

2nd World Tsunami Museum Conference 2018

Roles of Tsunami Museums from Chronological Perspectives:

Keeping the Memories and Lessons Alive and Passing Them Down for Future Generations

Tokyo, 30 November

Conference Report

Organizers	United Nations Office for Disaster Risk Reduction (UNISDR) Office in Japan, Ministry of Foreign Affairs (MOFA) of Japan, Economic Research Institute for ASEAN and East Asia (ERIA)
Co-organizers	International Council of Museums Asia-Pacific Alliance (ICOM-ASPAC), Japanese National Committee for ICOM, Tokyo National Museum
Supporters	National Resilience Promotion Headquarters, Cabinet Office of Japan, Ministry of Land, Infrastructure, Transport and Tourism (MLIT) of Japan, Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan, Japanese Association of Museums, Japan International Cooperation Agency (JICA)
Cooperation	International Research Institute of Disaster Science (IRIDeS) Tohoku University



UNISDR
United Nations Office for Disaster Risk Reduction



外務省
Ministry of Foreign Affairs of Japan



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About the Conference

In December 2015, a resolution jointly proposed by 142 countries to designate November 5 as World Tsunami Awareness Day (WTAD) was adopted by consensus at the United Nations General Assembly. Japan took a leading role for the creation of WTAD to raise public awareness of the risk caused by tsunamis and to enhance tsunami countermeasures. The designation of November 5 comes from the famous “Inamura-no-hi” story about Hamaguchi Goryo, a village leader in Hirogawa-cho (Wakayama Prefecture), who saved the lives of village inhabitants by setting fire to his sheaves of rice, thus quickly disseminating information about a giant tsunami triggered by the Ansei Nankai Earthquake on 5 November 1854. This led to the evacuation of the village to high ground, and he then made an effort to build back better. In later years, “Inamura-no-Hi no Yakata”, or the Hall of the Fire of Rice Sheaves, was established in Hirogawa-cho to hand down the experiences and lessons learned from the tsunamis they experienced to future generations.

Tsunami museums have been established around the world, such as the Pacific Tsunami Museum in Hawaii and Tsunami Museum in Indonesia, preserving images of tsunami damage and records of measures taken. It is important to pass on these records kept in tsunami museums to the next generation, to share these experiences and lessons learned with the world, and to prepare against future tsunamis, which may strike at any moment.

In light of the above, the 1st World Tsunami Museum Conference (WTMC) was held in Ishigaki City (Okinawa Prefecture) on 5 November 2017. The museums and institutions around the world participated in the conference to share their knowledge and experiences and held active discussions on key challenges and actions to effectively pass down the lessons learned from the damages caused by tsunamis to the future generations. The representatives from the following museums and institutions presented their activities and experiences at the event: Tsunami Museum in Banda Aceh, Indonesia; Bursa Disaster Training Center in Bursa, Turkey; Community Tsunami Education Center and Tsunami Museum in Telwatta, Sri Lanka; Disaster Reduction and Human Renovation Institute in Hyogo, Japan; Hiroshima City Ebayama Museum of Meteorology in Hiroshima, Japan; Inamura-no-Hi no Yakata in Wakayama, Japan; International Tsunami Museum in Khao Lak, Thailand; Museum of Lisbon in Lisbon, Portugal; National Office of Emergency of the Interior Ministry (ONEMI) of Chile; and Pacific Tsunami Museum in Hawaii, USA.

Considering that the year 2018 commemorates the 25th year since the Hokkaido-Nansei-Oki Earthquake in 1993 (230 people dead or missing), the conference in 2018 focused on “chronological perspectives” and discussed the evolving roles and challenges of tsunami museums at each phase of post-disaster period and onwards, as well as discussion of the efforts and activities to preserve experiences of, and lessons learned from disasters. 156 participants from 17 countries attended the conference.

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Participating Museums and Institutions



Okushiri Isle Tsunami Museum

Hokkaido, Japan

Hokkaido Nansei-Oki Earthquake on July 12, 1993

Established in 2001

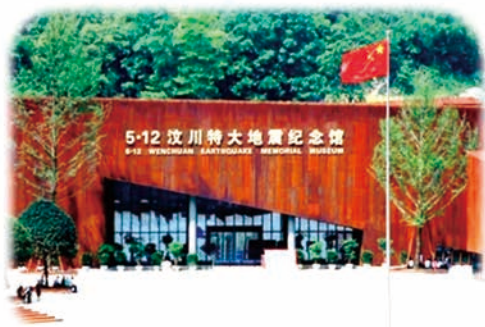


Tsunami Museum

Banda Aceh, Indonesia

Indian Ocean Earthquake on December 26, 2004

Established in 2009



5.12 Wenchuan Earthquake Memorial Museum

Sichuan, China

"5.12" Wenchuan Earthquake on May 12, 2008

Established in 2013



Ruins of the Great East Japan Earthquake:

Sendai Arahama Elementary School

Miyagi, Japan

Great East Japan Earthquake on March 11, 2011

Established in 2017



National Office of Emergency of the Interior Ministry (ONEMI)

Chile

Program

Roles of Tsunami Museums from Chronological Perspectives: Keeping the Memories and Lessons Alive and Passing Them Down for Future Generations

9:30 **Opening Session**

Moderator: **Yuichi Ono**, Professor of IRIDeS, Tohoku University

Opening Remarks:

Yuki Matsuoka, Head, United Nations Office for Disaster Risk Reduction (UNISDR) Office in Japan

Welcoming Remarks:

Akiko Yamanaka, Special Advisor to the President, Economic Research Institute for ASEAN and East Asia (ERIA)

Masami Zeniya, Executive Director, Tokyo National Museum

Remarks by Guest:

Teru Fukui, Member of the House of Representatives, Liberal Democratic Party of Japan

Part 1: Passing down lessons and communicating about the threats of disasters from generation to generation

Moderator: **Yuichi Ono**, Professor of IRIDeS, Tohoku University

9:55 **“Importance of passing down experiences and communicating about threats of tsunami between generations”**

Fumihiko Imamura, Director of IRIDeS, Professor of Tsunami Engineering, Tohoku University

10:05 **Session 1: “How should disasters and threats of tsunami be recorded and communicated?”**

Keiko Adachi, Guide, Okushiri Isle Tsunami Museum, Japan

Hafnidar, Head, Tsunami Museum, Indonesia

Feng Zhengbi, Director, 5.12 Wenchuan Earthquake Memorial Museum Management Center, China

10:50 **Session 2: “Efforts and measures by governments to preserve records and memories of tsunami”**

Kazuko Kohri, Mayor of Sendai City

Ricardo Toro Tassara, National Director, National Office of Emergency of the Interior Ministry (ONEMI), Chile

11:20 **Panel Discussion**
Panelists:
Presenters of Session 1 and 2

11:50 **Break**

Part 2: Towards conservation and inheritance of the memories of disasters

Moderator: **Yuji Kurihara**, Executive Vice Director, Kyoto National Museum

12:05 **Session 1: “Importance of communication and information at the time of disasters”**
Mirta Lourenço, Chief, Section for Media Development and Society, Division of Freedom of Expression
and Media Development, Communication and Information Sector, UNESCO

12:25 **Session 2: “Conservation of cultural heritage suffered from the Tohoku Region Pacific Coast
Earthquake and tsunami”**
Nobuyuki Kamba, Emeritus Member, Tokyo National Museum

12:45 **Panel Discussion**
Panelists:
Presenters of Session 1 and 2,
Mitsuru Haga, Professor, Tohoku University
Tomohiro Akutsu, Chief, Preservation Section, National Archives of Japan

13:15 **Closing Session**
Summary:
Yuichi Ono, Professor of IRIDeS, Tohoku University

Closing Remarks:
Johei Sasaki, Executive Director, Kyoto National Museum
Hiroyuki Shimatani, Executive Director, Kyushu National Museum

Biography of Speakers and Moderators

Opening Session

Teru Fukui

Member, House of Representatives

Japan



Graduated from Tokyo University. Started his career in the Ministry of Construction. Elected for the first time as a member of the House of Representatives in 2000. Serves as Acting Director-General, International Bureau, Liberal Democratic Party (LDP). Held positions including Minister of State for Okinawa and Northern Territories Affairs, Minister of State for Consumer Affairs and Food Safety, Minister of State for Ocean Policy, Minister in charge of Territorial Issues (all four posts in 2018), State Minister of Education, Culture, Sports, Science and Technology (2012), Parliamentary Vice-Member of Agriculture, Forestry and Fisheries (2006), Director of Fisheries Division, and Director of Land, Infrastructure and Transportation Division, Policy Research Council of LDP.

