

Survival in Disaster and Revival in Remains

Wenchuan Earthquake Site Museum

I. Disastrous Earthquake

The 2008 Sichuan earthquake, which measured at 8.0 M_s and 8.3 M_w according to the China Seismological Bureau, occurred at 14:28 on 12 May 2008 in Sichuan province of China. It was also known as the Wenchuan earthquake, after the earthquake's epicenter in Wenchuan County in Sichuan province. Gansu Province, Shaanxi Province were affected. The earthquake was felt as far away as Beijing and Shanghai, where office buildings swayed with the tremor. The earthquake was also felt in nearby countries. Strong aftershocks continue to hit the area even months after the main quake, causing new casualties and damages including landslides, mudslides and quake lakes. It is the deadliest and worst earthquake since the founding of the People's Republic of China in 1949.

The earthquake and the secondary disasters caused severe casualties and property damages. 417 counties (city and region) of ten provinces and municipalities were affected, covering Sichuan Province, Gansu Province, Shaanxi Province, and Yunnan Province, occupying a total of 500,000 km^2 . In the 51 counties of the most destroyed region and the destroyed region with a total area of 130,000 km^2 , the quake caused around 70,000 known deaths and 200 million destroyed houses. Beichuan County and Yingxiu Town were devastated. In addition, infrastructure including 15 highways and the Baocheng railway were damaged. Electricity and water supply, as well as communication were cut down. Many of the enterprises were closed, while offices, schools and hospitals were destroyed. Some of the agricultural land and facilities were also ruined.

Nature has been playing an important role in the development of human civilization. To some extent, history is the process of understanding of, adaptation to and use of nature by mankind. Wenchuan Earthquake is a natural disaster causing a lot of pain and sufferings.

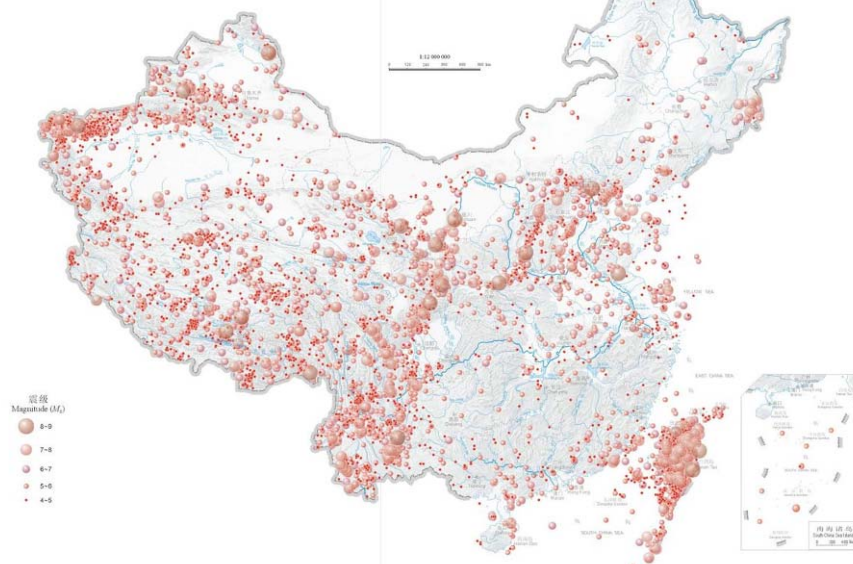
In the meantime, it is a lively example showing the relationship between man and nature, displaying plenty of information such as geology, disaster-preparedness measures and disaster relief.

The Chinese government received credit for its responsiveness in the rescuing efforts and its respect for human rights. Immediately after the earthquake, the Chinese Government and the Chinese people went all out to carry out the rescue operation and disaster relief for victims. The tangible and intangible heritage brought about by the earthquake is the common heritage of mankind, which needs to be preserved forever. Building an earthquake museum will be one of the best ways to commemorate record and transmit the heritage of earthquake, which will be a significant task in the reconstruction.

II. Wenchuan Earthquake Heritage System

China is one of the countries facing with most frequent earthquakes. 1/3 of the severe earthquakes in the world happen on the territory.

