level. The Institute for Education and Culture was awarded by the board of National Social Welfare and the Ministry of Social Development and Human Security as well as the National Council on Social Welfare of Thailand.

Open daily during 9:00-21:00 all year round, both museums receive no direct funding from other organizations. The museum management is administered by a committee comprised of a number of academic lectures and the Director Ms. Ratchaneekorn Thongthip. Small personal contributions allowed the hiring of an officer to take care of the museum. Most generously, entrance to the museum is entirely free for the local residents, children and school, and donation are used for supporting the local children.
The museum shows the exhibits which include animations and videos of the cause of tsunami, tsunami warning sign, the impact of the tsunami on the environment, tsunami survivor stories, early warning systems , sand sheets of Phra Thong Island providing tangible evidence that the 2004 tsunami was not the first of its kind. The visitor of the museums include ambassadors, international university study tours and notable celebrities.



By an introduction of Japan Embassy in Thailand, JICA invited the museum director to attend the World Tsunami Museum Conference in 2017 which the museum director got chance to meet Assoc. Prof. Anawat Suppasri, International Research Institute of Disaster Science at Tohoku University. He keeps supporting the technical assistance and is now one of the museum advisors. In 2019, the museum starts the Disaster Tour to show the knowledge and information about the tsunami, travel to the tsunami affected area, storytelling, telling live lessons and geopark. The Role of the Tsunami Museums as centers for knowledge transmission, passing-on the memories and prepare for the future.







Ms. Ratchaneekorn Thongthip
Director, International Tsunami Museum
Director, Tsunami Memorial Museum
Received B.Ed. and M.A. in Political Science from Chulalongkorn University, and B.A. in Political Science, Ramkhamhaeng University.
Working as Director of International Tsunami Museum and Director of Tsunami Memorial Museum, Phang-nga Province since 2006.
Also working as President of Institute for Education and Culture (NPO).

International Tsunami Museum, Khaolak, THAILAND
Address: 9/60 Moo 6, Khukkhak, Takuapa, Phang-nga 82220
E-mail: director@InternationalTsunamiMuseum.org
Ratchaneekorn.Thongthip@gmail.com
Website: www.InternationalTsunamiMuseum.org
Phone: (+66)081 442 5660

マーレーン　ムリー
Marlene Murray

SHARING STORIES

How the Pacific Tsunami Museum Keeps Tsunami Memories Alive

Tsunamis have killed more people in the State of Hawai'i than all other natural disasters combined. Tsunamis are a fact of life in Hawai'i, especially in Hilo, which has suffered more damage and loss of life than any other area of the islands. From 1900 to 1964, a tsunami with runup exceeding one meter occurred an average of once every five years. On April 1, 1946 and May 23, 1960, Hilo experienced devastating tsunamis that completely reshaped the social and economic structure of the community.

In recent years, Hawai'i has experienced enormous growth in both resident and visitor populations, with extensive development in potential inundation areas. During this same time period very little destructive tsunami activity has occurred. Consequently, generations of people have grown up without experiencing a major tsunami. Less than half our resident population and few visitors to Hawai'i have had any experience with tsunami hazards. Aging tsunami survivors, many of whom still reside within the State, are passing on. These tsunami survivors have invaluable stories to tell that can help document the cultural history and socio-economic development of Hawai'i. In the Hawaiian Islands, natural disasters, especially tsunamis, have played a significant role in determining where people live and conduct business. Currently, few tsunami education programs reach the general public or Hawai'i's school children.

DEADLY TSUNAMIS TO STRIKE HAWAI'I ISLAND IN HISTORIC TIMES

YEAR	SOURCE	AREAS IMPACTED	DEATHS	WAVE HEIGHTS (METERS)
1837	Chile	Hilo	14	20
1868	Hawaii	Kau	46	20
1877	Chile	Hilo	5	5
1923	Kamchatka	Hilo	1	6
1946	Aleutians	Hilo	96	10
		Rest of Hawaiian Islands	63	17
1960	Chile	Hilo	61	11
1975	Hawaii	Halape	2	8



Men running as third wave in 1946 tsunami crashed ashore near Kamehameha Avenue and Ponahawai Street in downtown Hilo.
Image from the Cecilio Licos Collection, Pacific Tsunami Museum



In response to the need for tsunami education in Hawaii, the Pacific Tsunami Museum was incorporated in 1994 and has provided that service to thousands of residents and visitors for the last 25 years.

KEY QUESTIONS
THAT DRIVE THE MISSION OF THE MUSEUM

- How do we learn from the disaster experience?
- How do we tell the stories?
- How do we honor those who have lost their lives?
- How do we remind people of the danger that exists?
- How do we prepare people for the next event?

OUR MISSION

- Through education and awareness, we believe that no one should die due to a tsunami.
- The goals of the Museum are to promote public tsunami education and to preserve history.
- The Museum serves as a living memorial to those who lost their lives in past tsunami events.

HOW WE ACHIEVE OUR MISSION

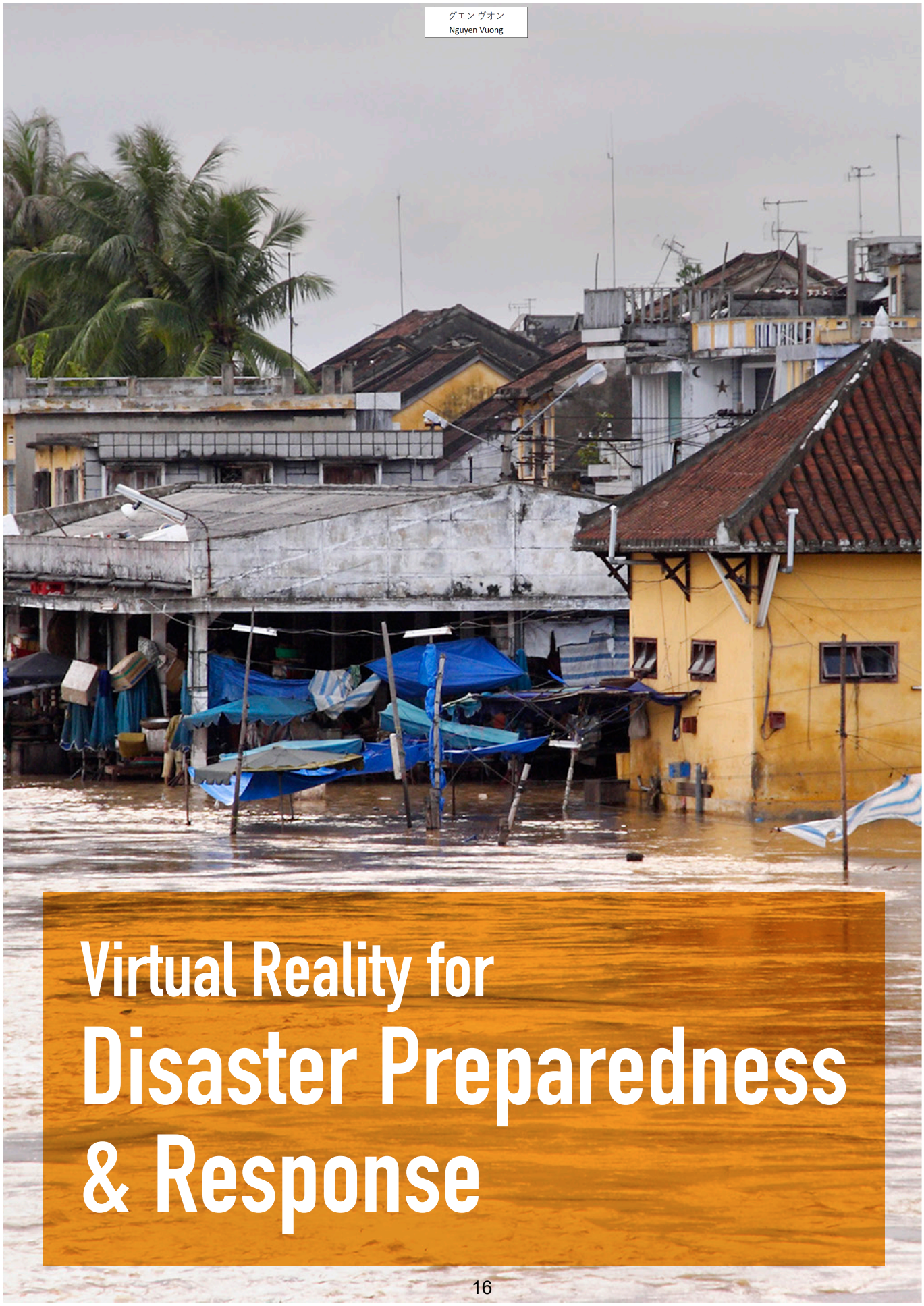
- Collection, preservation and dissemination of powerful materials.
- Museum Displays — Photos, Stories, Science
- Outreach — Tsunami Awareness Month, Workshops and Lectures, School Groups, Documentaries, News Outlets
- School Curriculum and Preparedness
- Scientific Research
- Support Emergency Management Agencies

"Experts agree, it is not a matter of *if*, but *when* the next tsunami will strike again."



CHALLENGES

- It is increasingly more difficult to collect tsunami survivor stories in Hawai'i since many are passing on.
- Some survivors find that talking about the experience is just too painful.
- Some people choose not to come to the museum because they believe that tsunamis are depressing.
- There is a general feeling of complacency since a major tsunami has not affected the Hawaiian Islands in 60 years.



Virtual Reality for Disaster Preparedness & Response

丸林祐子
Yuko Marubayashi

Recipes for the Dead

An Attempt at Integrating Japanese Death Culture and Acts of Testimony

Some records of written testimonies of families of the deceased of the 1995 Hanshin-Awaji earthquake show that these family members contemplate the dead by means of sharing meals. These particular personal acts in the domestic space derive from internalized rituals of communicating with the dead via food. My research will be able to present how food embodies testimony of the dead.

I consider practices of performance such as workshops, creating memorials, holding rituals, etc. as alternative expressions that further revitalize the relation between a family and their lost loved one. This concept of an act as testimony is clearly embodied by the practice of preparing and offering drink, food, and meals prepared for the dead in Japan, that is called *shisha-kuyo.*



Slice thinly ginger and *myoga*, and add the to the rice



Add sesame seeds and gently mix all ingredients well, cooling temperature down by using a fan



Inari Sushi, inspired by image of late daughter



Yuri Nakakita



Put a damp towel on rice while setting aside, to prevent rice getting dry and hard



Steam mushrooms for a few minutes



Cook white rice with two table spoons of black rice



Add vinegar to rice



Season steamed mushrooms with *dashi*/soy sauce



Cook deep-fried tofu with sugar, *mirin*, sake, soy sauce until tofu absorbs all liquid



Boil some shrimps for a few minutes



Get rid of remaining liquid from shrimps using a tea towel



Gently place rice ball inside tofu



Decorate with shrimp, mushroom, and bean



Peel skin off the black beans



All ingredients are ready



The on-going relationship between Yuri Nakakita, Tomiyo Nakakita, Koh Nakakita is embodied by the recipe for the late daughter. This aesthetic experiment is not specifically about memory of her but an example of a transformed way of expressing their testimony of loss.