Akiko Yamanaka

Special Advisor to the President of Economic Research Institute
for ASEAN and East Asia (ERIA)

Japan



Current posts include Senior Diplomatic Fellow of Cambridge Central Forum, President of International Tsunami Disaster Prevention Society, and Visiting Professor of Shandong Uni. Previous posts include Special Ambassador for Peacebuilding of MOFA, Visiting Professor of Graduate School of Hokkaido Uni., the United Nations Uni. and Churchill College of Cambridge Uni., Senior Visiting Researcher at St. Antony's College, Oxford Uni., Harvard Uni. and CSIS in USA, and Former Parliamentary Vice-Minister for Foreign Affairs.

Masami Zeniya

Executive Director, Tokyo National Museum

Japan



Joined the Ministry of Education in 1973. Held positions such as Deputy Commissioner for Cultural Affairs, Director General of Life-long Learning Policy Bureau, Director General of Elementary and Secondary Education Bureau, and Vice Minister of Education. Present post since August 2009. He is leading museums in Japan as the President of Japanese Association of Museums and Vice-chair of ICOM-Japan.



Yuichi Ono

Professor, International Research Institute of Disaster Science (IRIDeS) at Tohoku University

Japan

Received a Ph.D. in Geography from Kent State University. Previously worked for World Meteorological Organization, United Nations Office for Disaster Risk Reduction, and United Nations Economic and Social Commission for Asia and Pacific. Current post since 2012. Specializes in tornado disaster risks, disaster damage and loss statistics, and international policy making in disaster risk reduction. Director-General of the World Bosai Forum.

Part 1



Fumihiko Imamura

Director of International Research Institute of Disaster Science (IRIDeS) and Professor of Tsunami Engineering, Tohoku University

Japan

Associate Professor of School of Civil Engineering, Asian Institute of Technology in Thailand during 1993-1995. Professor of Tsunami Engineering since 2000, widely contributing to the process of recovery and reconstruction of the affected area in Indian ocean after the 2004 tsunami. Member of study group of reconstruction design council in response to the 2011 Tohoku earthquake and tsunami.



Keiko Adachi

Guide, Okushiri Isle Tsunami Museum

Japan

After graduating from Hakodate Otsuna High school, she joined then-Okushiri Fisheries Cooperative. While interacting with fisheries operators at work, she experienced Hokkaido Nansei-Oki Earthquake in 1993. After having engaged in fisheries reconstruction in Okushima Isle, she holds the current post since 2001 when the Museum opened. While sharing her own experience, she transmits to visitors lessons learned about the earthquake disaster damage.



Hafnidar

Head of Tsunami Museum and Head of Historical Section of Aceh Culture and Tourism Department

Indonesia

Received a Master's degree with a specialization of Museum Studies from University of Indonesia. Worked for Balai Kirti Presidential Museum from 2013 to 2014. Head of collection and education section at Aceh Museum from 2016 to 2018. Holds the current posts since 2018.



Feng Zhengbi

Director of 5.12 Wenchuan Earthquake Memorial Museum
Management Center

China

Since 2008, Ms. Feng Zhengbi has been committed to providing training on earthquake disaster risk avoidance, secondary disaster prevention, disaster reduction training and research on the art of disaster exhibition work. Holds the current post since 2016. Also serves as the Undersecretary of Propaganda Department in Mianyang Municipal committee since 2016.



Kazuko Kohri

Mayor of the City of Sendai

Japan

Born in Sendai City. Graduated from the Faculty of Economics at Tohoku Gakuin University. Joined Tohoku Broadcasting Co., Ltd. (TBC) in 1979. Elected to the House of Representatives for four terms. Served as the Parliamentary Secretary of Cabinet Office and Parliamentary Secretary for Reconstruction. Holds the current post since August 2017.



Ricardo Toro Tassara

National Director,
National Office of Emergency of the Interior Ministry (ONEMI),
Chile

Chile

He achieved the rank of General in the Chilean Army (ret.); during his military career, he was a military observer with the United Nations in the Middle East, military attaché at the Chilean Embassy in South Africa, and served with MINUSTAH in Haiti as Head of Operations and later as Deputy Commander. On 20 December 2012, he was named as National Director of ONEMI.

Part 2



Yuji Kurihara

Executive Vice Director, Kyoto National Museum

Japan

Previously worked for Ministry of Education, Agency for Cultural Affairs, and Tokyo National Museum. Holds the current post since 2016. Specializes in museum policies and has visited more than 10,000 museums all over the world. Currently striving with all his energy for the success of ICOM Kyoto 2019.



Mirta Lourenço

Chief, Section for Media Development and Society, Division of Freedom of Expression and Media Development, Communication and Information Sector, UNESCO

Holds three M.A.: from Université Paris 1 - La Sorbonne, Stockholm University - Stockholm Business School, and University of Buenos Aires. Served as the Programme Specialist for Education Sector (1991 - 1993), for Executive Office of the Director-General (1993 - 1998), and for External Relations and Cooperation (1998 - 2007), at UNESCO. Current post since 2007. Worked for the private sector and NGOs prior to UNESCO.



Nobuyuki Kamba

Emeritus Member, Tokyo National Museum

Japan

Received a Ph.D. from Tokyo National University of Fine Arts and Music. Head of Conservation of Tokyo National Museum until 2015 and Emeritus Member of the Museum at present. His specialty is clinical conservation of museum objects. He acts widely as an activist of preventive conservation and disaster risk management of cultural properties.



Mitsuru Haga

Professor, Tohoku University

Vice-Chairperson, Memory of the World Committee for Asia and the Pacific (MOWCAP) Bureau, UNESCO

Japan

Received a Ph.D. from Tokyo University. Special fields are Ancient Greco-Roman-Central Eurasian Archaeology and Higher Education Theory. Following the path of Alexander the Great, excavated a Greek-Kushan city in Uzbekistan and has been studying the diffusion of Greco-Roman iconography towards the East. Vice-Chairperson, Memory of the World Committee for Asia and the Pacific, UNESCO and Vice-Chairperson, Japanese National Committee for UNESCO.



Tomohiro Akutsu

Chief of Preservation Section at National Archives of Japan

Japan

Studied paper restoration techniques at Institute for Art and Restoration L'ambiente (Tokyo, Japan) and Palazzo Spinelli (Florence, Italy).

Working on conservation and preservation of documents at National Archives of Japan since September 2007. Participated in rescue operations of documents damaged by water at various areas affected by disasters including Great East Japan Earthquake and the flood in Joso City, Ibaraki.

Closing Session



Johei Sasaki

Executive Director, Kyoto National Museum

Japan

Received a Ph.D. and M.A. in aesthetics and art history from Kyoto University. President of Independent Administrative Institution, National Institutes for Cultural Heritage until last year. Has been working consistently on the administration of cultural property protection and the study of Japanese art history.



Hiyouki Shimatani

Executive Director, Kyushu National Museum

Japan

Born in 1953. Graduated from Tokyo University of Education, majoring in Sho-Calligraphy Art. Served as Curatorial Research Department Director and Executive Vice Director at Tokyo National Museum, and Research Coordinator at National Institutes for Cultural Heritage Secretariat. Holds the current post since 2015. Gave a keynote lecture “The roles of museums in times of major disasters” in Kumamoto in 2017.

Opening Session

**WORLD
TSUNAMI
AWARENESS
5 NOVEMBER 2018 DAY**



Opening Session

Moderator

Yuichi Ono

Professor of IRIDeS, Tohoku University

This year, a series of large-scale disasters caused by natural hazards took place all over the world. Most recently, the earthquake and tsunami hit Sulawesi, Indonesia on 28 September. How can we stop such disasters from happening? Mr. Ono, who served as a moderator for this conference, posed the question in opening the conference. The Sendai Framework for Disaster Risk Reduction 2015-2030 provides the key to answering such question as the framework aims for the substantial reduction of disaster risk and losses in lives, livelihoods, and health and in the economic, physical, social, cultural, and environmental assets of persons, businesses, communities, and countries. Outlined by the framework as one of the Priorities for Action is the investment in disaster risk reduction (DRR). One of the most fundamental ways of investing in DRR, he stated, is to make efforts not to forget the disasters. This is where tsunami- and disaster-related museums play a crucial role.

