

The full title of the paper: Consideration on Great Impact of Natural Disasters on Cultural Landscapes and Cultural Heritage and Sustainable Protection / Conservation Measures, with a Particular Focus on East Japan Great Earthquake of 11 March 2011

The chosen sub-theme: Landscape as Cultural Habitat

Keywords: natural disasters, earthquake, tsunami, cultural landscape

The author's name and contact details:

Dr Kunie SUGIO

PREC Institute Inc. Kojimachi 3-7-6, Chiyodaku, Tokyo, 102-0083, Japan

Tel: +81 3 5226 1103 / Fax: +81 3 5226 1112

E-mail address: k-sugio@prec.co.jp

ICOMOS membership number: Japan/ICOMOS (JP3435)

In 2004, a super-large earthquake occurred off the coast of Sumatra Island, Indonesia. The magnitude of the earthquake was 9, which exceeded the scale of any previously recorded earthquake in the history of the region. This shows that it is not sufficient to prepare ourselves for future earthquakes based on the historical records. Disasters that significantly affect cultural heritage, natural heritage, cultural landscapes, and natural landscapes are not limited to natural disasters, but there are also anthropogenic disasters. As for anthropogenic disasters, we are seeing the frequent occurrence of wars and conflicts between ethnic groups and religious groups. As ethnic groups are debilitated and many people are displaced as refugees, the destruction of many cultural and natural heritages and the natural environment is accelerated. Also, since it is technically difficult to predict the occurrence of natural disasters, it is necessary to recognize that any country and any location of an important heritage (such as World Heritage) could be attacked by a large-scale natural disaster.

According to the 4th assessment report of the IPCC (International Governmental Panel on Climate Change), the global average temperature will increase 1.1 degrees to 6.4 degrees Centigrade in the end of the 21st century in comparison with the end of the 20th century. There are concerns about the swelling of seawater due to higher temperature, the erosion of the seacoast due to higher sea level, and stronger waves. Among the impacts of climate change on typhoons, storms, and other climatic disasters, strengthened drought triggers a chain reaction of desertification, further affecting human health, the natural environment, cultural heritage, ecosystems, etc. It is inevitable that the world sees more diverse and frequent disasters inflict large damage and destruction on World Natural and Cultural Heritages, other important cultural heritages, and the living environment of people, making it very challenging to sustain and pass them on to future generations. We need to take many actions to sustain natural and cultural heritages and natural and cultural landscapes, so that we can pass them on to future generations.

Japan suffered much from the East Japan Great Earthquake that occurred in 2011. It is becoming a regular experience to see climatic disasters in Japan. It is certain that natural disasters will occur wider at the global scale. The author analyze the experience of the damage caused by the East Japan Great Earthquake and the on-going recovery efforts, with a view to identifying issues from the perspectives of the conservation and management of cultural properties and then present future guidelines. It will be a matter of urgency for ICOMOS to develop guidelines for disaster countermeasures for cultural heritage such as World Heritage.