Make small rice balls



Gently place each rice ball within a pocket of deep-fried tofu



Yuri Nakakita in her cradle

2020 International Forum on Telling Live Lessons from Disasters

伊藤駿 / 中丸和
Shun Ito / Nagomi Nakamaru

語り継ぎの担い手育成のため 学生向けプロジェクトベースドラーニング

Project Based Learning for Training Youth to Tell History of Disasters

伊藤　駿　Shun　ITO　（OSAKA University / ROJE）
中丸　和　Nagomi NAKAMARU　（KYOTO University / ROJE）

BACKGROUNDS／背景と目的

これまで日本では多くの災害が発生し、語り部やミュージアムの活動などによってその伝承が行われてきた。しかしながら、記憶に新しい限りで災害が発生していない地域においては特に、なかなか災害が「自分ごと」になりにくく、災害が発生していない地域においては特に、災害が発生した際の対応が遅れたり、適切な防災・減災が行われていなかったりすることがある。東京や京都に事務所を置く弊団体も、大学生を中心に被災地支援や防災教育の活動を行なっているが、被災した方のお話を伺うだけではどうしても他人ごとという感覚が抜けきらない学生も見られた。阪神淡路大震災を直接体験し、自分ごととして語り継ぐことができる方が減っていく中、語り継ぎを次世代にまで行なっていくには、次世代を担っていく若者たちが災害を自分ごととして捉え、それを伝えていく必要があると考える。このようなことから、未災地の大学生を主なターゲットとして、次世代に震災を語り継ぎ、それを自分ごととしてさらに次世代へと伝えていくことを目的とした活動をしている。以下ではその活動の紹介を行う。

Nowadays, we are facing risk of disasters including earthquake, heavy rain and typhoon. Although people working for gathering attention to disaster management and transmission of experiences of disaster, people those who do not have experiences as victims of disaster cannot have relevance for disaster management. In our organization which is located in Kyoto and Tokyo, students who are working as volunteer also cannot have relevance to disaster. Then, we launch the project which aims to transmit the memory of disaster and make relevance to disaster in future. In this presentation, we introduce our work and result of transformation of students' mind to disaster management.

METHODS／方法

特に教員志望や教育に関心がある大学生を対象に、被災地におけるプロジェクトベースドラーニングを行う。プロジェクトベースドラーニングの内容としては以下の通りである。

In the project, we focus on students who would like to be a teacher because they will have opportunity to transmit the memory of disaster to their pupils in classroom. Method of this project is "Project-Based Learning", which students are learning from the following process.

1）被災地におけるフィールドワーク

Fieldwork for finding the problem of the area.

まずは被災地を訪問し、現地の方にインタビューをしたりミュージアムを訪問したりして震災について学生が学ぶ。また、その中で被災地の今の課題を学生に見つけてもらう。

We start finding the problem by observation museum and interviewing with people who live in the area.



岩手県大槌町にてフィールドワークを行なったときの様子。

2）被災地での課題について解決方法を考える

Considering solutions for the problem.

フィールドワークを通して見つけた課題についてグループに分かれて自分たちができることを考える。

We discussion what problem we focus on and making solutions for the problem.



3）考えた課題解決の方策を実施

Carrying out the solutions.

グループごとに考えた課題解決方策を実施する。



We are carrying out the solutions for the target and problem we found.

大学や関西について知れる子ども向けイベントを開催。
Ex) We made activity for pupils to know about university.

4）大学生が震災・防災についての研究会・イベント開催

Distribution through sharing students' experiences in this project to people in outside of disaster area.

被災地における課題解決学習を通して学んだことを、今度は自らの言葉で周囲の人々に伝えていく研究会やイベントを行う。

We distribute our experiences for people in outside of disaster area.



この活動を通して、まずは学生が震災について知った後、被災地の課題の解決方策を考える中で、震災が他人ごとから自分ごとになるとともに、震災支援にも繋がる。また、教育に関心のある大学生が震災を伝承されるだけでなく、プロジェクトベースドラーニングを通して学んだことを研究会やイベント、教育現場にて自らの言葉で伝承する立場になることでさらに次の世代までも伝承が可能になると考えられる。

As a result of the project, youth people are working for participation to the community on their own initiative.

Conclusion／結果

以上の活動は、被災地を訪問し、現地の方のお話を伺ったり、ミュージアムを観覧するのみよりも、学生の中で震災支援や防災活動に対する主体性が向上した。

In comparison with other method of learning, such as observation, conducting interview to people those who live in the disaster area, students feel their self-efficacy. For future project, we are conducting self-evaluation of students fulfillness in this project.

朝廣和夫
Kazuo Asahiro

Support for Farmland Restoration through Mutual Assistance after Disasters

Dr. Kazuo Asahiro
Department of Environmental Design, Faculty of Design, Kushu University, Japan

Introduction.

Today's topic is the conservation of agricultural mountain villages, especially, relationship between tourism in normal time and agricultural volunteer activities in disaster time . The activities of agricultural volunteers had been developed in the recent disasters in Northern parts of Kyushu. I'll introduce it and future issues.

Phase of depopulation in countryside.

In recent years, depopulation and aging are being got progress in mountain villages so that the harsh agricultural and forestry production and urbanization. On the other hand, these area, which extend for nearly 70% of Japan, plays an important role in supporting not only natural scenery but also agriculture, forestry, and cultural landscape conservation.

Disaster and difficulties in countryside.

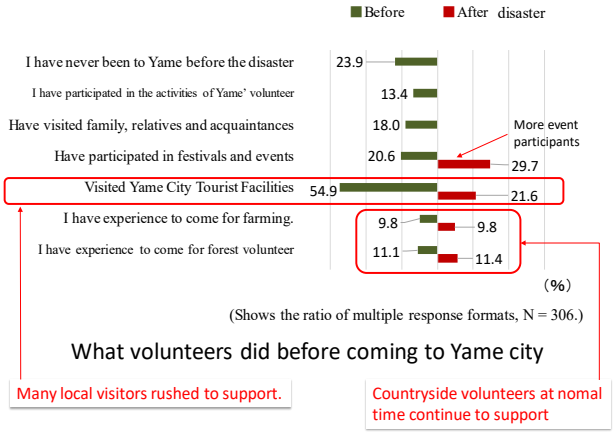
Northern Kyushu have been suffered severe disasters such as the heavy rains in July 2012, 2017 and the Kumamoto earthquake in 2016 too. In some areas, it was said that the depopulation got progress for 10 years by disaster happened.

What issues occurred after disaster ?

Farmer in rural had not only being affected damage of crops and agricultural facilities, but also affected daily food and health. If you saw a landscape that have severely damaged, you would had been felt like giving up, and mental damage such as loss of self-confidence. In generally, disaster volunteers have been not dispatched to agricultural support because it regard as the support for profitable businesses. Some say it is against the volunteer spirits. Agriculture is a profitable business. However, it preserves the farmer's life, health and natural environment. If we want to maintain a sustainable and diverse farming and mountain village in the future, we need to have more involvement of volunteers after disaster.

What sorts of people joint to volunteer? Kyeword is "tourism" before disaster.

A questionnaire was sent to participants of agricultural volunteers at the NPO Sansonjyuku（山村塾）, which had carried out in 2012's flood disaster.



Stood up volunteer in these region.


Removal of sediment from waterways in Kurogi, Yame city, Fukuoka in 2012' flood disaster.


Removal of sediment from waterways in Yase, Mifunemachi, Kumamoto in 2016' earthquake .


Rice harvesting at side of flooded river in Kurogawa, Asakura city, Fukuoka in 2017.


Potato management support in Nishihara, Kumamoto in 2016' earthquake .


Soil removal at Kaki orchard in Asakura city, Fukuoka in 2017' flood disaster site.

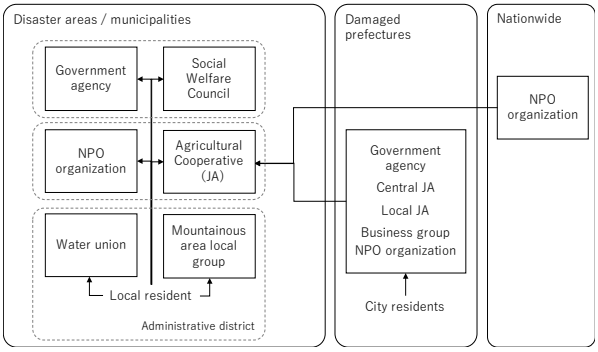

Pebble removal of terraced rice paddy in Kurogi, Yame city, Fukuoka in 2012' flood disaster.


Pebble removal of tea garden in Kurogi, Yame city, Fukuoka in 2012' flood disaster.


Green house cleanup in Kurogi, Yame city, Fukuoka in 2012' flood disaster.

Future task for more empowerment.

Future issues are the systematization of agricultural volunteers and human resource development. Currently, Fukuoka Prefecture has started the manual publishment and the coordinator training seminar to establish an agricultural volunteer center at the Agricultural Cooperative (JA) when disaster happened in the future.



Kumamoto Earthquake Experience Project (KEEP)

アンドゥルーミッチェル
Andrew Mitchell

Introduction

- In April 2016, Kumamoto Prefecture in Kyushu, Japan, suffered two major earthquakes. Many foreign residents found their lives tough, especially who could not speak Japanese and struggled to get help and information.
- The Kumamoto Earthquake Experience Project (KEEP) was started in May 2016 with the support of Kumamoto University, by Kumamoto University students. Our initial ambition was to hold a single workshop to allow both Japanese and foreign residents to share their earthquake experience
- The feedback from our first event in Jul 2016 was so positive we decided to carry on our activities and keep the voice of the foreign experience of the earthquakes alive.

Our Aim

- Spread the message of the foreign residents who experienced the earthquakes to people so that they can learn and better prepare
- Help with the creation of better disaster policy for foreigners
- Help Japan to become a more multicultural country



Voices from the disaster

... No sooner had I found a place and laid down, the second earthquake began – the main shock. The basketball hoops were moving so strongly that I thought they were going to be torn off and fall on people. Then the lights went out and all was dark. !!!
... My Skype was always on. My parents went so worried that my mom even didn't go to work in order to be able to be in touch with me all day long.
... During my stay at my apartment for my own safety, I wore a helmet which I got from a friend. I didn't take it off even while sleeping.
... In 2011, during the Tohoku Pacific Ocean Earthquake at Tokyo, I was living in a dormitory for foreign students. We were young, inexperienced and lost, not knowing what to do. And actually we did nothing. Just gathered together in one room and followed the news. Comparing my behavior back then and now, I can proudly say that I have grown a lot, and partially it is thanks to Japanese people.
...



Mariam Piruzyan
Doctoral Student
Department of Molecular Medicine
Graduate School of Pharmaceutical Sciences
Kumamoto University

.... I summoned courage after a while and tried getting the server rack out of my way so I could open the door and get out of the room. My laboratory room is on the 7th floor and I was horrified at the extent of damage the building had suffered as I made my way out of the building via the stairs as the elevators had stopped working.



Bilkisu Mohammad-Bello
Doctoral Student
Computer Science and Electrical Engineering
Kumamoto University

....Within one month of my arrival in Japan, I had to pass through a lot of difficult situations. Still now it seems to me a nightmare whenever I remember it. Beside these events, I would like to mention about the help of well hearted Japanese people and the tremendous helps from my Bangladeshi fellows ....



Fatema Akter
Doctoral student
Department of Medical Biochemistry
Faculty of Life Sciences
Kumamoto University.