At the 1st WTMC, held in Ishigaki City (Okinawa Prefecture) in November 2017, participating museums shared best practices and challenges and the conference gave birth to a soft network among the museums for further collaboration. Indeed, the collaboration is flourishing. For example, since the conference last year, Tohoku University provided the International Tsunami Museum in Khao Lak, Thailand, with tsunami deposit from the 2004 Indian Ocean Tsunami and the one that hit the area some 600 years ago. Additionally, the University, in partnership with a private company and Japan International Cooperation Agency (JICA), provided assistance to improve the Tsunami Museum in Banda Aceh, Indonesia.

With some participants attending the conference for the first time while others for the second time, this year's



conference aimed to build upon the success of the first conference and to further facilitate sharing of knowledge and experiences, in particular, around the theme: Roles of Tsunami Museums from Chronological Perspectives - Keeping the Memories and Lessons Alive and Passing Them Down for Future Generations.

Opening Remarks

Yuki Matsuoka

Head, UNISDR Office in Japan

Tsunamis may be rare but can be tremendously costly and result in significant loss of lives, as we have seen again on 28 September in Indonesia when an earthquake and subsequent tsunami caused the loss of over 2,000 lives and left over 4,000 people injured.

Unfortunately, the economic impacts of such disasters can have far-reaching effects on development, growth, and society, Ms. Matsuoka stressed. We have learned that this event has resulted in an estimated US\$ 530 million in economic losses, destroyed a lot of critical infrastructure, and left almost 70,000 people displaced. The final figures may well be larger.

Noting that 5 November 2018 marked the third time we observed WTAD, Ms. Matsuoka added that, this year UNISDR has been promoting a reduction of disaster economic losses (in relation to global GDP). Over the last twenty years, economic losses from tsunamis have come to at least US\$ 280 billion including the 2004 Indian Ocean Tsunami and the 2011 Great East Japan Earthquake and tsunami in Japan.

Elaborating on WTAD, Ms. Matsuoka highlighted that it serves as a reminder of the importance of reducing current and future levels of risk, posed by tsunamis. Recalling the story of “Inamura-no-Hi” from 1854, the swift actions of Hamaguchi Goryo to help disseminate information, leading to the evacuation of his village to higher ground, which he then helped to build back better, remain a lesson in the importance of the value of traditional and local knowledge as well as the need to build back better and to invest in resilient infrastructure.

The 1st WTMC in 2017 was successful in its aim of strengthening cooperation between museums and welcomed as a catalyst for the creation of an international network of tsunami- and disaster-related museums. Last year’s conference also recognized that, whatever form museums may take, be it “field museums”



such as rock soil and tsunami boulders, each possessed an inherent role in passing down information and increasing public awareness on the underlying threat of tsunamis.

Building on the achievement of the previous conference, the objective of the 2nd WTMC is to examine the role of tsunami museums through a chronological perspective. Bringing together experts, the conference includes discussions on the evolving roles of tsunami museums and their efforts to preserve lessons learned from disasters.

Acknowledging that the conference was held together with the occasion of the National Convention of Museums organized by Japanese Association of Museums, Ms. Matsuoka noted the audience to be highly relevant and special for the objective of the conference.

Because museums play a vital role in educating communities, Ms. Matsuoka appreciated the co-organizers and supporters and expressed her hope for the participating museums to contribute to strengthening preparedness and building resilience of society toward future disasters and to foster further collaboration. In closing, she wished that the WTMC would continue as the unique venue for tsunami- and disaster-related museums to get together and learn from each other.

Welcoming Remarks

Akiko Yamanaka

Special Advisor to the President, ERIA

In opening her speech, Ms. Yamanaka provided a brief introduction of ERIA. Reminding us of the 2004 Indian Ocean Tsunami and the earthquake that struck Sulawesi on 28 September 2018, she stressed that disaster prevention and reduction are high priority issues in Asia. Turning her attention to various natural hazards that threaten Japan, Ms. Yamanaka, as the president of the International Tsunami Disaster Prevention Society, stated that people are quick to forget the dreadfulness of tsunamis year after year and become used to tsunami warnings, removing the sense of urgency to evacuate immediately. Moreover, the construction of large breakwaters to help safeguard communities from tsunamis can often lead to residents feeling safe and thus becoming slow in reacting to the warnings. Adding that more men than women committed suicide following the disaster in Japan on 11 March 2011, Ms. Yamanaka stressed the need for more effective disaster prevention and recovery from a human security perspective. She called for providing support such as education, resilient infrastructure including housing, and lifelines for everyone regardless of race, skin color, religion, or nationality.

Certain of many rich avenues for cooperation that will contribute to raising the consciousness of the world community, Ms. Yamanaka listed three concepts through which to understand the issues that the world faces: ensuring social resilience, addressing common interests, and establishing an “age of balance”. She added that we need to consider how we ensure the resilience of society, encompassing diverse aspects from human beings to infrastructure. Additionally, an urgent need exists to spread the concept of protecting “common interests” to those who do not yet realize the concept’s importance. She also stated that it is critical to recognize that the 21st century is the “age of balance”, as the struggle for balance between dichotomies of competing values (such



as development vs. environmental protection, group orientation vs. individualism, and national interests vs. common interests) is being waged on an international, state, and individual level.

In closing, Ms. Yamanaka cited that keeping memories of disasters and handing them over to the next generation is expected as the noble role of the tsunami museums.

Welcoming Remarks

Masami Zeniya

Executive Director, Tokyo National Museum

In expressing the great honor for Tokyo National Museum to be the venue for the 2nd WTMC, Mr. Zeniya shared that the conference coincided with the 66th National Convention of Museums, organized by Japanese Association of Museums, which celebrates its 90th Anniversary in 2018.

Gathering museums across Japan, he remarked that the theme for the convention was “Museums as Hubs”, making the discussions at this conference concerning the roles of tsunami museums relevant to the convention as well.

Recalling a personal story from his hometown in Akita Prefecture, Mr. Zeniya spoke about the 1983 Nihonkai Chubu Earthquake that triggered a tsunami. Many students from Aikawa Minami Elementary School of Kitakita City were having lunch at the beach at that time and regrettably lost their lives. More recently, students at Okawa Elementary School in Ishinomaki City (Miyagi Prefecture) lost their lives following the 2011 Great East Japan Earthquake and tsunami. These tragedies, just to name a few, demonstrate the importance of education on disaster prevention and the value of the conference such as this one.

When disasters strike, museums face an enormous challenge in rescuing cultural properties damaged by the earthquake and tsunami, Mr. Zeniya continued. He added that Tokyo National Museum, in cooperation with organizations including Japanese Association of Museums, Rikuzentakata City Museum, and Iwate Prefectural Museum, has taken a central role in recovering cultural properties after the disaster in 2011. To present to the public the status quo and the achievements of their efforts, a special exhibition entitled “The Great Tsunami of 11 March 2011 and the Restoration of Cultural Properties” was organized in 2015. Moreover, concerts had been organized with a reed



organ, salvaged from Rikuzentakata City Museum and subsequently repaired; it is one of the only three reed organs that exist today in Japan. Speaking about the concerts which moved many in the audience, he further reinforced the role of museums in rescuing cultural properties.

Mr. Zeniya concluded his speech by reiterating the significance of this conference, thanking Mr. Fukui for his efforts toward designating WTAD and organizing the conference as well as the organizers and everyone involved, and expressing his wish for a fruitful conference.

Remarks by Guest

Teru Fukui,

Member of the House of Representatives, Liberal Democratic Party of Japan

The objectives of the National Resilience Movement are to protect society and to minimize the damages caused by natural hazards such as earthquakes, tsunamis, and floods. Learning to live with the natural hazards, the movement should involve even those living outside Japan, Mr. Fukui stated in commencing his guest remarks.

In the event of an earthquake in the Nankai Trough off the southeastern coast of Japan, the estimated economic damage could be approximately JPY 1,240 trillion. To illustrate how society can reduce the damage caused by natural hazards, Mr. Fukui told the audience that public investment of JPY 38 trillion can reduce the economic damage by JPY 509 trillion. The investment is expected to reap JPY 54 trillion of tax revenue increase, he added.