中国地震震中分布 (2300B.C.~2000A.D., $M_s \geq 4$)
Earthquake Epicenter Distribution of China



(Earthquake Epicenter Distribution of China, "Chinese National Geography", 2008, 6)

The preservation of earthquake site and heritage as national cultural and natural

heritage can contribute to the promotion of nation unity, popularization of earthquake science and information, as well as improvement of national emergency response mechanism.

Therefore, it is necessary to preserve an earthquake site of certain value as a complete heritage system. **A so-called “complete heritage system” is a spatial concept, with the macro scope of 500,000 km² earthquake-affected area spanning through Sichuan, Gansu, Shaanxi and other Provinces, with the middle scope of 130,000 km² earthquake-destroyed area covering cities and counties, and with the micro scope of earthquake-devastated area covering towns and villages. The above-mentioned three spatial levels constitute the “complete heritage system”, i.e. the Wenchuan Earthquake Heritage Sites.**

III. The Site Museum Preserving the Authenticity of the Earthquake

Site

According to the preliminary analysis, the most seriously destroyed Beichuan County earthquake site can be chosen as the center of the heritage system, based on which the Earthquake Site Museum can be established. Beichuan County was devastated by the earthquake causing a lot of casualties and property losses. Decision has been made to reconstruct the county in another place to preserve the area as an earthquake site. Combined with the museum architecture in Leigu Town, Beihcuan County is the best place to be considered as earthquake site museum.



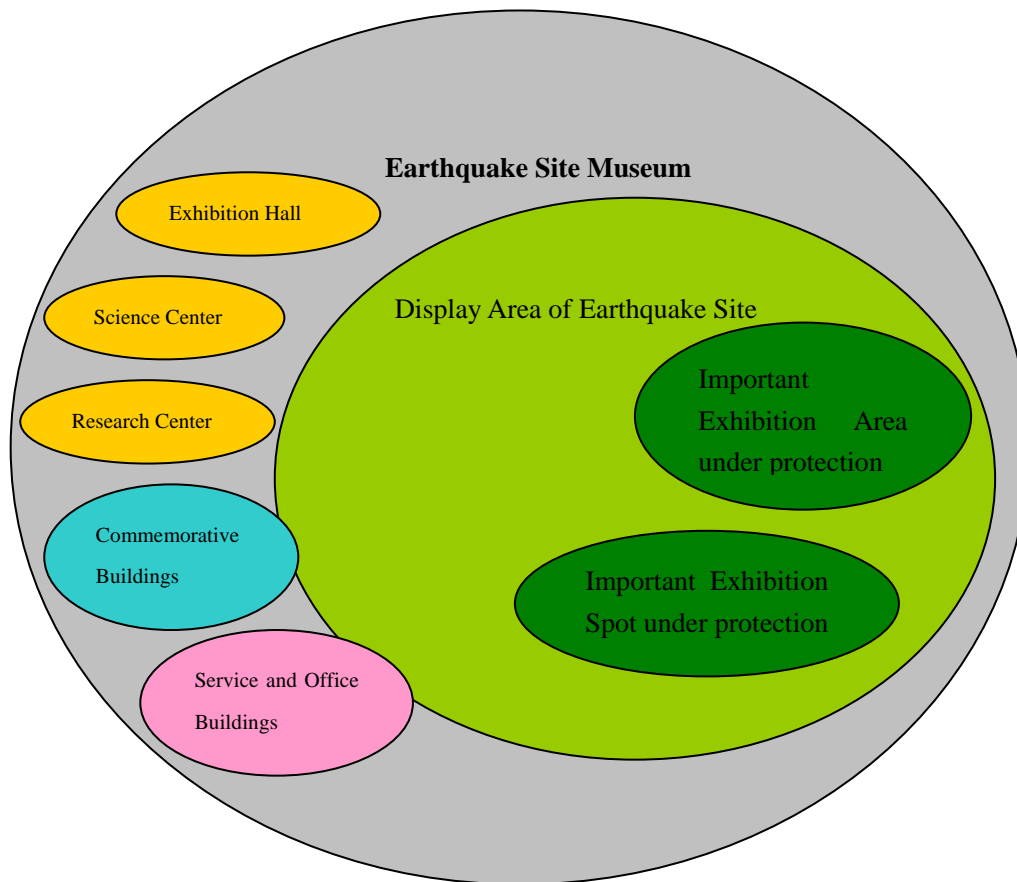
(Beichuan County before the Earthquake)