Current members



Andrew Mitchell
(United Kingdom)



Francis Wargirai
(Papua New Guinea)



Luis Francisco Japa Soto
(Dominican Republic)

Media appearances

- KEEP have appeared on Kumamoto TV and radio shows since 2016
- Received an award from the Kumanich Shimbun in 2017 for keeping the voice of the foreign residents alive
- KEEP has been featured on NHK twice this year: once on TV with Andrew Mitchell discussing his earthquake experience, and once on NHK radio with all members discussing their unique experiences and challenges from the earthquake
- You can see KEEP's KKT interview online at tiny.cc/kumakeep



Some of KEEP's Activities

- Grand Challenges Workshop, Kumamoto (Jul 2016)
- The Council of Local Authorities for International Relations (Jan 2017)
- Kagoshima University (Feb 2018)
- Kobe disaster forum and Life in a Evacuation Shelter event, Kobe
- Sophia University, Tokyo International Communication Committee (Nov 2018)
- Sociological Society of West Japan Annual Meeting, Saga (May 2019)
- Saga University (Nov 2019)
- Many of Kumamoto International Foundation events (2016 - now)















KEEP LOGO

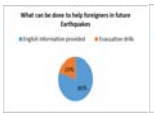
- The castle represents the damage and suffering of those in Kumamoto
- Two helping hands in different colours represents the local and international communities, together embracing Kumamoto with care and love, forming a heart
- With our motto – Let's Keep Together !!!

KEEP Official Booklet

- In 2016 KEEP conducted a questionnaire survey, focus groups and 1-1 interviews, as well as collecting essays, in order to better understand the needs of foreigners during emergencies
- We published these results in our KEEP booklet, along with information about and photos of the disaster
- The booklet is free to download at tinyurl.com/KEEPBo









Social Media and Web Presence

facebook.com/kumadaiquake



- KEEP's Facebook page is the main way which KEEP shares information about it's activities and information related to disaster prevention. Through our page we have made contact with many people from across the world.

kumadaiquake.wordpress.com



- We also launched a WordPress site which contains shared experience stories, photos, and all the activities of the project.
- This site is no longer updated but contains a lot of information, essays, etc. from our activities between 2016-17

Future Activities



We are currently conducting research into the Islamic experience of the Kumamoto earthquakes; how they came together as a community and some of the problems they faced in interacting with the Japanese community.



KEEP are key organising members for the The National Solidarity Forum with Migrants Japan (NSFMJ), which will be held in Kumamoto in 2020



Despite being a volunteer project, we are still working hard to collect more experiences and to spread these across Japan.

Words from KEEP

- We have two mottos at KEEP: "Let's KEEP together!" and "We can't predict, we can't prevent, but we can prepare"
- By preparing for disasters together, and by working together as one community when they happen, we can all live much safer and richer lives

Words from KEEP's members



- "Everybody told me that Kumamoto doesn't have natural disasters so I didn't make any preparations"
- "Preparation is very important. If you're prepared you won't panic, and that might save your life and the lives of those you love."



- "By working together with my neighborhood, I felt relieved and safe being part of a community."
- "Most of the information I couldn`t understand from the media, I got from talking with my neighbours."



- "The signs on the street and the information on the news were hard to understand for most foreigners."
- "Foreign residents should learn some Japanese so that they can communicate in yasashii Nihongo during a disaster"

HIROSHIMA UNIVERSITY

川崎梨江 / 匹田篤
Rie Kawasaki / Atsushi Hikita

2020 INTERNATIONAL FORUM ON TELLING LIVE LESSONS FROM DISASTERS

Study of Survivors' Storytelling about Sediment Disaster in Hiroshima, 2014

Rie KAWASAKI, Atsushi HIKITA

HIROSHIMA UNIVERSITY Graduate School of Integrated Arts and Sciences

Introduction & Method

In this study, we focused on "personalization" of disaster experience and examines how to use the storytelling of survivor for future disaster prevention. Experiences and memories are usually weathered with time. However, they interpreted with personal context are remembered for a long time. In contract, even if people suffer the same disaster, personal experience and memories tend to remain over time.



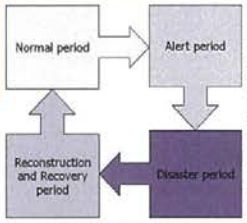
This photo is the sediment disaster caused by heavy rain that occurred in Hiroshima City on August 20, 2014. (taken by a survivor)

Human Damege

Ward	District	Dead	Injured
Asaminami	Yagi	53	53
	Midorii	16	
	Yamamoto	2	
Asakita	Miiri	1	15
	Kabe, Kabehigashi	5	
	obayashi	0	
total		77	68

Hiroshima Prefecture Civil Engineering Bureau Erosion Control Division, (2015), *Occurs on August 20, 2014, 8.20 Earth and sand disaster*

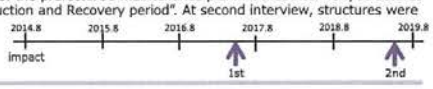
We interviewed 19 survivors living in the Yagi and Midorii districts of Asaminami Ward, the most damaged area.



Created baced on Mitsuaki Okamoto, (2011), *Characteristic changes and problems in media disaster reporting in the Great East Japan Earthquake*, Reference, National Diet Library Survey and Legislation Examination Bureau

	1st interviews	2nd interview	male / female	Age of disaster	Damage to housing
a	12th Jan. 2017	11th Jul. 2019	male	60s	Inundation above floor level
b	19th Jan. 2017	10th Jul. 2019	female	50s	Inundation above floor level
c	20th Jan. 2017	13th Jul. 2019	male	60s	Inundation above floor level
d			female	60s	
e	5th Feb. 2017	18th Aug. 2019	male	30s	half collapse
f			female	30s	
g			female	30s	
h	5th Feb. 2017	19th Aug. 2019	male	60s	half collapse
i			female	60s	
j	5th Mar. 2017	20th Jul. 2019	female	20s	inundation below floor level
k	21th Mar. 2017	18th Jul. 2019	female	80s	large scale destruction
l	17th Apr. 2017	28th Jul. 2019	female	50s	complete collapse
m	21th Apr. 2017	9th Jul. 2019	female	50s	large scale destruction
n	21th Apr. 2017	9th Jul. 2019	female	20s	large scale destruction
o	22th Apr. 2017	14th Jul. 2019	female	60s	inundation above floor level
p	24th Apr. 2017	18th Jul. 2019	female	50s	half collapse
q	27th Apr. 2017	11th Jul. 2019	female	50s	large scale destruction
r	28th Apr. 2017	18th Jul. 2019	female	50s	× (Lifeline damage only)
s	15th May 2017	9th Jul. 2019	male	60s	large scale destruction

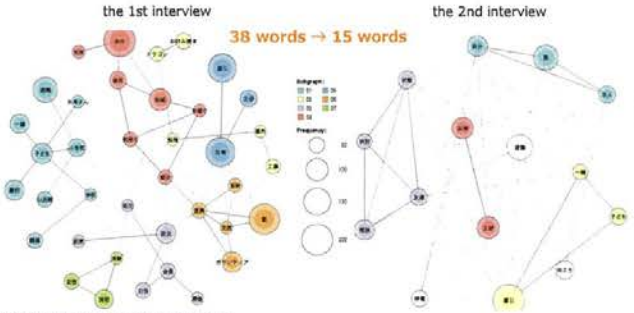
We interviewed survivors twice. The first is the in third year and the second it the fifth year after disaster. These two periods were set based on the location of the prefecture's maintenance plan. At first interview, structures were under maintenance, so it is "Reconstruction and Recovery period". At second interview, structures were after maintenance, so it is "Normal period".



Results

We text mined the contents the 1st and 2nd interviews respectively.

Co-occurrence networks based on text analysis of two interviews



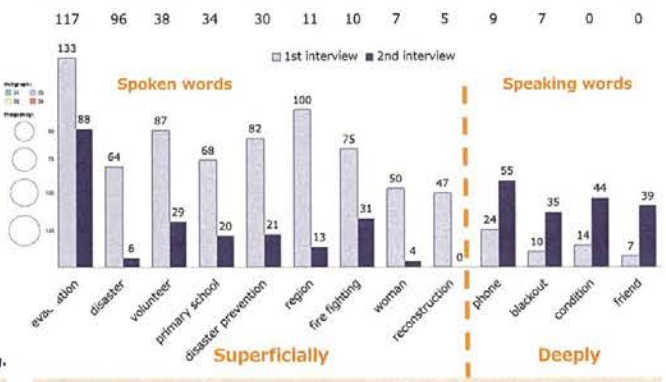
Change from the 1st to the 2nd

1. **The number of common words is less than half.**
2. **The number of superficial words that are easy to share is decreasing or disappearing.**

The content analysis of the two these interviews with the survivors provided results that supported this theory. In the second interview, personalized experiences began to talk about personalized experiences and feelings that they only know. However, they no longer talked a little about the superficial memories that are easy to share.

Superficial words may appear frequently in newspaper. We compared the words used in the titles of newspaper articles with fewer or missing words from 1st interview to the 2nd.

number of titles in Chugoku(local) newspaper articles from August 20th to September 19th, 2014



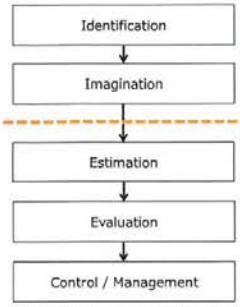
As a result of analyzing the titles of newspapers, we confirmed that the words frequently mentioned in newspaper articles tend not to be spoken in 2nd interview. We consider these words are superficial expressions as "spoken words". On the other hand, we consider the words that increased in 2nd interview are deep and personalized expressions as "speaking words.

Discussion

When a miserable event occurs, people seek out the narratives of the person who actually experienced the event. They tend to talk about superficial experiences and memories as shared by the audience. They then increase their chances of recalling the more easily shared superficial memories. As a result, they are less likely to talk about personalized experiences because the more easily shared surficial memories are recalled. There are two challenges.

1. If people who are not disaster survivors want to know the superficial experience and information, survivors don't necessarily have to talk..

Citizen's risk recognition process



Takashi Kusumi, (2006), *Citizens' risk recognition process*, Risk encyclopedia Augmented edition, Hankyu Communications

【Identification】 Awareness of the existence of risks.

【Imagination】 Form an image of risks. There are two types of images. 1) seriousness / fear, 2) unknown

Identification and Imagination are formed by providing information in one direction, such as mass media. The story of survivors also provides one-way information.

【Estimation】 The experts calculates based on the probability of occurrence based on past statistical. On the other hand, citizens make intuitive judgments using heuristics.

【Evaluation】 Assessing whether citizens can accept risks. They weigh the benefits that can be obtained and the risks that may occur.

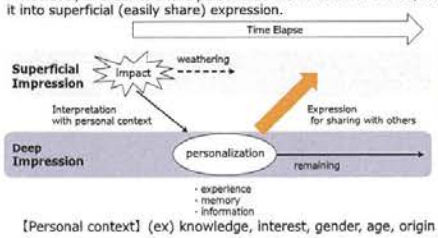
【Control and Management】 Actions to reduce the probability of the the perceived risk and the extent of damage.

Finally the conditions for risk communication are established.

In other word, just listening to the survivor's story does no lead to risk communication.

2. Personalized experiences and memories are difficult to share because they are personalized.

The personalized episode is the reality of the survivors. However, in order to share personalize memories with others, it is necessary to convert it into superficial (easily share) expression.



People experience and memorize certain impacts through the interaction three contexts: **personal context**, **sociocultural context**, and **physical context**.

Therefore, in order to share personalized memory and experience with others, we need to consider these three contexts.