Reflecting on his involvement with High School Students Summit for WTAD, Mr. Fukui shared that the participating students from around the world are recognized as the ambassadors of DRR and are expected to contribute to the National Resilience Movement in their own countries. He reaffirmed the importance of embracing the ideas that the natural hazards do exist, we should be prepared, evacuation is crucial, and sharing the goal of preventing even one human loss. Reiterating the goals of the movement, he envisioned a caring and sharing society in which nobody is left behind and feels lonely.

Mr. Fukui described a time when he visited Kuroshiro Town (Kochi Prefecture); the town is forecast to face a 34-metre-high wave if an earthquake occurs in the Nankai Trough off Japan. There, he spoke with one elderly person, Grandma Kayoko, about participating in evacuation drills; she suffered from pain in her legs and thus had been reluctant in participating in the drills. He shared with Ms. Kayoko that, many young people, after



having initially evacuated to the higher ground, returned to the lower ground to rescue the elderly and subsequently lost their lives following the 2011 Great East Japan Earthquake and tsunami. Today, Grandma Kayoko joins the drills regularly.

Reflecting on the aftermath of the disasters in 2011, Mr. Fukui said more than 100 children were taken in by their relatives as they lost their immediate families in the disaster. Expressing his determination to support the children's lives, he stated that none of these children should feel shy to express their needs and wants to their relatives: to ask for seconds at dinner, to participate in extracurricular activities which cost money, or to attend university. Extending support to such children is also the key element of the National Resilience Movement.

As a way to mainstream DRR, Mr. Fukui drew an example of a shrine in Japan as an evacuation assembly place as well as a museum, preserving the memories of tsunami and passing them down to future generations. Speaking about Kabu Island Shrine which stands on top of elevated land in Kabu Island, Hachinohe City (Aomori Prefecture), he explained that the religious practice of visiting the shrine everyday also functions as an evacuation drill in

case of a tsunami.

The National Resilience Movement must be eternal, emphasized Mr. Fukui, as only in this way would we be able to overcome our desire to forget past disasters. As years pass by, infrastructures age as well as the people who experienced the disasters firsthand. In this context, he cites that museums function to imprint the memories of disasters to our genes and thereby passing the lessons learned from and memories of the disasters onto the future generations.

Lastly, Mr. Fukui shared one unforgettable moment during the High School Students Summit in 2016 in Kuroshio Town. He recounted the voices of hundreds of students from around the world in different languages shouting in unison out towards the sea. Spurred by Mr. Yoshida, an Elementary School Principle in Kuroshio Town, the students were encouraged to not deny the nature that makes their hometown but fully embrace it. The shout out to the ocean echoed their love for the sea and their hometowns. We must continue to impart upon one another how to live in harmony with nature, concluded Mr. Fukui.

Tsunami Damage from the Great East Japan Earthquake



立山のかぶさる町や 水を打つ
前田 管隆



国土強靱化ムーブメントの大展開 —日本の生き様(文化)を世界の人々に—



Part 1

WORLD
TSUNAMI
AWARENESS
5 NOVEMBER **DAY**
2018



Part 1

Passing down lessons and communicating about the threats of disasters from generation to generation

Moderator

Yuichi Ono

Professor of IRIDeS, Tohoku University

Importance of passing down experiences and communicating about threats of tsunamis between generations

Fumihiko Imamura

Director of IRIDeS,

Professor of Tsunami Engineering,

Tohoku University

Echoing Ms. Matsuoka's remarks during the Opening Session, Mr. Imamura began his presentation by pointing out the low frequency of tsunamis and the high degree of impact they could cause. According to UNISDR, tsunamis accounted for more than 250,000 deaths and US\$ 280 billion in economic losses between 1998 and 2017. Despite this staggering data, Mr. Imamura stressed that by capitalizing on the brief time lag between when the natural phenomena (such as an earthquake and underwater landslide) occur, triggering a tsunami, and when the tsunami hits the coast, it is possible to drastically reduce human deaths and injuries from tsunamis if people evacuate properly.

To provide further scientific insight into the impacts of tsunamis, Mr. Imamura cited inundation, current, wave force, sedimentation, and tsunami fire as the diverse aspects of tsunami hazard and resulting damage it inflicts. Providing further details of each aspect, he explained that tsunami waves are composed of not just seawater but also sediments, which explains the black color of tsunami waves. As the current transports sediments, the sedimentation patterns change in the inundated area. Furthermore, tsunami currents are so strong that even large cargo ship and tankers can be washed ashore. Similarly, the wave force of a tsunami is strong enough to



wash away buildings made of concrete.

Secondary damage of tsunamis includes liquefaction and tsunami fire, which can occur in both residential and industrial areas from diverse causes. For example, following the 2011 Great East Japan Earthquake and tsunami, fires broke out as car batteries, flooded by seawater, ignited. The important thing is, he added, to prevent small fires from escalating.

Reflecting on the damage to humans, Mr. Imamura explained that people drown to death when they are caught in the tsunami. In addition, when they inhale into their lungs tsunami seawater, which contains sediments, they will have trouble breathing or develop a lung infection, called tsunami lungs.

Understanding the impacts of tsunamis, Mr. Imamura reaffirmed the importance of widely sharing the experience of disasters caused by tsunamis and the ways in which museums and universities can contribute. He urged the museums and universities to collect, manage, and exhibit records of the experiences, thereby maintaining data that can provide objective points of view. He also stressed that the institutions need to share the personal stories of suffering and challenges associated with the disasters, adding subjectivity to the records. Organizing lessons learned also imbues an element of universality, thus making the information easier to be passed on to future generations. Moreover, museums and universities can offer support in predicting

future risks of disasters and demonstrating the risks not just through figures but through images, which can speak more strongly than just numbers.

Growing up in land-locked Yamanashi Prefecture, Mr. Imamura shared that he knew the word “tsunami” but did not really understand well what it does. Having learned more about the phenomenon by studying at Tohoku University and visiting museums in different regions, he is now a professor and the expert in Tsunami Engineering. With such a personal background, he strongly advocates for the importance of education in disaster prevention and risk reduction.

Session 1

How should disasters and threats of tsunamis be recorded and communicated?

Keiko Adachi

Guide, Okushiri Isle Tsunami Museum, Japan

“I couldn’t believe my eyes. The tsunami and fire destroyed buildings and, like a former battleground of war, everything was gone.”

It was a nice day in remote Okushiri Isle, south-west of Hokkaido, with no waves and mild winds. On that night, she had gone to bed at 10:00 pm only to be woken up suddenly by strong bumps beneath her bed and a large crashing sound. Experiencing both vertical and horizontal tremors, she found herself unable to stand and had to crawl to the room of her children... After spending a night in a car with her family in higher ground to which she evacuated, she returned home. Once inside, she was shocked to find a complete mess on the floor made of the things that fell. The water and electricity were out. When she went to look out, downtown on lower ground, she couldn’t believe her eyes. The tsunami and fire destroyed buildings and, like a former battleground of war, everything was gone.



Ms. Adachi, now a guide at the Okushiri Isle Tsunami Museum, vividly recounted her memories of when the Hokkaido Nansei-Oki Earthquake of 7.8-magnitude struck at 10:17 pm on 12 July 1993, resulting in 198 precious lives lost and 26 people unaccounted for.

Travelling at breakneck speeds over 500 km per hour,

tsunami waves as high as 9 meters slammed into the coast closest to the epicenter only three minutes after the earthquake, leaving people little time to evacuate. A series of 13-meter waves hit Aonae cape within five minutes of the earthquake. Some areas experienced the approximately 30-meter run-up height of the waves.

Aonae area, where Ms. Adachi's home is located, suffered from not just a tsunami but also fire. Fueled by propane gas canisters and heating oil tanks in people's homes, fires spread and lasted for about 11 hours, consuming 198 households. Moreover, having a large fishing community, many houses and warehouses were concentrated on the coast, causing extended damages in Okushiri Town.

Nevertheless, with support from throughout Japan, 330 temporary houses were built in just 1.5 months; some of them already complete within two weeks after the earthquake. Earlier than planned, the town declared itself recovered and reconstructed just five years post-disaster.

Reconstruction efforts to prepare for future disasters

Introducing some examples of the reconstruction efforts at Okushiri Town, Ms. Adachi presented "*bokaikyo*", an elevated structure providing a temporary evacuation space, built at Aonae Port. A seawall of 14km length was also constructed with a section that rises as high as 12 meters.

Forty-two evacuation paths were created throughout the town, leading to higher ground. One of the paths has a roof over it, ensuring the safety of the evacuees in the harsh winter climate.