(Beichuan County after the Earthquake)

Together with the new Beichuan County in Bandengqiao, the museum exhibition halls and the service area to be located in Leigu Town link the earthquake museum with the Mianyang City as well as important road connections. Though the exhibition halls and service area will be within the earthquake zone, the geological condition and anti-earthquake design will ensure its safety. In addition, the identified area for the museum architecture in Leigu Town meets the standards to build a national level museum.

The earthquake museum will cover the whole Beichuan County as display area of the earthquake site, important exhibition spots or area under particular protection, display halls of objects, commemorative buildings for the victims, and interactive Science Popularization Center and Research Center. In the meantime, local culture, traditions of ethnic groups and emotional factors of local residents will be taken into consideration in the arrangements of the objects. Also the protection of cultural heritage and bio-environment, as well as development of social economy and culture will be included in the overall reconstruction plan.



(Earthquake Site Museum Framework)

In terms of overall framework and details, the design of the earthquake museum should reflect the theme of “Survival in Disaster and Revival in Remains”. The visiting route will scientifically link site/spots and functional areas to lead the audience from grief and silence to relief and hope. Plants will also be used to help convey the theme of the museum.

Overall protection with highlighted exhibition-the protection of cultural heritage does not only refer to the cultural object itself but also the surrounding environment, which is an important part of authenticity and integrity. The most important value of the Beichuan County earthquake site is to exhibit the historical moment of the happening of the natural disaster, the devastating power of the earthquake, and the unity of mankind which shall be passed on to future generations. Therefore, it is more significant to preserve the valuable cultural heritage, trace and site as well as the surrounding environment than only preserving the heritage itself. Twisted houses, crashed buildings by landslide, broken automobiles in the street, large rocks falling down from the mountain, and traces on the road should be

kept as an overall site at its original place. In this way the onsite earthquake museum will bring visitors genuine experiences of the power of nature, value of life and spirit of the nation.

For such large scale site, various means of preservation methods shall be used to classify ordinary site and major site and spot. According to evaluation and protection principles, typical and special spots/area (e.g. former address of Beichuan Middle School, places where the survivors were rescued, seismic fault, and former address of a typical community or street) shall be chosen as major spot/area under protection. The rest shall be classified as ordinary site. In this way the whole site is presented with major spot/area highlighted.

Preservation of ordinary site and major spot/area are different according to their different features. Ordinary site can be preserved as background of the earthquake site, while major spot/area should be preserved and exhibited scientifically. Consequently the protection of the site can be improved.

Harmony with nature and dynamic presentation-the Wenchuan Earthquake revealed the overwhelming power of nature and the importance of a harmonious relationship between man and nature. Building the Wenchuan Earthquake Site Museum should obey this principle and should not isolate the site from its environment.

Protection and presentation of the ordinary site should be dynamic. After investigation and cleaning, plantation shall be used to reinforce the site to ensure safety and can be used as background of the museum. Of course dynamic protection and presentation also means monitor and control of the species and growing speed of the plantation.

In addition, architecture of the museum should be in harmony with the environment in terms of size, material and color. Energy-saving and environmental protection should be included to reduce effect of human activities to nature.

People oriented Exhibition-the arrangement of functional areas and the display of objects should be people oriented, meeting the diversified demands of visitors (educational /commemorative purposes). Interaction between visitors and the museum should be

encouraged, such as allowing visitors to go inside a reinforced major site to experience. The Science Popularization Center shall include earthquake simulation facilities to provide a genuine experience of earthquake. The design and layout of the earthquake site area, commemorative building area and the exhibition area should be reasonable with adequate service facilities and road access. Facilities for the disabled and group visitors shall be included as well.