【Personal context】 (ex) knowledge, interest, gender, age, origin

【Sociocultural context】 Relationship with others. For example, the effect is different if person accepts the same information alone and accepts it at the same time as others.

【Physical context】 environment and situation. There are different ways to receive the stories of survivors in the lecture room and in the disaster area.

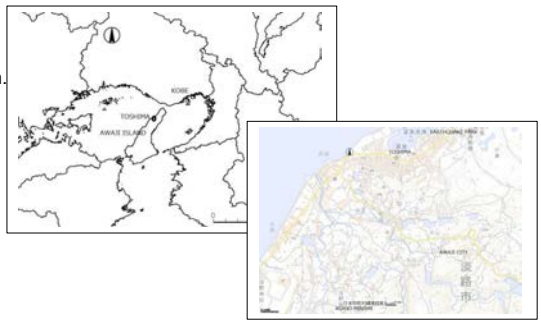
We will continue to consider effective methods to share personalized experiences and memories.

森康成
Yasushige Mori

A Personal Story of Catastrophe of the 1995 Earthquake in Awaji Island in Japan

Mori Yasushige
Volunteer Story Teller, Hokudan Earthquake Memorial Park in Awaji

1993-4 We recently had our house renovated at a cost of about 8 million Japanese Yen. I never thought any big earthquake would happen.



1995 Jan 17 AM5:46

A fault line appeared on the north-western coast of Awaji Island.





Town of Toshima
26 were killed



Our house before the earthquake
The hill nicknamed 'Joyama, castle mountain'

An old man in my neighborhood:
'My grandfather told me that two of the three cliffs at Joyama collapsed due to an earthquake."
People think there is a fault around there
One of the cliffs also collapsed in 1995, as a result of the earthquake.

1995 Feb 4 A damaged house is pulled down and demolished.





The intervening two years spent living in the farm barn



1996 Flattened terrace fields for the new house, located 200 meters from the site of the previous house. Cost of rebuilding:10 million yen (with no financial aid from outside)



1997 Jan. 1, Rebuilt our house with loaned money

2000 Started teaching disaster mitigation subject at a senior high school nearest to Nojima Fault. Taught this subject for 12 years



2012 Started telling my story at the Hokudan Earthquake Memorial Park in Awaji





浅利満理子
Mariko Asari

Introduction to the Approach of a Non-governmental Network of Community Organizations Devoted to Preserving & Disseminating Information Relating to the 2011 Great East Japan Earthquake & Tsunami

3.11Memorial Network

About 3.11 Memorial Network

3.11 Memorial Network takes as its aim: "working towards a society where as many lives as possible can be saved in the event of a disaster" and "working towards a society in which reconstruction can be carried out as easily and efficiently as possible, reducing the burden on both disaster victims and the disaster area." In order to achieve this goal, and using experiences garnered from the 2011 Great East Japan Earthquake & tsunami as its basis, a group has been formed consisting of various individuals, groups and focal facilities spanning both geographical boundaries and age groups, all devoted to preserving and disseminating the lessons learned from the disaster, in order to prepare for future events, and share this valuable knowledge resource with both the rest of Japan and the rest of the world.

The group is geographically based around the 3 prefectures of Iwate, Miyagi & Fukushima, and works towards its aims of knowledge-sharing and disaster prevention & reduction by taking a three-fold approach: networking, planning/projects & human resource development.

While the Network originated in Ishinomaki City, Miyagi Prefecture, it currently has a membership of 450 members and 70 organizations from across the country, and, under the direction of 10 directors democratically elected by the members, sees cooperation & coordination across geographical boundaries and generations.

After March, 2011 — Disaster area guides working separately in each area

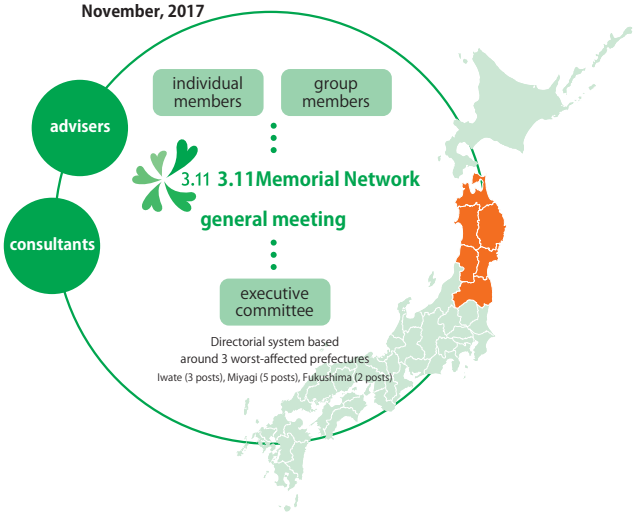


June, 2012

Ishinomaki Visitor Support Network, Disaster guide section

a forum for disaster-related guides in the Ishinomaki area to exchange information & ideas

November, 2017

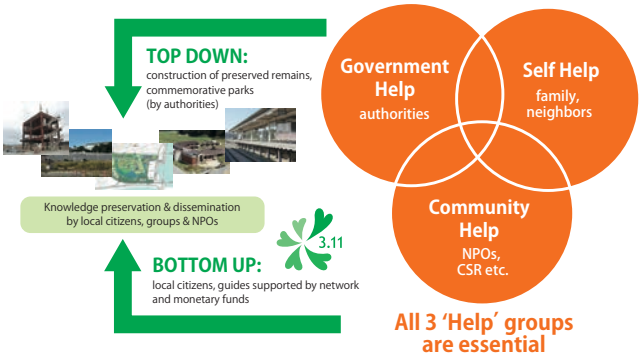


Significance of the Network & Issues Related to Keeping the Memory of the Disaster Alive

As part of the reconstruction process that has been planned out for 10 years since the disaster, over 80 preserved ruins, info facilities and memorial parks are being completed throughout the disaster area. Amidst this, issues of concern include the creation of networks connecting disaster-related facilities over and above the level of individual municipalities, and securement of funds to continue 'soft' intangible projects with a view to handing the reins down to future generations.

- training of disaster info-related positions such as guides, escorts, coordinators etc.
- improvement in planning power for disaster-related activities
- promotion of cooperation between diverse groups in the community, industry, government, academia and the media
- creation of a collaborative framework & information-sharing between relevant individuals & organizations with shared aims regarding DRRM regardless of geographical location

By networking across geographical boundaries and age groups, we are looking to solve these problems which we have in common



Main Activities Carried Out by 3.11 Memorial Network

NETWORKING

networking between 3 main disaster area prefectures



ORIGINAL PROJECTS

original projects organized by members



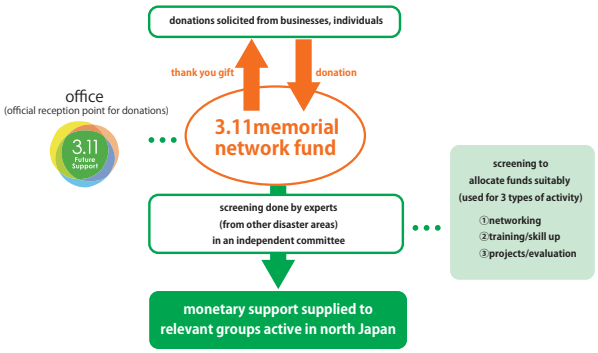
FUTURE GENERATIONS

preparation/training for future generations



Community Activities Supported by the Community

Monetary donations from individuals & businesses are used to assist in networking, training and other projects carried out by groups involved in recording and educating about the disaster and its aftermath, particularly in the 3 worst affected prefectures. 1st invitation for donations carried out in autumn 2019.

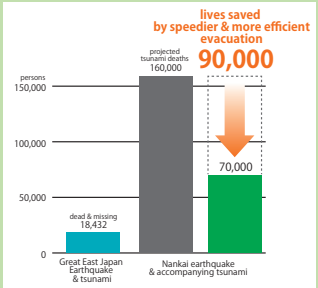


"to avoid repeating the same mistakes"

The number of casualties from the Great East Japan Earthquake & tsunami is 18,432 (includes directly related deaths and those missing presumed dead).

However, many of these deaths could have been prevented.

Making use of, and disseminating the lessons learned from the 3.11 disaster to a wider audience could result in more lives saved in the future from other disasters yet to occur in Japan.



Working towards the realization of a society where as many lives as possible can be protected in the event of a disaster, we who experienced the tsunami firsthand have a responsibility to keep the memory alive and hand the lessons learned down to future generations. 3.11 Memorial Network is supporting efforts to do this all over the Tohoku area.

中川政治
Masaharu Nakagawa

Visualization of evacuation behavior patterns in the 2011 Tohoku Tsunami

公益社団法人
3.11 みらいサポート
3.11 Future Support Association

Abstract

The giant tsunami of March 11th 2011 took 3 – 4 minutes to flow over the existing floodwalls and flood the Minami-Hama District of Ishinomaki City to a height of approximately 7m (excepting high ground).

However, since there was a duration of about 1 hour from the initial earthquake to the actual arrival of the tsunami, one can posit that all lives in the area could have been saved by speedy and early evacuation.

Realization into video of the evacuation behavior patterns of approximately 100 of the survivors brings to light such issues as the small number of people who initiated evacuation promptly directly after the quake, and also people who only evacuated to high ground after they had observed the tsunami from close by.

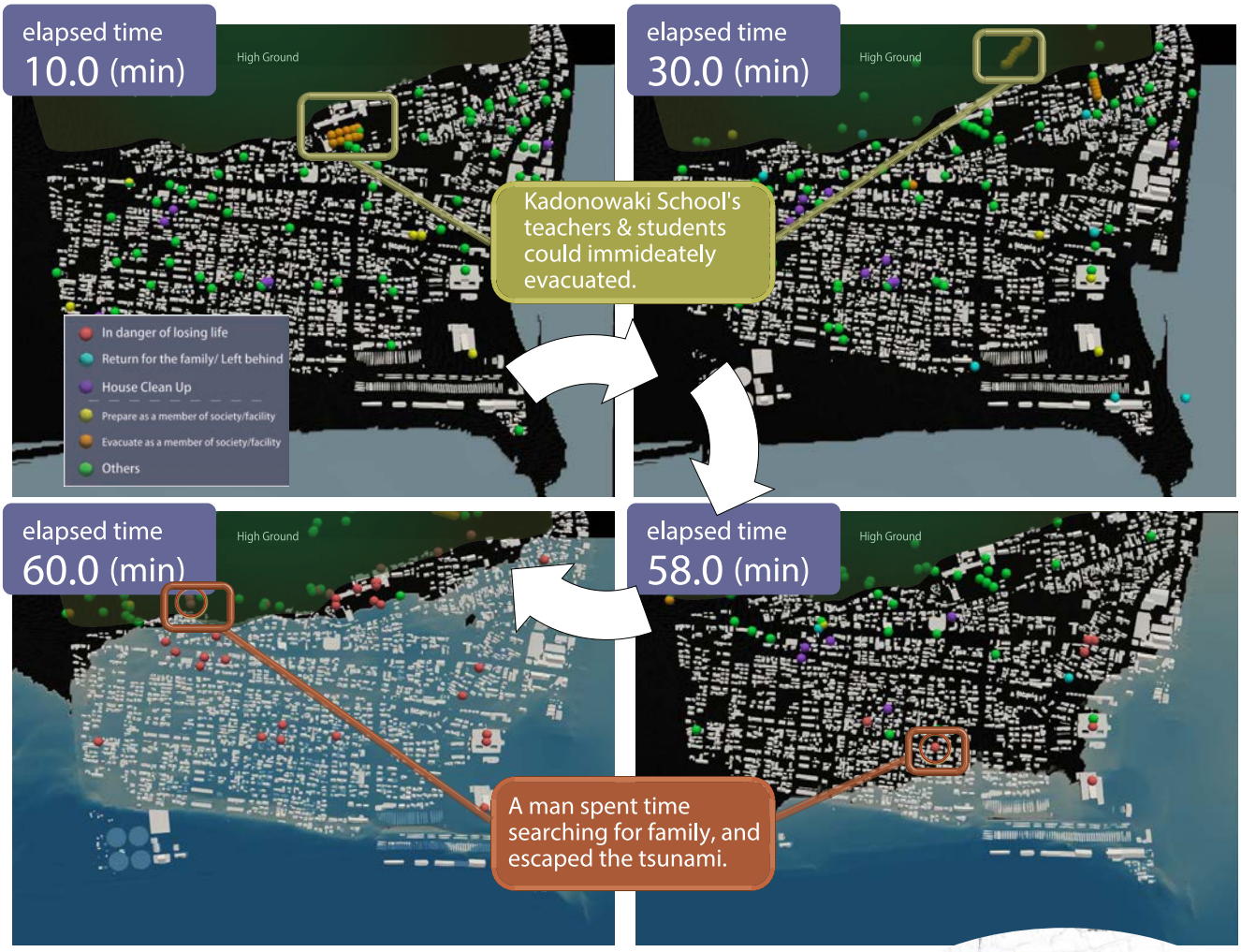
This method effectively exposes many important lessons to be learned regarding evacuation procedure, from instances of speedy evacuation to schools and other designated facilities, to cases where some returned to low-lying and flood-prone areas from high ground, some people returning again to high ground afterwards, and some spent time searching for family and friends.