At Aonae Elementary School, located on low land by a river, columns on the ground floor elevate the classrooms to the second-floor level, allowing tsunami waves to pass underneath.

The houses in Aonae area are built on top of elevated land, 6 meters above sea level.

To prepare the residents for future disasters, elementary

schools conduct evacuation drills a few times a year, added Ms. Adachi. The island-wide drill is organized annually with trainees from outside the Island participating as well.

"Eight years after the earthquake, Okushiri Isle Tsunami Museum opened in 2001 to pass down the memories of the earthquake and tsunami to the future generations."

Eight years after the earthquake, Okushiri Isle Tsunami Museum opened on 1 May 2001, in order to pass down the memories of the earthquake and tsunami to the future generations. Ms. Adachi has worked for the museum since the beginning.

After the 2011 Great East Japan Earthquake, visitors from municipalities increased, recalled Ms. Adachi, feeling strongly the importance of passing down the threats of tsunamis and earthquakes. Encouragement and continued support from visitors make her feel glad that she had continued her work at the Museum to this day.

Disasters caused by natural hazards can strike anytime. Tsunamis come immediately after the earthquake. She urged that we need to be prepared to evacuate safely right away.

Finally, Ms. Adachi welcomed the audience to visit the museum and enjoy the Island, surrounded by the deep blue ocean, abundance of marine food, local products produced in the fertile land, and see the Island reconstructed and recovered following the disaster in 1993.

Hafnidar

Head, Tsunami Museum, Indonesia

Reflecting on the beginning of Tsunami Museum in Aceh, Indonesia, Ms. Hafnidar explained that the decision was made in 2007 to build a museum in order to preserve the memories of the 2004 Indian Ocean Earthquake and tsunami. The deadly tsunami claimed more than 230,000 lives and caused massive damage in the region, ravaging more than 150,000 houses and schools.

In 2007, Badan Rehabilitasi dan Rekonstruksi (BRR) NAD-Nias or “Rehabilitation and Reconstruction Agency for Aceh and Nias” commenced the museum construction. In 2009, then President Mr. Susilo Bambang Yudhoyono inaugurated the museum, offering admission to some institutions. Subsequently, in 2011, the Aceh Governor opened the museum for the public, offering free admission. From 2011 to 2018, the museum was managed under a Memorandum of Understanding (MoU) by the Ministry of Energy and Mineral Resources of Indonesia (ESDM) and Aceh Government. With the cessation of the MoU in 2018, all management of the museum now lies in the hands of Aceh Government.

Tsunami Museum today: continuous efforts by the renewed management

Today, under Ms. Hafnidar’s leadership, the museum plans to obtain an official legal status in early 2019, allowing easier access to budgetary allocations. While the current lack of legal status poses a great challenge, she noted that Tsunami Museum management has been working hard to improve the museum.

With the aim of reinforcing the functions of the museums such as research, communication, and preservation, the museum has restructured the organization in 2018. The staff base has now been expanded to close to 50 personnel, comprising 27 Visitor Service Staff and Security Technicians, 14 Educators, 2 Marketing Staff, 2 Administration Staff, 1 Registrar, 2 Curators, and 1 Museologist. Specifically, the personnel are focused on four areas of i) collection, ii) human



resources management, iii) building management, and iv) visitor program initiatives.

Moreover, the management re-inventoried the collection and launched new capacity building programs so that more staff can receive national certifications relevant to their professions. She added that the number of visitors has been increasing each year since the museum opened its door to the public in 2011.

While discussing the roles of museums, Ms. Hafnidar emphasized the use of the museum as an evacuation assembly space. The top floor of the museum functions as such.

Future visions: redesign the permanent exhibition and expand the digital archives

Meanwhile, the focus of 2019 would be to redesign the permanent exhibition, shared Ms. Hafnidar, stressing how visitors look for interactions with staff and objects when they come to the museum. In this regard, the museum intends to replace the current passive displays with interactive ones. It also plans to work with local students in creating a 4D exhibition room. Speaking of the plan to collect more oral histories and store them in digital formats, she maintained that the museum has a goal to become the center of digital archives for disasters around the world. Envisioning a museum that provides visitors even greater arrays of information, she hopes to find new partners and collaborators, including researchers specialized in disasters.

Seeking financial support to enable these endeavors, Ms. Hafnidar expressed the vision of the museum to be an inclusive institution, which not only educates its visitors

but also facilitates information sharing concerning experiences of disasters around the world.

Feng Zhengbi

Director, 5.12 Wenchuan Earthquake Memorial Museum Management Center, China

Conveying her deep gratitude on behalf of the victims of the “5.12” Wenchuan Earthquake in 2008 which claimed the lives of over 80,000 people and injured 370,000 people, Ms. Zhengbi sincerely thanked the support from around the world. Encompassing a vast disaster-affected area of 500,000 m² and crossing 10 provinces, the 8.0-magnitude earthquake resulted in economic losses of over RMB 845 billion.

To help capture the memories and records of the earthquake as well as the lessons learned from the disaster, the 5.12 Wenchuan Earthquake Memorial Museum was built in Beichuan Qiang Autonomous County, Sichuan Province. Opened for the public free of charge since May 2013, the museum has thus far attracted 16.8 million visitors including 3,582 batches of foreign researchers and government officers. Annual visitors exceed 3 million, of which around 39 percent are adolescents.

Vast earthquake ruins and artifacts preserved in the world’s largest disaster-related museum

Covering an astounding 142,300 m², the museum comprises both an interior exhibition, composed of main and sub-pavilion, and an outdoor exhibition made up of relics off-site. Equipped with a collection of over 600,000 artifacts, including nationally protected cultural properties, the main pavilion features an exhibition space of 10,800 m². The pavilion preserves the memories and records of the disaster by recreating the sites of earthquake damage as well as the process of reconstruction and recovery. The exhibition at the sub-pavilion, on the other hand, provides visitors with scientific insight into the mechanisms of the seismic event as well as information about disaster preparedness measures. The total building area of 14,280 m² makes



this museum the world largest disaster-related museum, Ms. Zhengbi stated.

The outdoor site has three elements: the earthquake relic of Beichuan County, Sha Ba earthquake fault, and Tangjiashan Lake, all preserving valuable scientific resources. Encompassing 1,200 m², the preserved site of Beichuan Country, which suffered tremendous damage following the earthquake, is said to be the largest earthquake relic in the world.

Introducing the various initiatives by the museum, Ms. Zhengbi stressed the value of reaching out to experts in China and beyond to stimulate discussions and further deepen the knowledge and expertise in DRR. For instance, the museum has organized three symposiums thus far, inviting over 80 experts from a number of countries and territories including China, Japan, and Taiwan. It has also collaborated with universities to develop DRR education material.

Reaching out widely for DRR education

Highlighting the role of the museum as an educational institution, Ms. Zhengbi presented the museum’s collaboration with schools, communities, private sectors, municipalities, and the military to organize evacuation

drills and educate the public about DRR. Citing some examples, the museum has created numerous campaigns to invite citizens to join their seminars on the occasions of various Chinese Public Holidays and other traditional festivals. The museum has organized educational activities on more than 140 occasions, reaching over 1.7 million people.

Incorporating innovative technologies is also a key to the successful educational program, Ms. Zhengbi added. To enable easier learning, the museum has created educational material in multimedia formats.

Concluding her remarks with an invitation to the audience to visit the museum, Ms. Zhengbi expressed her wish for even broader cooperation with other institutions.

Session 2

Efforts and measures by governments to preserve records and memories of tsunamis

Kazuko Kohri

Mayor of Sendai City

Located in northeastern Japan, City of Sendai, the largest city and the economic and cultural center of Tohoku region, has historically suffered earthquakes and tsunamis every 400 to 800 years. In fact, to alert the community about the past disaster, *Namiwake* (“waves-splitting” in Japanese) Shrine, originally built in 1703 under a different name, was renamed and relocated to a location where the receding floodwater from the tsunami was said to split in two when a massive tsunami hit the area in 1611. On 11 March 2011, the Great East Japan Earthquake and tsunami devastated the communities along the Pacific coast of northeastern Japan, claiming approximately 20,000 lives and completely destroying over 120,000 houses. Sendai City also suffered tremendous damage. Ironically, until then, the city residents had considered the tale of Namiwake Shrine to be preposterous or fictional. Today, the importance of preserving and passing down the memories and records of tsunami and earthquake is heartfelt, shared Ms. Kohri.