In addition, mood of the visitors shall be guided from depression and grief to gratitude and hope, understanding the theme of “renascence from ruins and rise from the tortures”.

Harmony in culture and regional development-since ancient time this region has been the region for culture exchange for ethnic groups in the southwest. The famous scholar Mr. FEI Xiaotong commented this region as “Corridor for Zang and Yi People”, while Mr. TONG Enzheng used the phrase of “Half-Moon Shaped Region for Culture Transmission in rim land”. Beinchuan County is the only Qiang People’s Autonomous County in which other ethnic groups also live. Culture harmony should be emphasized when building the earthquake museum in consideration of local culture. For example, the forest behind the mountain of each Qiang village is considered as a sacred place where god lives in. Therefore in the site the heavily populated area of Qiang people shall be identified by planting fir trees or cypress which are worshipped by the Qiang people.

The Wenchuan Earthquake Site Museum project is challenging which needs to be combined with the reconstruction plan, especially the reconstruction of the new Beichuan County. In the region development planning, attention shall be paid to the the relationship of the museum with tourism development, transportation, urban development zone, especially with the Mount Qingcheng and Dujiangyan Irrigation System World Heritage site, the Wolong Natural Reserve, and Chengdu city. It is hoped that by careful planning the regional development plan can be coordinated.

IV. Conceptual Planning

Main functions of the earthquake museum are as witness and presentation, commemoration and pondering, caution and retrospect, science population and education, as well as research and development. The earthquake site museum is around 10 km², covering the site exhibition area, commemorative area, exhibition architecture area, service area, Leigu Town, the Beichuan County and its surrounding environment.

Main components are as below:

Introduction Area-bringing into memory

Since the Bandengqiao Town is close to Mianyang City with relatively good road connections, it will be the introduction area with necessary facilities established.

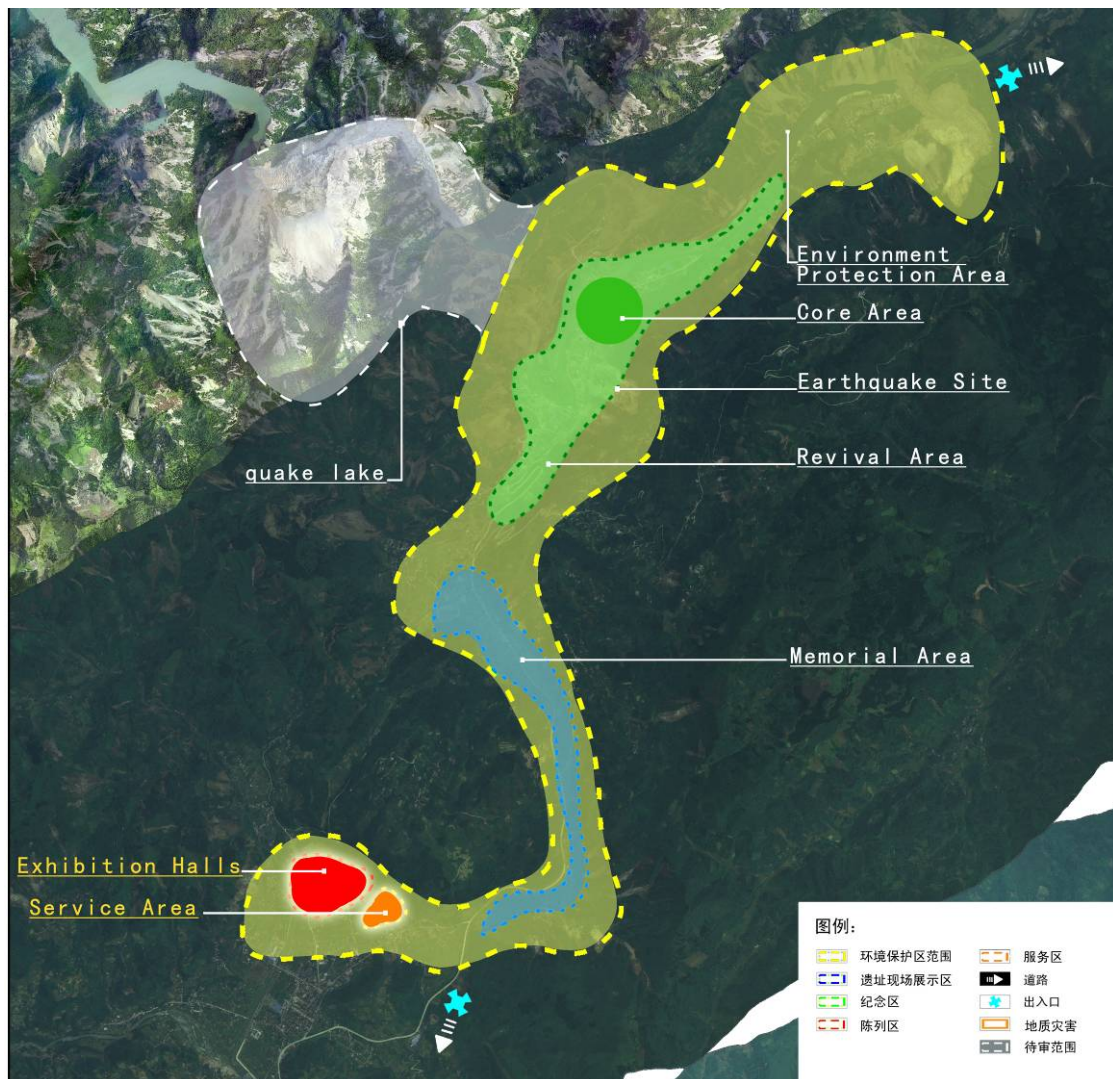
Exhibition architecture area and service area- **experiencing the shock**