Methods

The Great East Japan Earthquake & ensuing tsunami on March 11th 2011 caused catastrophic damage to the Minami-Hama District of Ishinomaki City, resulting in 389 deaths and 150 missing presumed dead.

After carefully interviewing approximately 100 survivors of the 3.11 disaster regarding their feelings and thoughts while evacuating after the quake and the routes, their evacuation behavior patterns for the 60 minutes after the quake were then visualized in conjunction with a tsunami simulation (joint design by IRIDeS: International Research Institute of Disaster Science, Tohoku University).





Prospects

The resulting evacuation behavior pattern video has proved an excellent tool for emphasizing the importance of correct and speedy evacuation, being shown at the tsunami information center in the Minami-Hama District which is visited by over 17,000 people yearly. It is to be hoped that the method will continue to be used to analyze the influence of societal relationships between family, other members of the community and local ventures on evacuation behavior, and also be of use in promoting evacuation procedures in the event of other large-scale disasters such as the possibly imminent Nankai Trough Earthquake.



Making Evacuation Behaviors a Daily Routine

Masato Tanaka* and Misa Egawa**
* Professor, Department of Regional Development Studies, Otemon Gakuin Univ.
** Student, Department of Regional Development Studies, Otemon Gakuin Univ.

Unlike earthquakes and volcanic eruptions, meteorological disasters can be predicted with high probability. Therefore, evacuation actions before such disasters occur are possible. Nevertheless, the "evacuation rate" is generally low. In order to increase the "evacuation rate," the government has revised the evacuation information expression method several times. However, no matter how refined the expression is, the effect seems to have fundamental limitations.

For example, the heavy rain in West Japan in 2018 resulted in 232 dead and missing people. The "evacuation rate" was said to be only 4.6%. In response to this, a "warning level" was added in parallel with the conventional "evacuation advisory" and "evacuation instruction."

However, according to research by the Ministry of Land, Infrastructure, Transport, and Tourism (2019) regarding this disaster, the reasons for not evacuating were: "Home is considered safe," "Nearby residents were not evacuating," etc. On the other hand, there were few responses like "I do not recognize evacuation advisories." In other words, the low "evacuation rate" is not mainly due to the fact that evacuation information is not transmitted.

Therefore, this study investigated changes in evacuation awareness and evacuation behavior among people who actually experienced disasters. The research areas included Totsukawa village in Nara prefecture, which was affected by the 2011 landslide disaster in the Kii Peninsula, and Hiroshima city, Hiroshima prefecture, which was affected by heavy rain in August 2014.

There was something in common among the actions of those who experienced severe damage, which was to make evacuation behaviors a daily routine. For example, the behaviors include staying at a low-risk acquaintance' s house or going to a shopping center with few hazards. These "evacuations" are inevitably more frequent because they take place much earlier than when the crisis is imminent. In other words, these "evacuations" are repetitive and periodic. In order to promote appropriate evacuation behaviors, it is considered necessary to incorporate these behaviors into daily life.

Landslide Disaster in the Kii Peninsula (2011)



十津川村の人口は 3,774 人，1,894 世帯（2013 年 7 月現在），面積は 672,4km2 を占める。全域が急峻な地形で，小規模な集落が斜面地に張り付くかたちで散在している。
台風 12 号では，12 名の死者・行方不明者が発生した。河道閉塞，土砂ダムの形成により，災害対策基本法第 63 条に基づく警戒区域が設定され，長期にわたって避難指示が発令された。応急仮設住宅は被災集落の位置を考慮し，30 戸が 4 つの地区に分散的に建設された。その後，災害公営住宅が谷瀬，高森という 2 つの集落に埋め込むかたちで建設されている。
十津川村は，過去にも繰り返し水害に見舞われており，よく知られるように 1889 年の大水害からの復興にあたっては，再被災リスクを避けるべく，北海道への大規模な集団移転が行われた。







“雨が降り続くとすぐに近くの知人宅に「避難」する。梅雨や台風の時期は、頻繁に行き来する”
一人暮らしの O さん（70 代女性）













8.20 Hiroshima Heavy Rain (2014)



広島県は過去，繰り返し風水害の被害を受けてきた。第二次世界大戦直後の枕崎台風をはじめ，土砂災害防止法制定のきっかけとなった 1999 年豪雨，同法の真価が問われた 2014 年豪雨，そして西日本広域に被害をもたらした 2018 年豪雨。
広島市は，太田川流域に形成された沖積平野からなり，花崗岩が風化した真砂土が表層に堆積している。山麓部は集中豪雨等による斜面崩壊や土石流の発生しやすい地形的・地質的特性を有している。
2014 年 8 月の豪雨では，広島市安佐南区を中心に，前日の夜から明け方にかけて線状降水帯が形成され，3 時間累加雨量が 200mm を超える局地的な集中豪雨により，大規模な土石流が発生した。犠牲者は 77 名（関連死 3 名を含む）に及んだ。



“避難勧告が出たら、とりあえず娘夫婦の家に行くという約束で元の家に残った”
一人暮らしの T さん（80 代女性）

“避難準備情報が出ると、自宅から離れたショッピングセンターに妻と一緒に行ってコーヒー飲んで買物したり”
夫婦で暮らす M さん（60 代男性）















Dissemination of various kinds of Experience at Educational Site
—The Case Study of the Great Hanshin-Awaji Earthquake—

Yosuke Nakamura , Asuka Maebayashi , Go Urakawa and Hayao Morinaga
(Graduate School of Disaster Resilience and Governance , University of Hyogo)

中村洋介
Yosuke Nakamura

Contents
(previous research, documents)

Analyze

When, Where, What Happened? Who did mission?

+

Characteristic of Damage level and Damage area

method : GIS

Imagination

Realities on Site What teachers had experienced at school

method : interview

Educational materials for disaster response

movie / manual

Codified Knowledge from Individual Memory

When the Great Hanshin-Awaji Earthquake occurred, many teachers had to support victims in the shelter at school in spite of their suffering damage. It was very hard for them to implement operations because they had never experienced them. It was also difficult to resume education for students. 25 yeas have already passed since the disaster, teachers who had experienced disaster were more less. Their valuable experiences will be a personal memory. It is indispensable for us to conserve memories and share as social knowledge.

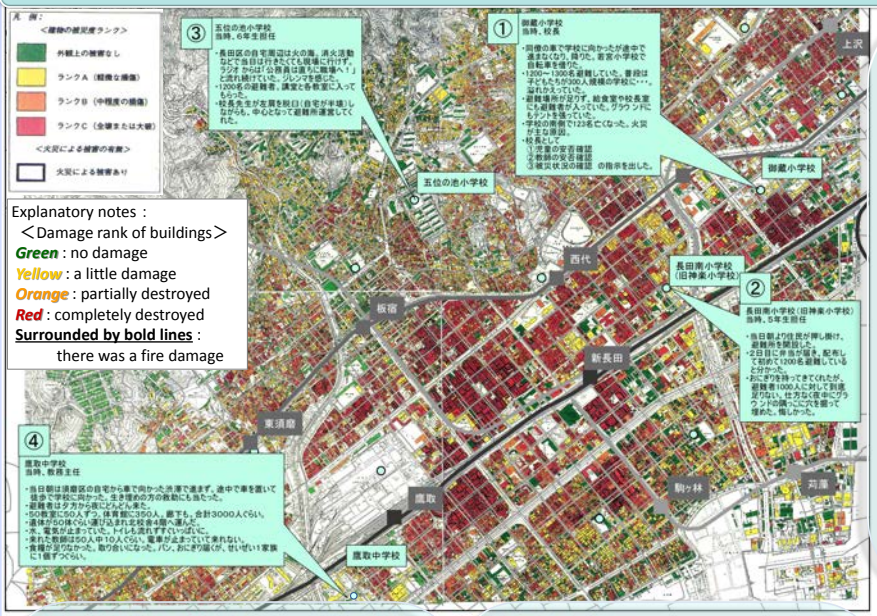
Collecting of various kinds of experiences

We held forums to research realities what teachers had experienced disaster responses at school in those days. We invited some teachers and undergraduates in University of Hyogo interviewed each one as shown pictures. In addition, I collected various kinds of experiences by visiting others. It is not only important to collect information but also education for students.



Interviewee : Kobe city teachers
Interviewer : University of Hyogo students

True Story-map (Nagata-ku Ward, Kobe City)



①Mikura elementary school 御蔵小
The principal



- On that day, I went to my school by a colleague's car. But we were caught in traffic, so I get off the car. I rented a bike at Wakamiya elementary school (3.5km from my school).
- There were 1200~1300 evacuees in the school. (Usually, there are 300 children.)
- We were short of space, so evacuees were also in the kitchen , the principal's room, and setting up a tent on the ground.
- 123 people were died in the south area because of fire.



- I gave three directions to my subordinates.
  1 Make sure children 's safety.
  2 Make sure teachers' safety.
  3 Make sure the damage situation.

④Takatori junior high school 鷹取中
The teacher of curriculum coordinator

- On that morning, I went to school on foot because of traffic jam. I rescued people buried alive.



- Evacuees were in the classroom, a gym, and corridors. There were almost 3000 evacuees.
- We laid about 50 dead body at fourth floor.
- Supplying water and electricity stopped, so the toilet was clogged.
- We ran short of food. There was a scene of competing for food between evacuees.

③Goinoike elementary school 五位の池小
The teacher in charge of the sixthgrade

- On that day morning, the area around my house was a disastrous fire. I wanted to go my school, but I had to do fire fighting. I felt a dilemma
- There were 1200 evacuees. We asked them to enter a lecture hall and classrooms.