Describing the impact of the tsunami in Sendai City following the earthquake in 2011, Ms. Kohri said the waves of 7.1 meters in height reached Sendai port. A 6-meter embankment of Sendai Tobu Road is widely believed to have stopped the tsunami from causing even more catastrophic damages. Many residential areas inland also suffered from a landslide. Within the city, about 900 deaths occurred, caused mostly by drowning, and about 30,000 buildings completely collapsed.

Numerous efforts to prepare for future tsunamis

Based on the concept of “multiple defenses”, Sendai City aims to minimize the water that reaches the city with



multiple structures, thereby reducing the damage from tsunamis. Rebuilding river levees and coastal seawalls, regenerating forest in the coastal area, and elevating the prefectural roads contribute to creating “multiple defenses” for the city, explained Ms. Kohri.

Evacuation is equally critical, Ms. Kohri continued, as extremely large-scale tsunamis like the one in 2011 can surpass these structures. As of March 2017, the city has constructed new tsunami evacuation facilities and infrastructure such as 13 towers, 4 hills, and 3 roads.

Furthermore, the city has been working on relocating residents to inland from high-risk disaster areas. Approximately 1,800 households in total are to be relocated, about 40 percent of which relocate as communities and 20 percent into a municipal housing.

The unique street- and landscape along the coast as a result of these measures contribute to passing down the history of tsunamis the city has experienced, said Ms. Kohri.

Equally important is to recognize the great potential of the community efforts in DRR. Even before 2011, the city

has been promoting community-based disaster prevention. After the disaster in 2011, the city reviewed its disaster prevention plan to further promote the community-centered approach.

Turning her attention to facilities such as the Ruin of Sendai Arahama Elementary School and Sendai 3/11 Memorial Community Center, Ms. Kohri presented the city's projects that aim to pass down the memories and experiences of the earthquake and tsunami to future generations.

Situated along the Pacific Coast, Arahama area is now designated as a high-risk disaster area and the residents were relocated post-disaster to inland areas. Prompted by the earthquake in Chile in 2010, Arahama Elementary School, located 700 meters inland in Arahama area, had changed their disaster prevention plans. The teachers instructed students to evacuate immediately to the rooftop in case of an earthquake and moved the emergency supplies to the third floor of the building from the school gym on the ground floor. On 11 March 2011, the tsunami flooded the school about one hour after the earthquake with water reaching 40 cm above the second floor. All 320 people, including students and residents, who evacuated to the school rooftop survived while over 190 lives were lost in the surrounding area.

Opening Arahama Elementary School as an earthquake and tsunami relic site

In April 2017, the city opened the school as an earthquake and tsunami relic site, where visitors can learn about the impacts of the tsunami by observing the damaged interior and exterior of the building as well as through photographs and a video that showcase the city before and after the disaster. Some former residents now work there and share their personal experiences with the visitors. As of November 2018, the school received over 130,000 visitors.

The audience, then, had a chance to watch a shortened version of the video shown in the school, depicting the 27 hours between when the earthquake struck and when

320 evacuees were rescued from the rooftop.

Elaborating on other projects, Ms. Kohri mentioned that the plan is underway to open for the public the destroyed foundation structures of houses as a relic site for earthquake and tsunami. The city is also working on developing the coastal areas from which groups of residents had relocated, in partnership with a private sector.

Having suffered the disaster, the city firmly recognizes its mission to preserve and pass on the memories and records of the disaster. To that end, the city actively disseminates information by publishing reports of its damages and recovery processes and participating in events including ones co-organized by the civil society as well as international conferences such as World Bosai Forum.

"It is essential to foster a community culture that passes on records and memories of the disaster to future generations."

Lastly, Ms. Kohri affirmed that, in order to prevent the memories of the disaster from fading away, it is essential to foster a "community culture" that passes on records and memories of the disaster to future generations. How to foster this community culture by capitalizing on the preserved ruins, she added, is a monumental challenge that the city faces.

“These countries in the Pacific Basin should share their experiences with one another because we all face common threats.”

An 8.8-magnitude earthquake struck south-central Chile on 27 February 2010, inflicting damages in areas such as Talcahuano, Juan Fernández, and Sector La Poza. The deadly event represented a turning point for institutional development in Chile, raising awareness of the resounding impact of earthquakes and tsunamis, explained Mr. Toro. Sharing a simulated time-lapse of the 2010 tsunami with the audience, he added that the generated tsunami traversed the entire Pacific Basin from the epicenter, just offshore of Chile, and reached Japan in a mere 30 hours. Recognizing the wide-spread impact of the event, Mr. Toro reinforced that those countries in the Pacific Basin should share their experiences with one another because they all face common threats. Indeed, of the 29 earthquakes of magnitude greater than 7.5 that occurred worldwide between 1 January 2014 and 30 September 2018, 25 of them had the epicenter in the Pacific Rim, bordering the Pacific Ocean. Four of them had the epicenter in the coast of Chile, of which one with the magnitude 8.3 struck Illapel in 2015.

In the last five years, Chile has experienced 48 percent of the major emergencies that occurred in the country since the 1960 Valdivia Earthquake of magnitude 9.5 and tsunami. Chileans have historically lived with geological threats (such as earthquakes, tsunamis, and volcanic eruptions), other disasters related to meteorological events such as floods as well as and forest fires exacerbated by climate change in recent years.

Japan-Chile collaboration in DRR

In tackling the common threats of the Pacific Basin countries, Mr. Toro highlighted some examples of collaboration between Japan and Chile, undertaken by JICA. “Kokoronokea (mental health care)” project aims to



introduce to Chile the Japanese model of mental health care support programs in times of emergencies and disasters; “Kizuna (human bonds)” project, on the other hand, aims to offer human resource training to professionals in disaster risk management in Latin America and the Caribbean.

Moreover, earlier this year, the bilateral cooperation commenced for “Institutional Strengthening of ONEMI for Capacity Development in Disaster Risk Reduction Project”. The project aims to: 1) determine priority functions of ONEMI as the national agency specialized for DRR, 2) design a knowledge management system and create an implementation strategy, and 3) establish a mechanism for human resource development and training on DRR.

Elaborating on the establishment of knowledge management center, Mr. Toro stressed that the project is in line with two of the four Priorities for Action of the Sendai Framework for Disaster Risk Reduction: understanding disaster risk (Priority 1) and enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction (Priority 4). The project is expected to contribute to achieving the Global Targets of the Sendai Framework as well as the Sustainable Development Goals, he added.

Diving deeper into the project details, Mr. Toro stated

that ONEMI, with the support from JICA, intends to incorporate the lessons learned by Japan and Chile and create an innovative knowledge management system at the national level. First, ONEMI is to analyze various aspects of the management system by clarifying elements such as historical memory, training, lessons learned, and exhibitions. Then, it will investigate how the knowledge and experiences related to natural hazards and disasters are currently collected, stored, and organized, and identify the areas that ONEMI is to manage. ONEMI also plans to decide ways to use the collected information to varying audiences with differing objectives; some information is to be used to raise awareness among the community or for specialized training for Civil Protection Academy and others in reports and indicators, for example.

Virtual platform connecting heritage sites and museums

To complement the above project, ONEMI, in cooperation with Chilean National Service of Cultural Heritage, has been working on developing a virtual platform, which hosts a network of heritage sites and museums and features memories and knowledge of disasters that occurred in Chile, Mr. Toro explained. The objective of the project is to make culture accessible for all, use technology for further cultural development, and promote connectivity and decentralization.

In closing, Mr. Toro reiterated the challenges that the countries of the Pacific Basin face. Urging all to learn to live with nature, he recognized the immense value of sharing information and best practices among those involved.

Panel Discussion

Panelists:

Keiko Adachi, Guide, Okushiri Isle Tsunami Museum, Japan

Hafnidar, Head, Tsunami Museum, Indonesia

Feng Zhengbi, Director, 5.12 Wenchuan Earthquake Memorial Museum Management Center, China

Kazuko Kohri, Mayor of Sendai City

Ricardo Toro Tassara, National Director, National Office of Emergency of the Interior Ministry (ONEMI), Chile



Benefiting from experiences of panelists around the world, the moderator, Mr. Ono, invited questions concerning challenges encountered by and the expectations held by the museums over time, similarities and differences between the museums, as well as what the participating museums expect from the soft network of museums established at the conference. To help visualize the chronological perspective of museums, a diagram was kindly put together by Mr. Ono, indicating the length of time between the disaster and the museum opening.