Leigu Town will be chosen as the exhibition architecture area and service area due to its relatively good geological condition. Based on the original infrastructure and service facilities, new exhibition architecture and management offices will be established. ◦

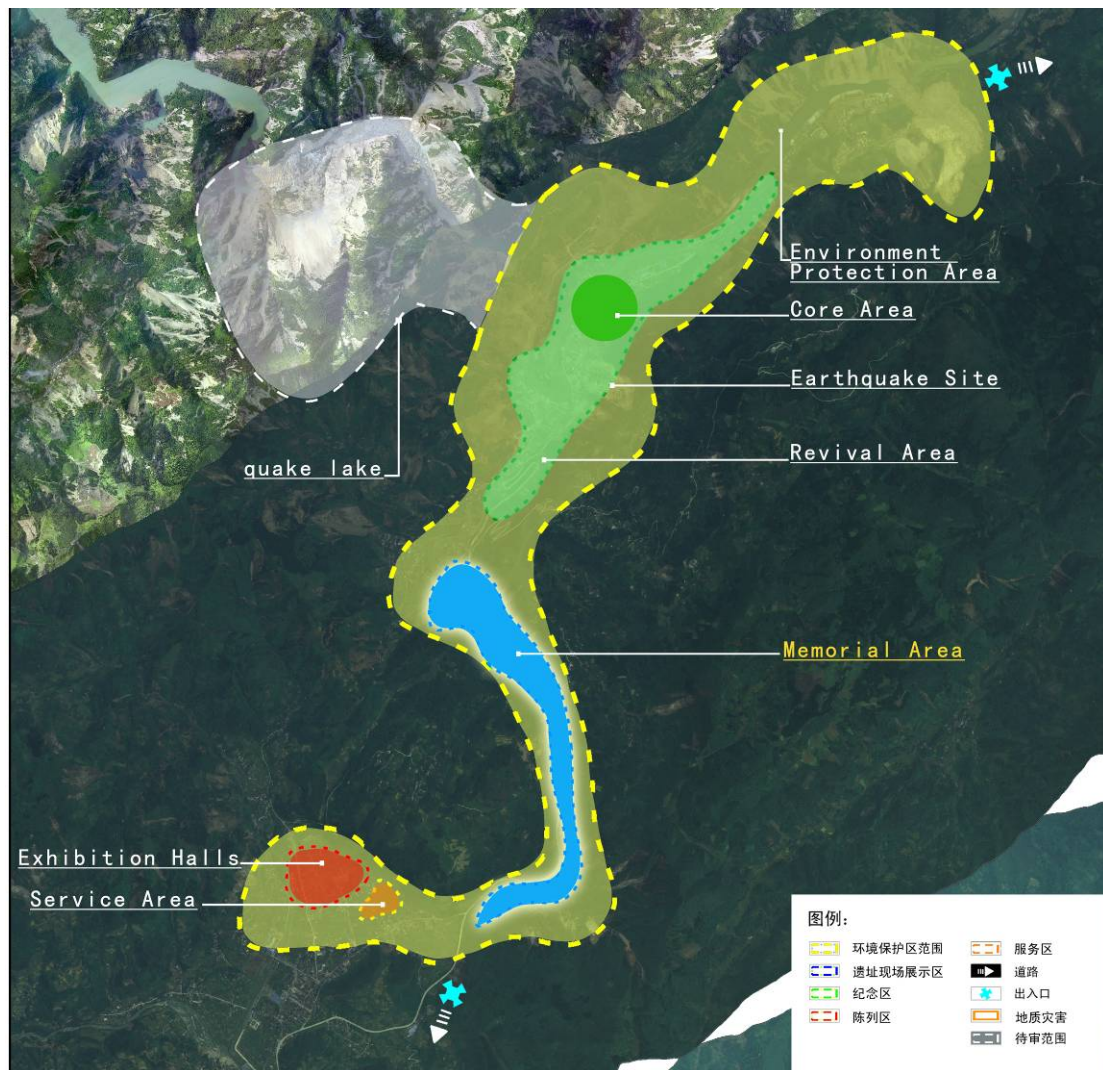
Commemorative area-condoling and pondering