- A principal got injured because of his house was damaged. But he led the operation shelter.

②Nagataminami elementary school
The teacher in charge of the fifth grade

長田南小
(旧神楽小)

- It's former name is Kagura elementary school.



- On that day morning, many evacuees rushed for the school.
- On the second day, It was not until we distribute lunch box that we knew there were 1200 victims in the school.
- A kind person brought rise balls for evacuees. But they were smaller than number of evacuees. I had no choice but to threw away it.

宮定章
Akira Miyasada

Telling disaster prevention like cherry blossoms(SAKURA)
～ Prepare first, Safety and Lively life later, for disaster. ～



Lessons we learned from disaster

① Real reconstruction requires improved local appeal and sustainability
Due to urbanization, regional recovery requires a perspective of population decline and aging
② Disaster victims cooperate with related parties to create a community with their own power.
In order to collaborate after a disaster, it is necessary to collaborate before the disaster.
③ Humans cannot overcome the threat of natural disasters. A flexible reconstruction that coexists with nature is necessary for reconstruction in the future.









Information about our district "MIKURA" in KOBE

In the Great Hanshin-Awaji Earthquake, Our district in Kobe City Nagata Ward was severely damaged, and 128 people were killed by building destruction and fires. The community and everyday life that people had built for generations was destroyed with tremendous power.

On the other hand, while it was a tragic disaster experience, it was also an opportunity to feel the importance of things not being noticed normally, such as living carefully and living together with nature. In our district, 80% of the households moved out due to the disaster, and the survivors who have left their homes have been aiming to return to the district where they lived.

Opportunities (field visits and exchanges) to interact with people around the world have increased as the survivors and volunteers from outside collaborated to create communities for recovery from the disaster, which lead to a lot of growing awareness and learning. We have learned about the importance of conveying experiences and have been carrying out exchange activities for 25 years.

Our team Activity about "MACHI-COMMUNICATON"

To provide an opportunity for residents who had evacuated to temporary housing complexes in other areas to return to the community and meet again even for a short time, Machi-Commi, hand in hand with the Association, facilitated and coordinated various events such as Bon Dance Festivals, rice cake pounding and memorial services in Mikura. Through helping out with these events and working hard with the residents, Machi-Commi gradually built close relations and trust with the residents. So Machi-Commi support community building with residents.









Documents in English (inc 5 language)

MOVIE in English

AKIRA MIYASADA (Dr. Eng)
Director of Machi-Communication
Researcher, Graduate School of
Disaster Resilience and Governance,
Governance, University oh Hyogo
Email : m-comi@bj.wakwak.com

How to telling

① Earthquake disaster experience learning

"I(Student) thought to prepare for disaster prevention by listening to the experiences of the victims."
243 schools accepted 20373 elementary and junior high school students. We also accept adult training. The contents of the disaster experience learning are explanations of the disaster situation using photo slides, talking about the story, walking around the disaster area, cooking experience, etc.







② Misuga Karuta

In December 2003, 133 residents and friends of the Community of Misuga in Kobe Japan created their own Karuta (a traditional Japanese card game). A Karuta consists of two sets of cards: Yomi fuda (reading cards) and E fuda (picture cards). The Yomi fuda are typically poems, proverbs, haiku, stories, or messages written on the cards and the E fuda are drawings that represent the writing on the Yomi fuda. For Misuga Karuta, 65 cards were created for each set of reading and picture cards.

Creating Karuta cards by individuals for their own reasons is not new in Japan. However, having 133 participants involved in the creation of a Karuta game is probably one of the highest numbers ever recorded for this type of activity. Misuga community members participated by either writing a Yomi fuda (reading card) or drawing an E fuda (picture card). The reading cards were written by people whose ages ranged from 10 to 88 years old and, the picture cards were created by people ranging in age from 6 to 70 years old.

Misuga was severely damaged by the Great Hanshin-Awaji Earthquake in January 1995. The Misuga community members who created the Misuga Karuta created the Karuta cards to help them remember the impact of the Earthquake on their lives. The cards were used to record memories about life before the Great Hanshin-Awaji Earthquake as well as memories of how Misuga and its community members were affected during and after the earthquake.





The Construction and its Process of Digital Archives for The Great Hanshin Flood in 1938 and the 1995 Great Hanshin-Awaji Earthquake
阪神間における災害デジタルアーカイブの構築とそのプロセス～1938阪神大水害と1995阪神・淡路大震災を例に～

折橋祐希 / 喜田悠太郎
Yuki Orihashi / Yutaro Kida

兵庫県立大学大学院　減災復興政策研究科　Graduate School of Disaster Resilience and Governance , University of Hyogo
Yuki Orihashi　Yutaro Kida　Go Urakawa　Hayao Morinaga　(Mail:yuki.orihashi@gmail.com)

Abstract

It is very important to pay attention to past disasters and events that we have experienced, draw lessons from them, and preserve and inherit them as social memories. However, most of the remaining materials are analog media owned and stored privately. The number of people experiencing disasters in the past has been decreasing year by year. In this paper, we focused on the Great Hanshin Flood in 1938 and the 1995 Great Hanshin-Awaji Earthquake that occurred in Hyogo Prefecture and constructed digital archives of these two disasters using information on paper media such as photographs related to them and memories of the victims. In addition, local junior high school, high school, and university students participated in the disaster prevention education process through oral communication and fieldwork with experienced persons and lore of the disasters. In case of the Great Hanshin Flood, the Rokko Sabo Office of the Ministry of Land, Infrastructure, Transport and Tourism gathered information from the victims using flyers, posters and newspapers. In addition, information on disaster itself, information from experts, and information obtained from fieldwork for junior and senior high school students were used to construct the archive. In the case of the Great Hanshin-Awaji Earthquake, we focused mainly on activities during the reconstruction period. We collected information on damages from research institutions, information on evacuation shelters and episodes and photos provided by activists in reconstruction process. Based on this information, a digital map application was created. For photos that can be located, we used Cloud GIS to give absolute position information. An area information is assigned for photographs where the location is ambiguous. These digital archives not only provide a bird's-eye view of the entire disaster, but also visualize a story about a lot of information, including photos of individuals.

The Great Hanshin Flood in 1938

What is The Great Hanshin Flood in 1938

From July 3rd to 5th in 1938(Showa 13), the rainy season front stimulated by the typhoon stagnated in western Japan, and torrential rains occurred mainly in Kobe City. The rain that began on the evening of the 3rd recorded a precipitation of 461.8mm before it stopped at 1:20 pm on the 5th. Due to this total rainfall, landslides occurred at various places on Mt. Rokko, and rivers in the city area overflowed. At the same time, debris flows mixed with megaliths, driftwood, and earth and sand flowed into the city of Kobe. In Kobe City, 616 people were killed and 89,715 houses were damaged. This is called "Hanshin Great Flood", including damage in the neighborhood caused by this torrential rain.



Near Sogo department store, where the muddy stream has gathered (Sannomiya, Chuo-ku, Kobe City)



The road in front of Sannomiya station, where the muddy stream flows (Chuo-ku, Kobe City)

Purpose

Despite the disaster that caused such a great deal of damage, only analog records remain today, 81 years after the flood. Therefore, it is indispensable to collect information about this disaster and extract lessons from it. In this effort, we constructed a digital archive to pass on the memories and records of disaster victims to the next generation through verbal communication and field work based on it with junior high and high school students.

Efforts to share records and memories

Based on the knowledge gained from workshops and town walk (Machi-aruki) conducted in collaboration with the Rokko Sabo office and information from verbal communication (interviews) with people who have experienced floods, are shown for each river basin.



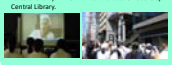
GIS smartphone application



Digital archiving and lore process

Shin-Ikutagawa・Ujikawa River Basin ● (Chuo-ku, Kobe city)

Date: August 1, 2018
Target: Kobe City Nagisa Junior High School
Disaster prevention junior leader students
In advance, the Rokko Sabo Office interviewed those who were elementary school students at that time. The interview contents were the situation of the flood and the scene of evacuating home from school. In a town walk, junior high school students walked the same route from school to her home where a experienced person had walked at that time. In addition, we visited the "Kobe Great Flood Picture Scroll", drawn for each river basin from the Senmori River in Suma-ku to the Ishiya River in Nada-ku at the Kobe City Central Library.



Togagawa River Basins (Nada-ku, Kobe city)

Date: August 8, 2018
Target: Kobe City Nagisa Junior High School
Disaster prevention junior leader students
The students were divided into two teams, each in charge of the north or south region of the basin, and conducted a town walk to identify the location information of past photographs. In the north, they received cooperation from the "Kobe Archives Photo Gallery", and in the south, from the "Nada-ku Shinzaike Community Development Council". The students took photographs from the same location as those days and recorded the interview details. Also, using a GIS application on a smartphone, the episode was entered on the electronic map along with the photos.



Sumiyoshigawa River Basin (Higashinada-ku, Kobe city)

Date: July 31, 2018
Target: Kobe City Sumiyoshi Junior High School
Students of the student council
A group study on flood damage at the Great Hanshin flood was held at Sumiyoshi Junior High School located in the Sumiyoshi River basin. The lecturer was a specialist dispatched by the Rokko Sabo Office. The students learned the outline of the flood and the situation of the damage at that time, and thought about the interview contents to a priest of Sumiyoshi Shrine. Based on them, they asked the priest about the situation of the damage, what he experienced and felt at that time. They wrote important things on a paper.



Shin-Minatogawa River Basin (Nagata-ku, Kobe city)

Date: July 31, 2018
Target: Tokiwa Girls High School
Students of the student council
Tokiwa Girls High School students, with the guidance of a priest of Nagata Shrine, identified the locations of the past damage and wrote them on a paper map along with the episode at the time of the disaster.



Significance

Long-term storage of information
・Documents remaining on paper, images of damage, and stories of disaster victims
・To store experiences of disaster victims as a digital archive

Creation of a place for communication
・To create a place to share memories and records using Communication with disaster victims through workshops through the Internet

What location information tells us
What could be clarified by visualizing information
-Pinpoint location and related information
-Overview information of region and area

A sense of responsibility for information
Through the work of providing and creating information
Responsibility by becoming the sending side instead of the receiving side is born

Digital Archive of The Great Hanshin Flood in 1938



Information of these efforts and information received from the public, such as photos and testimonials, are saved as ' Digital Archive of the Great Hanshin Flood ' so that anyone can freely browse from the Internet, and will be open to the public on November 24, 2018.

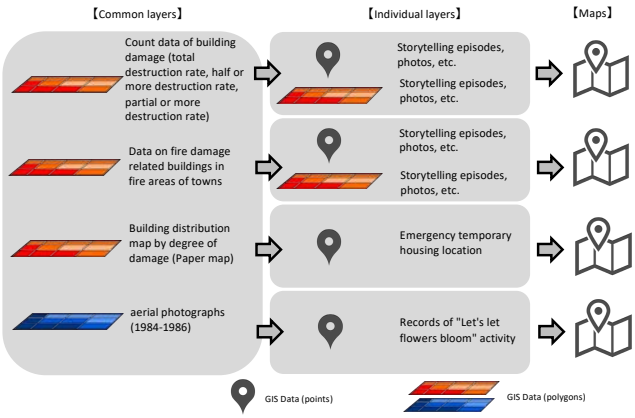


The Great Hanshin-Awaji Earthquake

Constitution of Digital Archive

①Earthquake information registration workshop
This workshop included verbal communication to listeners who are not experienced from the narrator who is experiencing the Great Hanshin-Awaji Earthquake, and the process by which the listener creates the information as digital data in real time using GIS.
②Web maps
The above information is overlaid as a layer with point data and information on damage from the Great Hanshin-Awaji Earthquake.