Mr. Toro highlighted that there is a project with another state institution to develop virtual museums. He also indicated that he would like to have a museum dedicated to the memory of disasters. However, his institution does not have the resources. Recognizing the education for the public as one of the fundamental aspects of DRR, he reiterated that the extensive collaboration had already been initiated between ONEMI and JICA to share knowledge, resources, and experiences. As such, efforts

are underway in Chile to better integrate disaster prevention into the National Service for Cultural Heritage under the Ministry of Cultures, Arts, and Heritage.

Strategic location of the museums

While all museums had in common the exhibition content covering the impact of the disaster and how one can prepare for such events, Ms. Kohri underscored that the operation of the ruins of Sendai Arahama Elementary School is unique because the exhibitions are housed in the preserved earthquake ruins. Visitors can observe the damages of the building and learn exactly what happened on 11 March 2011, as if to relive the experience. The personal stories shared by the guides who had been living in Arahama area prior to the disaster, further elucidate the experiences of the community to visitors, noted Ms. Kohri.

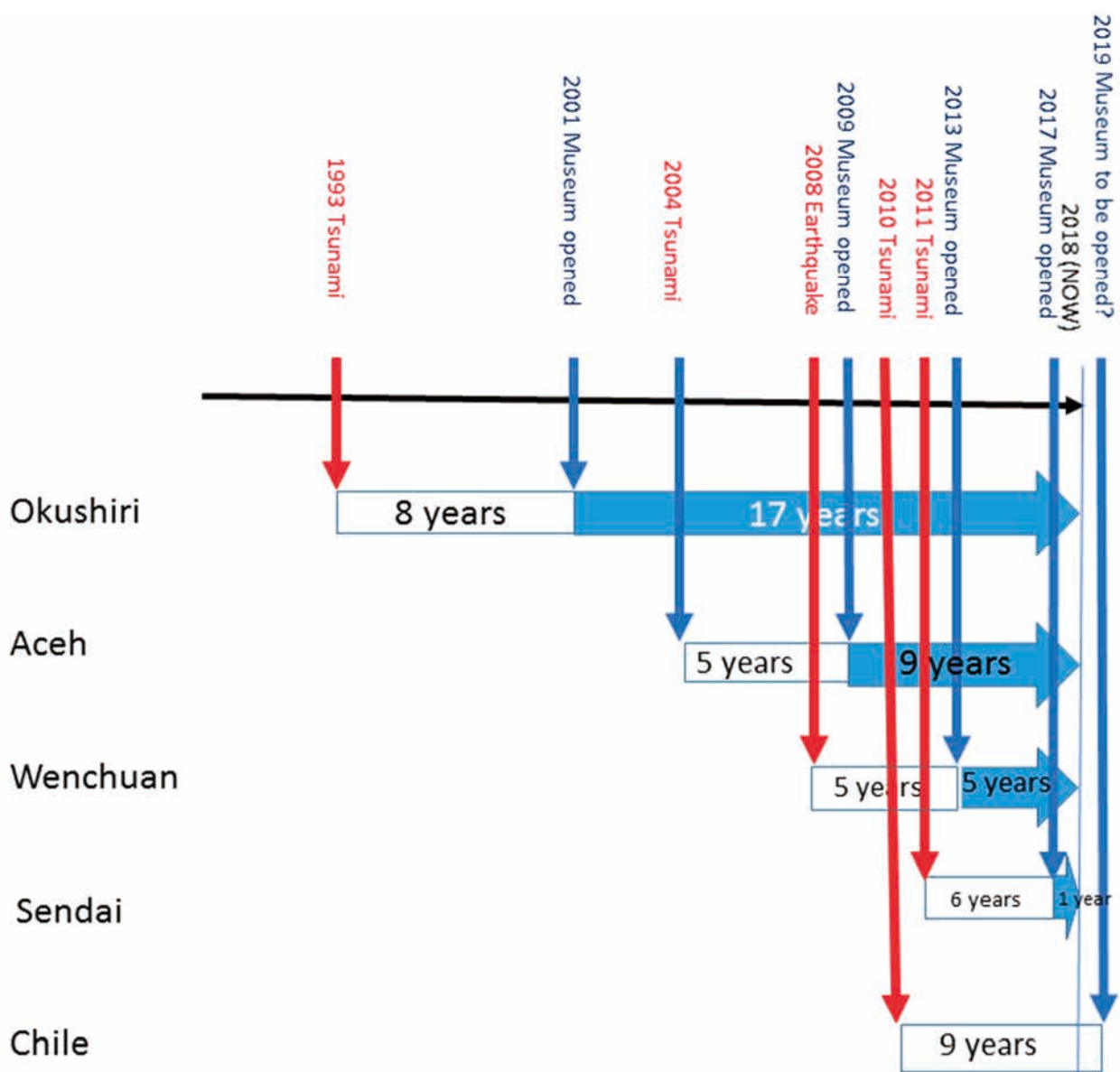
Okushiri Isle Tsunami Museum, opened in 2001, was strategically built in the district that suffered the most extensive damage and currently designated as tsunami

high-risk area where no private homes are to be built. As the debris was cleared a mere 1.5 months after the 1993 Hokkaido Nansei-Oki Earthquake and tsunami, the museum hardly has objects that exemplify the damage caused by the fatal event. Coupled with consideration for the young audience from local communities, the museum had initially not focused on presenting the cruel and harrowing aspects of the disaster.

Increase of visitors after the 2011 Great East Japan Earthquake and tsunami

Following the 2011 Great East Japan Earthquake and tsunami, the institution has been receiving an increasing number of visitors from outside Hokkaido Prefecture, told Ms. Adachi. Moreover, given 25 years have passed

since the disaster, she noticed that some visitors hardly know about the deadly event that devastated the Island until they come to the museum. These new trends have encouraged her to reassess how to better serve the visitors. She now feels that it is important to transmit to visitors even the painful and tragic memories to fully convey the threats of tsunamis and earthquakes. To be prepared to safely evacuate and to escape from the tsunami as soon as the earthquake hits is the message she is determined to disseminate to as many people as possible. Additionally, she mentioned that this conference provided her with a great opportunity to learn about the tsunami damage in other areas as well as the other tsunami- and disaster-related museums.



Chronology of the development of tsunami- and disaster-related museums linked with preceding disasters
(Diagram by Yuichi Ono)

Various roles of tsunami- and disaster-related museums

Further illuminating the various roles of museums, Ms. Hafnidar stated that Tsunami Museum in Aceh, Indonesia, functions as an evacuation center; in fact, many people evacuated to the roof following an earthquake in 2012. Until today, the museum goes beyond the traditional activities of a museum, bringing together people from the community in building solidarity. Ms. Hafnidar expressed her hope in the near future to introduce training for children and people living with disabilities in responding to disasters and to help avoid drowning.

Ms. Zhengbi shared that 5.12 Wenchuan Earthquake Memorial Museum commemorates this year the 10th Anniversary of the “5.12” Wenchuan Earthquake in 2008. Inspired by the discussions at the conference, she looks forward to bringing the knowledge she gained there to China and hopes to improve the museum management.

Too often and too quickly we forget the tragedy of disasters, shared Ms. Adachi. For many residents of the town who lived through the disaster, they may not wish to talk about the event even though they are unable to forget after many years. As shared by Ms. Kohri, we must consider how to pass down our experiences to children and young people “as a culture”, with efforts already starting in Sendai.

Part 2

WORLD
TSUNAMI
AWARENESS
5 NOVEMBER **DAY**
2018



Part 2

Towards conservation and inheritance of the memories of disasters

Moderator

Yuji Kurihara

Executive Vice Director, Kyoto National Museum

Commencing Part 2 of the conference, Mr. Kurihara introduced the theme “Towards Conservation and Inheritance of the Memories of Disasters” and mentioned the efforts by Indonesia and Sri Lanka to preserve the memories of the disaster they experienced. The National Archives of Indonesia and Sri Lanka, along with the Aceh Government, nominated “The Indian Ocean Tsunami Archives” to be on UNESCO’s International Memory of the World Register. The nominated archive, successfully inscribed on the Register in 2017, contains important documents including 500 photographs, 196 audio cassettes, 1,230 CDs and DVDs that reveal the situations around the time of the disaster. Meanwhile, in Japan, some ruins of tsunamis are designated as cultural properties and preserved to be passed down to future generations.

producers in the vicinity. Cultural institutions such as museums and art galleries too fell victim to rumors, he added. For about half a year following the disaster, the museums and galleries abroad cancelled the collection rentals with institutions including ones in Tokyo that were hardly affected by the nuclear meltdown. As a result, many exhibitions had to be cancelled or postponed. Such experiences reaffirm the value of establishing an appropriate communication system, encompassing media, within society in times of disaster and emergencies, Mr. Kurihara stressed.