The 4 km long road between the Leigu Town and the Beichuan middle School together with the Beihcuan Middle Scholl will be the commemorative area. A commemorative pagoda will be established in the Beihcuan Middle School for visitors to see the whole earthquake museum site.

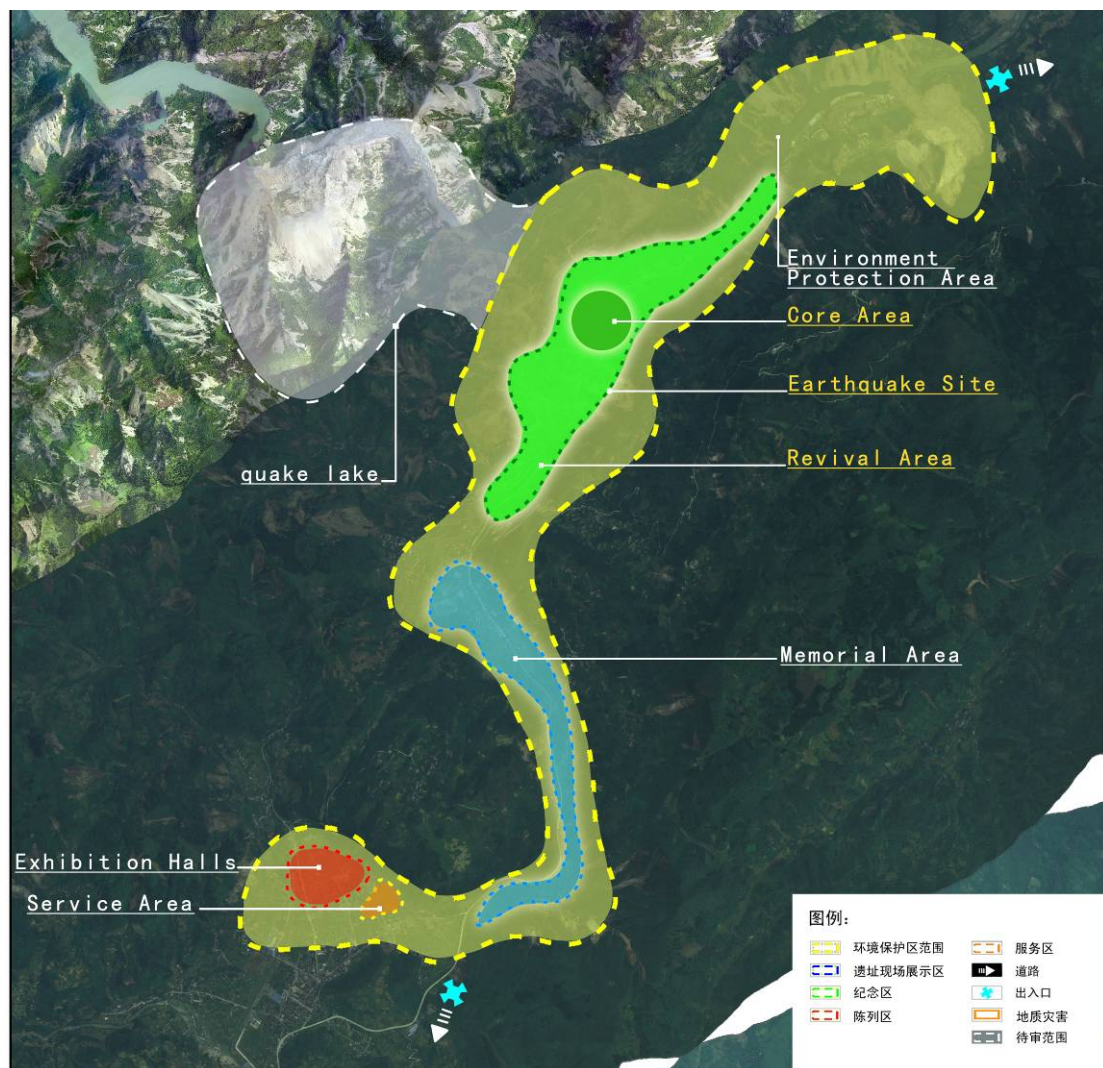
Earthquake site exhibition area-Looking into the future with hope