Relationship between layers and digital maps



Development of the date entry tool

In order to visualize "what happened at that point / region" using ESRI's ArcGIS Online, it was possible to input it with points (points) and faces (polygons). Also, attribute items of free descriptions such as time zones and episodes were added.



The workshop

Opportunity of sharing records

Three groups (Groups A to C) were created. Group A researched the damage situation and reconstruction process in the northern part of Noda, Nagata-ku, Kobe, Hyogo Prefecture, and Group B surveyed the damage situation around Nagata-ku, Kobe, Hyogo Prefecture. Group C consisted of graduate students and performed identification work on the location information of the temporary housing in Hyogo Prefecture.
Group A and Group B were designed to include people who talk and listen (about 3 people). Among the listeners, the roles of listeners, information registrants, and writers were included. The listener proceeded while listening to the talker's story and asking the information that the registrant wanted. The information registrant input the interview contents into the media according to the classification method set in advance. The writer used Google Drive to leave the story of the speaker in the form of a minutes of the proceedings. The total number of registered information was 206, including those created in advance.

Registered information

班名	事前準備	当日作業	合計
A班：野田北部(ポイント)		19	19
A班：野田北部(ポリゴン)		1	1
B班：長田区周辺(ポイント)		4	4
B班：長田区周辺(ポリゴン)		18	18
C班：応急仮設住宅(ポイント)	142	6	148
ガレキに花を(ポイント)	16		16
総計	158	48	206

Digital maps



Digital map created

Summary

Linking location data to information and representing it as a digital map aims to visualize information of damage and episodes related to the disaster, and to provide a more comprehensive overview of the disaster. These efforts are also expected to have the effect of disaster prevention education, creating opportunities to think about the relationship between disasters and the formation of towns and between people and nature. In addition, it is assumed that such information storage is utilized not for the purpose of storage itself. It is hoped that various information will be released in the form of so-called open data, and that many people will develop it as applications and various contents based on various ideas.

Sharing of Local Disaster Experiences: Publication of a Digital Archive Map Showing Disaster Monuments

Hinako Suzuki, Wataru Tanikawa, Shoichiro Uchiyama, Goichiro Uramoto

鈴木比奈子
Hinako Suzuki

Digital Archive Map Showing Disaster Monuments

■ What are disaster monuments?

◇ They are monuments with information about natural disasters carved on their surface.

- They have various names: stone monuments, disaster monuments, traditional natural disaster monuments, tsunami monuments, etc.
- They are made of a variety of materials, such as stone and wood.

◇ Contents: Disaster monuments usually include one or more of the following items of information.

(1) Past disaster experiences and the extent of the damage to the region
(2) Commemoration of victims
(3) Lessons from the past and warnings of future disasters

◇ Installation situation: usually outdoors

- Monuments can tell us how far inland a tsunami or a flood penetrated, or report that their own location was flooded.

◇ Problems: Stone monuments may be lost, and their significance is not always understood.

- Carved letters are often weathered, and cursive script can be difficult to read.
- Stone monuments may be moved or lost due to natural disasters or road

A digital archive of tsunami monuments introduced by realistic 3D models.
(Tanikawa, et al. 2016)

◇the Digital Archive Site of Earthquake Tsunami Monuments

http://www.jamstec.go.jp/res/ress/tanikawa/index.html

- Publication of 3D software models
- Browsing of letters carved on the stone monuments and the information they convey



Earthquake monument of Kishimoto Asuka shrine (Kochi pref.)



Hagitani Amida Budda Stone (Kochi pref.)

■ Digital Archive Map of Disaster Monuments

https://dil-db.bosai.go.jp/saigai_sekihi/ （Japanese only）

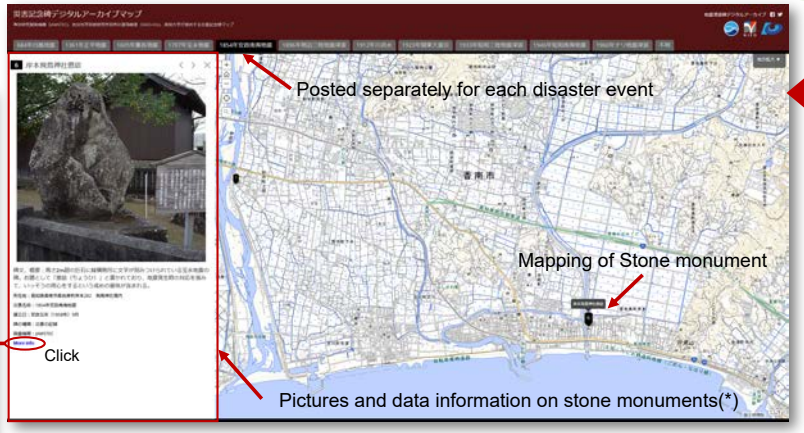
- Publishing information on stone monuments, etc., on the Web map.
- Sharing information on stone monuments (their content and location) on the Web.

Sharing the information on stone monuments on the Web map



Linking to Web pages describing the stone monument in 3D





The screen layout of the digital archive map of disaster monuments

***Pictures and data information on stone monuments**

- Stone monument information
- Epigraph or its summary
- The disaster it records
- Construction date
- The type of monument
- Investigation agency

Stone monuments classified by prefecture published on the map
(as of November 2019).

Disaster	Stone Monuments	Iwate pref.	Miyagi pref.	Tokushima pref.	Kochi pref.
684 Hakuhou earthquake (M8.4)	1				1
1361 Shohei earthquake (M8.5)	2			1	
1605 Keicho earthquake (M7.9)	2			2	
1707 Houei earthquake (M8.6)	14			3	11
1854 Ansei Nankai earthquake (M8.4)	42			18	21
1896 Meiji Sanriku earthquake (M8.2)	9	9			
1912 flood	1			1	
1920 flood	6				6
1923 Greate Kanto earthquake (M7.9)	1				1
1933 Showa Sanriku earthquake (M8.1)	9	7	2		
1946 Showa Nankai earthquake (M8.0)	27			8	14
1960 Great Chilean Earthquake (Valdivia Earthquake) (Mw9.5)	2	1			1
2001 heavy rain disaster on west-southern area of Kochi prefecture	4				4
Other	6	6			

[Web-GIS specifications]

◇ Data used

- The digital archive of earthquake tsunami monuments
- The monument to the Sanriku Coast Tsunami, the investigational data

◇ The engine used

- System: ArcGIS ONLINE Story Map Shortlist
- Background map: GSI Maps

[Future developments]

- Superimposition on past flood records or flood prediction maps, browsing
- Cooperation with other organizations

[reference] Tanikawa, et al. (2016) 3D modelling for digital archive of monuments that records historical Nankai earthquakes at Kochi Prefecture, JpGU G02-P01.

[Contact] Hinako Suzuki, hinasuzuki@bosai.go.jp
Multi-hazard Risk Assessment Division, National Research Institute for Earth Science and Disaster Resilience

荒井勛
Isao Arai

「あなたにも出来る被災者支援」・ 25 年の手法を語り継ぐ

“ YOU CAN SUPPORT DISASTER VICTIMS ”

＊We introduce our method how to support suffers　　神戸 NPO・ひまわりの夢企画

１、被災後の避難所支援 （ REFUGE SUPPORT ）


給水支援・1995 年 1 月


露天風呂・1995 年 1 月


温水シャワー2011 年 3 月


洗濯機設置 2011 年 4 月

２、仮設住宅の生活支援 （ SUPPORTING TEMPORARY HOUSES FOR VICTIMS ）


お茶碗運搬 2004 年 11 月


食器市 2004 年 12 月


食器市 2009 年 10 月


食器の収集 2011 年 6 月


無料食器市 2011 年 8 月


食器市 2011 年 10 月


食器市・2016 年 5 月


食器市・2016 年 10 月

３、心の復興を支援する活動 （ SUPPORTING MENTAL CARE SUPPORT ）


復興イベント 2001 年 7 月


鯉ネット 2004 年 7 月


鯛ネット 208 年 5 月


歓鯨ネット 2013 年 6 月


カツオネット 20013 年 3 月


完成設置したカツオ


くまモン・2018 年 3 月


ひまわり植え 2005 年 6 月


山古志村①　2005 年 5 月


山古志村②震災 3 年後


山古志村③震災 5 年後


防災楽習迷路 2017 年 1 月

中越メモリアル回廊
The CHU-ETSU Earthquake Memorial Corridor

稲垣文彦
Fumihiro Inagaki

Nagaoka Earthquake Disaster Archive Center KiokuMirai
Learn the lessons and findings left by the Chuetsu Earthquake

Niigata Prefecture Chuetsu Earthquake
October 23, 2004, around 17:56

1. An earthquake that hit hilly and mountainous areas where the depopulation and aging of society was advancing.
2. A sharp decline in the population of hilly and mountainous areas that were damaged severely.
3. Sustainability of hilly and mountainous areas become a big challenge for the recovery from the disaster.(Existing challenges in the communities were actualized.)

Initiatives taken for the CHU-ETSU Earthquake Memorial Corridor

Fumihiko Inagaki
Director of the Earthquake Disaster Archives and Memorial Center
Chuetsu Organization for Safe and Secure Society

Myoken Earthquake Memorial Park
Memorial Park to morn for the victims of disasters

Initiatives taken for the CHU-ETSU Earthquake Memorial Corridor

1. Chuetsu Marugoto (comprehensive)Archive
2. Unique facilities
3. Memorial facilities that support sustainable community development on residents own initiatives

Yamakoshi Recovery Exhibit Hall Orataru
Review the life in the mountains damaged by the disaster

Kogomo Earthquake Memorial Park
Preservation of realistic scars of the earthquake disaster appealing to the disaster prevention awareness

Ojiya Earthquake Disaster Museum Sonae-kan
Experience the situations of disasters

The Epicenter of the CHU-ETSU Earthquake Memorial Park
Memories of the recovery from the disaster and dissemination of appreciation

Kawaguchi Kizuna-kan
Strengthen the bonds between people

Memorial facilities that support sustainable community development (activities aimed at resolving regional challenges) by residents own initiatives

1. Entrust the management of memorial facilities to the NPOs in the communities
2. Independent and proactive involvement of residents
3. Ensuring the sustainability by diversified management and personnel for community coordination

高田知紀
Tomoki Takada

The International Forum on Telling Live Lessons from Disasters 2020

An Education Framework for Disaster Risk Reduction by Utilizing "*Yokai*(妖怪)" as Intellectual Resources

Kobe City College of Technology
Tomoki TAKADA

What is Yokai(妖怪)?

Yokai(妖怪) is made up of two Kanji. Both "妖" and "怪" denote strangeness, mystery, or suspicion. Kazuhiko Komatsu, who is the leading academic authority on the supernatural in Japan, said that the concept of yokai has three domains. The first one is yokai as event(*dekigoto*, 出来事). The second is yokai as presence(*sonzai*, 存在). And the third one is yokai as object(*zoukei*, 造形). Such yokai which is drawn in Japanese anime is yokai as object. However, the Japanese people before Edo period thought that a mysterious and unfavorable phenomena is caused by work of yokai.

Diversity of Yokai

There are many kind of yokai. In addition, the environment in which yokai appears is also diverse. For example, yokai that appears in the mountain is *tengu* (Fig.1), *yamauba* and *konaki-jiji* and so on. Representative of yokai appearing on the waterfront is *kappa* (Fig.2) or *umibouzu*. Furthermore, there are yokai that appears in the house such as *akaname* (Fig.3) and *zashikiwarashi*.

What is important is that many kind of yokai have been told set with types of environment. In other words, yokai lore is told with a placeness.



Figure 1
Tengu(天狗)



Figure 2
Kappa(河童)



Figure 3
Akaname(垢嘗め)

Role of Yokai for Disaster Risk Reduction

Yokai lore often tell us the importance of preparing for a disaster. Yokai lore of *yaroka-mizu* is the content that people heard a strange voice from the upstream of the river before the flood occurs. And, yokai of *konaki-jiji* cry in the mountain before the earthquake occurs. Work of yokai relating natural disaster can be classified in occurrence factor, omen, situation description, prevention scheme, and disaster history transduction.

"Yokai Safety Workshop(妖怪安全ワークショップ)"

I conducted "Yokai Safety Workshop" as a social experiment, based on a role of yokai lore as a social device to transmit disaster risks. In this workshop, first of all, the children search for the dangerous places of their region (Fig.4, 5). Next, they consider the original yokai that appears in the dangerous places (Fig.6). At that time, the children propose how to avoid the damage caused by the yokai. Finally, in order to make "Yokai safety map", the original yokai is plotted on the map (Fig.7).

Through the work to create new yokai, the children who participated in the workshops were able to recognize the risks in the region and suggest how to avoid disaster risks.



Figure 4



Figure 5



Figure 6



Figure 7

東山陽次
Yoji Higashiyama

Passing Down the History of the Damages Caused by Mt.Unzen Volcano and the Issues at Hand

Yoji Higshiyama
Mt.Unzen Disaster Memorial Hall
*** e-mail: gakugei@udmh.or.jp**



Mt.Unzen Disaster Memorial Hall (Gamadasu Dome)

1. Introduction

- In Nov 17, 1990, the Mt.Unzen Volcano erupted once again ever since its last eruption 198 years ago. On June 3 of 1991, a pyroclastic flow of the biggest scale in the region occurred, taking away lives of 43 victims. This year would be the 28th year after the happening of Mt.Unzen eruption disaster(Fig.1).
- Mt.Unzen Disaster Memorial Hall, the core facility dedicated for the education of volcanic disasters founded in July of 2002, has undergone renovations and reopened in April 2018 in order to improve and make enhancement in its facilities.
- Our mission is to educate the lessons learned from the history of volcanic disasters to the public. However, as the population of the younger generations who has never experienced the disaster increase in the area stricken by disaster in Shimabara, continuing the education of the experience of a disaster becomes a tacky issue at hand. In order to continue our mission of passing down the lessons of volcanic disasters, it is necessary for the younger audiences to visit and know about the disaster area, and we try to hold many more programs to achieve such goal.



Figure1: (A)Pyroclastic flow occurred in Senbongi district in June, 1993. (B)This image shows Shimabara city now after recovery.

2. Background



Figure2: The incorporate projection mapping has newly renovated in this museum.

- Much time has passed since the happening of the disaster in the area, and the restoration of the disaster area is gradually transforming away from the sightseeing spot with attraction from its unique traces from natural disaster like it has been right after the disaster. From the decrease in the number of visitors to Mt.Unzen Disaster Memorial Hall as well as the narration guides (field tours where the guides explain verbally) every year, we predict that there will be a change in the willingness of visitors to visit the disaster areas.
- In order to attract more visitors to Mt.Unzen Disaster Memorial Hall, the museum has renovated to incorporate much more interactive exhibitions such as projection mapping(Fig.2). Other new facilities include the Geo Park Playground for children and Wonder Labo for experiment and workshop.

3. The Current Situations and Issues

- Starting from last year, we began a different approach in presenting to students visiting for field trips by allowing the students to have a comprehensive understanding of the disaster through explanations for the exhibitions, performance of experiences in Wonder Lab, and seminars held by narration guides, provided in a shared effort by the professional staffs and narration guides of various departments.



Figure3: The memorial ceremony for the victims is held in Gamadasu Dome on June 3 every year and people pray for them to rest in peace.

- Also, we founded a praying ceremony that will be held every year on June 3rd, the day of the disaster, in memory of the victims from the disaster, in order to educate the younger generations who has never experienced the disasters(Fig.3 & 4).
- Right now around 20 volunteers have been volunteering at our facility for over 10 years, and of those, 10 of them are working on the education of disasters as narrating guides. The narrating guides regularly holds seminars for permanent exhibitions, in disaster areas, and in elementary schools.
- However, as these narrating guides age, it becomes harder for them to visit places afar or attend activities requiring longer time spam, and the number of guide decreases every year. The other side of this problem is that the narrating events rely too much on certain guides.
- Amongst the staff, many are from the generation that has never truly experienced the disaster, and it is necessary for them to deepen their understanding for the disaster in order to educate other people about it. Although we do hold volunteer recruitment, but we lack a proper system for recruiting and training the volunteers.



Figure4: The narrating guides regularly hold the seminars in some elementary schools.

4. The New Efforts





Figure5: (A)This image shows the class of volcano junior master school. (B)These students asked guides about volcanic disaster happened in this place.

- We have started a project called "volcano junior master school" that will begin this year, targeting elementary upperclassmen to middle school students(Fig.5). These students will be educated to become the person responsible for disaster prevention in each area. Our aim is that these young students may become capable of making the right judgement and take actions during the actual happening of a disaster. We are hearing feedbacks from the lecturer saying that they are learning to coexist with volcano well.
- Starting last year, we launched new seminars regarding the prevention of volcanic and natural disasters, learning from experts who has been on the grounds of disasters of 2016 Kumamoto Earthquake, 2014 Mt. Ontake eruption, and heavy rainfall in Northern Kyushu District in July 2012.

5. Summary

- As time passed and memories of the disasters faded, and the narrating events are receiving less and less recognition, our future is interconnected with how the people of every generation, especially the younger generations, understand and learn from the past disasters, and use those knowledge to prevent disasters in the coming future.
- Our efforts taken so far have received some positive feedbacks. It is important that we continue efforts such as Volcano Junior master school or Disaster Prevention seminars that endeavors in the education of disaster prevention with new approaches. It is especially important that we educate young students who will become responsible for disaster prevention in each area, and we will discuss further regarding projects to achieve such goal.
- Also, instead of relying heavily on the guides, we hope that each staff could deepen their understanding regarding volcanic disaster, and for there to be new opportunities to learn for our staffs and volunteers so that all staffs and volunteers could be on the same line when working towards the goal of continuing the education on the prevention of disasters.

編集 / Editing:

小林郁雄 / Ikuo Kobayashi

人と防災未来センター上級研究員、兵庫県立大学減災復興政策研究科特任教授。1944 年名古屋生、1967 年神戸大学卒業、1969 年大阪市立大学大学院修士修了。(株)都市･計画･設計研究所、まちづくり株式会社コー・プラン、神戸山手大学教授を経て現職。阪神大震災復興市民まちづくり支援ネットワーク世話人、非認証 NPO きんもくせい代表、世界災害語り継ぎネットワーク TeLL-Net 代表など。地域計画、市街地整備から住民主体のまちづくりまで広い分野の都市プランナー。震災復興にかかわる兵庫県・神戸市などの各種委員会・審議会や被災者復興支援会議メンバーなどに参画。神戸市コミュニティ再開発計画・環境カルテ作成、神戸港ポートアイランド基本設計、神戸ハーバーランド整備計画、HAT 神戸基本構想などに参画。

Senior Researcher, Disaster Reduction and Human Renovation Institution; Professor, Graduate School of Disaster Resilience and Governance, University of Hyogo. City planner in a wide range of fields from urban development planning to community-based movement. Born in 1944 in Nagoya; B.E. from Kobe University, M.E. from Osaka City University. Worked as CEO of CO-PLAN Inc. (urban planning company). Engaged in various civil activities such as Leader, Recovery from Kobe Earthquake Disaster / Supporter's Network for community development "Machizukuri"; Representative, TeLL-Net. Participated in various committees of Kobe City and Hyogo Prefecture for earthquake restoration. Engaged in important plans and surveys such as Kobe Port Island project, Kobe Harbor-land project, HAT Kobe project, Kobe earthquake recovery emergency plan survey (Kobe city), Kobe earthquake reconstruction 10-year summary verification and recommendation (Hyogo Prefecture).

深澤良信 / Yoshinobu Fukasawa

西日本鉄道株式会社海外展開室長、人と防災未来センター特別研究調査員、アジア防災センター評議員。1957 年生、1980 年東京大学卒（土木工学）、1982 年東京工業大学大学院修士課程修了（社会工学）。1982 年国土庁入庁、国土計画、地域開発、防災、国際協力などに従事。国連人道問題局救援調整官、総理府阪神・淡路地域復興本部事務局上席局員、人と防災未来センター副センター長、国土交通省国土計画局計画官、総務省消防庁参事官などを経て 2013 年から 2017 年まで国連ハビタットアジア・太平洋地域本部（福岡本部）本部長。世界災害語り継ぎネットワーク／TeLL-Net 事務局長、世界災害語り継ぎフォーラム（2010）及び 2020 世界災害語り継ぎフォーラム（2020）企画運営に従事。

Director, Overseas Business Department, Nishi-Nippon Railroad Co., Ltd.; Research Fellow for TeLL-Net, DRI; Trustee, Asia Disaster Reduction Center. Born in 1957, B.E. from Tokyo University, M.E. from Tokyo Institute of Technology. Joined National Land Agency, Japanese Government in 1982; engaged in national territorial development plan, disaster risk reduction, international cooperation. Worked as Relief Coordination Officer, UN Department of Humanitarian Affairs; Senior Member, Secretariat of Hanshin-Awaji Area Reconstruction Headquarters; Deputy Executive Director, Disaster Reduction and Human Renovation Institution (DRI); Counselor, Fire and Disaster Management Agency, Ministry of Internal Affairs and Communications, prior to UN-Habitat Regional Director for Asia and the Pacific from 2013 to 2017. Secretary, TeLL-Net; engaged in organizing 2010 TeLL-Net Forum and 2020 TeLL-Net Forum.



DRI調査研究レポート 2020-01
DRI Technical Report Series【vol.46】

2020世界災害語り継ぎフォーラム
―災害の記憶をつなぐ―

2020 International Forum on Telling Live Lessons from Disasters

発　行／Published

2020年12月／December2020

阪神・淡路大震災記念　人と防災未来センター
The Great Hanshin-Awaji Earthquake Memorial
Disaster Reduction and Human Renovation Institution (DRI)

〒651-0073 神戸市中央区脇浜海岸通1-5-2
tel (078)262-5060　fax (078)262-5082
http://www.dri.ne.jp

印　刷

商工印刷株式会社
〒651-0094 神戸市中央区琴ノ緒町4丁目5-7
tel (078)221-1113

阪神・淡路大震災記念　人と防災未来センター
The Great Hanshin-Awaji Earthquake Memorial
Disaster Reduction and Human Renovation Institution (DRI)

http://www.dri.ne.jp

ホームページ
DRI Website

調査研究レポート
DRI Technical Report Series