The earthquake site museum will include the exhibition architecture area (the part highlighted in red) and the service area (the part highlighted in orange) in Leigu Town; the earthquake exhibition site of Beichuan County; the commemorative area which is between the Leigu Town and the Beihcuan County, as well as the Beichuan Middle School; the surrounding environment which includes natural disasters like landslide and landslip. Whether the Tangjiashan quake lake (the part highlighted in grey) will be included depends on the evaluation of experts in hydrotechnics and geology.



Commemorative area (the part highlighted in blue) includes the Disaster Relief Center in Beichuan Middle School where commemorative buildings can be established, and the 4 km road between Leigu Town and the Beichuan Middle School where the memorial walls with names of the victims can be established.



The most striking part of the earthquake site museum will be the exhibition area (the part highlighted in green), i.e. the Beichuan County. The exhibition site is the last part of the museum which presents a genuine and complete disaster-destroyed site. Through visiting the site it is hoped that the visitors could go through the emotional process of turning grief to hope. The moment when the earthquake happened is demonstrated through the “Core Area”- the preserving street, architecture and objects. The earthquake site museum in itself is also a dynamic record of the happened and happening disaster. The whole natural progress will be seen through the “Revival Area” –the ruins around the Core Area, while the site will be covered by plantings and become part of the surrounding mountains. However, lives will

continue in the ruins as time passes by.

It is planned that the Wenchuan Earthquake Site Museum can be completed in 5-8 years with the total investment of 0.15-0.2 billion US dollars. Lots of preparation work needs to be done, such as detailed geological disaster assessment of the surrounding areas, the reconstruction of roads and so on. It remains a challenging problem for the future years.

V. Future- existence and development of mankind

Museums are aiming at recording, educating and transmitting.

The Wenchuan Earthquake is not only a disaster for one nation but also for the world. The history of man is a balancing relationship between man and nature. How to keep the harmonious relationship with nature should never be forgotten. Issues including man and the Nature, sustainable development and eco-civilization need to be taken into serious consideration from now on.

Lessons have been learned from the natural disaster which have become a common heritage. Establishment of the earthquake site museum is the task and obligation to be fulfilled by China.

The Wenchuan Earthquake Museum will be the first one worldwide to preserve the whole earthquake site, which will be an immortal milestone in the history.