Public records are not the only source of memory, Mr. Kurihara cautioned. History proves that a variety of information including groundless rumors is exchanged at the time of disaster. For example, after the 2011 Great East Japan Earthquake caused a severe accident at a nuclear power plant, some people refused to buy products from the Tohoku region even a few years later. He stressed that rumors to this day negatively affect the

Session 1:

Importance of communication and information at the time of disasters

Mirta Lourenço

*Chief, Section for Media Development and Society,
Division of Freedom of Expression and Media Development,
Communication and Information Sector, UNESCO*

Information as a form of aid and media as a tool for DRR

During disasters, media plays a critical role in providing life-saving information to the public. When done correctly, the accurate information, using understandable language for citizens and provided quickly by the media, can help ensure an effective response and save lives. When the information is not properly conveyed, however, media can potentially harm the population by negatively affecting the rescue and recovery processes.

Media is also valuable in educating the public before the disaster strikes. For example, from 2013 to 2016, a radio soap opera was used to raise awareness about disaster risks related to floods and typhoons among women in the Mekong Delta region of Vietnam. The radio show was broadcast during the typhoon and flood seasons and has reportedly reached 80 percent of households. It tackled issues such as coping with landslides and undertaking first aid.

Highlighting that many citizens learn about disasters and emergencies through television, radio, print and online media, including social media, Ms. Lourenço emphasized the importance of including media in DRR and preparedness plans. She also stressed the value of facilitating journalists to collect and disseminate accurate and understandable information. In this light, authorities need to be aware of journalists' need to: tap into diverse sources for accurate information, access relevant sites and check facts, and identify and address rumors, disinformation, and misinformation.



In Myanmar, to facilitate media to provide information about meteorological events and disasters caused by natural hazards, the Department of Meteorology and Hydrology holds a “Monsoon Forum” with local journalists twice a year. During the forum, officials explain to journalists disaster-related concepts, reflect on the past season, and explore together predictions for the coming season.

Effective communication and coordination as key for successful DRR

While media can multiply the effectiveness of the DRR and relief measures, they can also hamper government efforts, for instance, by inducing unwarranted fear, panic, or collective stress which can lead to further chaos and subsequent loss of lives. Many public service broadcasters, such as Japan's NHK, are mandated to coordinate with actors such as the office of meteorology, national disaster management office, and emergency service providers to deliver relevant information to affected communities.

Other examples of best practices include the Australian

Broadcasting Corporation which has a dedicated framework for systematic and coordinated response to emergencies, as well as the establishment of a communications working group by United Nations Office for the Coordination of Humanitarian Affairs (OCHA) to work with the Filipino government departments, humanitarian aid agencies, and national telecommunications companies to improve access to vital information for the affected communities immediately after Typhoon Haiyan in 2013.

Media can also act as a reverse communication channel, conveying diverse information, people's concerns, knowledge gaps and needs - from the audience towards authorities. In Cambodia, a radio listener informed about the alarmingly high level of the river to Radio National Battambang, which contacted the Deputy Governor, who was then able to use this information to decide to release water from a dam and subsequently inform listeners how to best prepare against possible flooding.

People's rights to information and the importance of editorial independence

Fundamentally, Ms. Lourenço underscored that the principles of a free, independent, and pluralistic media and people's right to information are compatible with DRR and preparedness measures. In order to achieve balance and impartiality in news, better investigate humanitarian aid, and ensure accountability by those distributing it, media should be able to operate independently and free of influence. She advocated that media should work for the public interest, and disseminate not only the information the public *needs to know* to save their lives, but also the information the public *is entitled to know*, which can include criticisms of emergency response.

Moreover, she urged journalists to ask themselves: which precautions can media take to avoid aggravating disaster situations, interfering with relief efforts, and endangering lives - and yet continue to cover events independently?

With the mission to contribute to peace and security by promoting cooperation among the peoples of the world in education, science, communication, and culture, UNESCO is the UN agency mandated to assist governments and civil society in media development and policy. For disaster preparedness and response, the Organization is a broker for dialogue and a capacity-builder. The coordination of authorities and humanitarian actors, including UN organizations, is essential and powerful - if based on mutual understanding of and respect for the principles that each one operates with. The principles media operates with are freedom, independence, and pluralism.

In finalizing the presentation, Ms. Lourenço thanked Japan for its proactive contribution to UNESCO's efforts to promote friendship and mutual understanding, as well as the audience for their attention.

Session 2

Conservation of cultural heritage damaged by the Tohoku Region Pacific Coast Earthquake and tsunami

Nobuyuki Kamba

Emeritus Member, Tokyo National Museum

Triggered by the earthquake on 11 March 2011, a massive tsunami of over 10 meters engulfed the coast of Rikuzentakata City (Iwate Prefecture) and struck the area as far as approximately 3 km inland. Many precious lives were lost. Social infrastructure, intangible cultural heritage such as traditions and performing arts passed down through generations by the citizens, and tangible heritage collected and preserved in the community for many decades also sustained devastating damage. National Institutes for Cultural Heritage (NICH), composed of four national museums in Tokyo, Kyoto, Nara, and Kyushu and three research institutions, collaborated with many other organizations to rescue and conserve cultural properties in the affected area. Mr. Kamba, who led such activities in Iwate Prefecture, shared the achievements over the past eight years and the future outlook for the projects in Rikuzentakata City that spanned five areas: i) rescue, ii) conservation, iii) dissemination of information, iv) study and research, and v) regeneration of Rikuzentakata City Museum.

Rescue operation

Two major collaborative bodies conducted the rescue operations in Iwate Prefecture: one led by regional organizations composed of museums and other relevant institutions in Iwate Prefecture, and another led by the Agency for Cultural Affairs under the Ministry of Education, Culture, Sports, Science and Technology of Japan, with support from other specialized organizations in Japan. The former was active first when the affected area lacked basic infrastructure, and the support from the latter came in as the affected area became more easily accessible. Compared to the operations following the 1995 Great Hanshin-Awaji Earthquake, the division



of roles among the two bodies was smoother, recalled Mr. Kamba. However, considering their efforts began twenty days after the tsunami, how and when to initiate the rescue of cultural properties needs to be carefully considered and evaluated again in the future.

Conservation

Thanks to a project funded by the Agency for Cultural Affairs and Reconstruction Agency, 190,000 out of 460,000 cultural properties rescued have undergone the stabilization treatment, which involves removing sludge, salt, oil, and bacteria. By end of 2020 when the project ends, 270,000 properties will have been treated, leaving 190,000 yet untreated. The outlook beyond 2020 is unclear.

Dissemination of information

Through a project funded by the Agency for Cultural Affairs, workshops and seminars were organized to disseminate information about the rescue of cultural properties, and guidebooks outlining the stabilization treatment targeted for specialists were also published. Recognizing the initiatives by the civil society and private sector, Mr. Kamba spoke about music CDs and illustrated books produced and concerts organized under the

theme of damaged cultural properties. While those involved have spoken about their efforts at International Council of Museums - Committee for Conservation (ICOM-CC) and Research Centers of Smithsonian, he acknowledged that much more should be done to disseminate information beyond Japan.

Study and research

As part of a project led by NICH, Tokyo National Museum has been working on research and development of technologies concerning the stabilization treatment of art- and craftwork such as oil paintings and lacquerware. Also, technological development concerning methods of analysis of the material remains at Iwate Prefectural Museum has been carried out. Nevertheless, since no project or organization has been established to develop technologies related to stabilization treatment long-term, the future in this area is uncertain.

Regeneration of Rikuzentakata City Museum

With the view of reopening the museum in 2020, many projects have already been carried out including organizing and researching about artifacts that have been stabilized and repaired, exhibiting the rescued artifacts throughout Japan, organizing seminars at Elementary Schools, accepting donations of and collecting artifacts, and opening the temporary museum building for the public. Despite these achievements, significant challenges concerning the following need to be tackled: how to share the experiences and lessons

learned from working on regenerating the museum in the ten years following the disaster, how to position the facilities that have temporarily housed the salvaged artifacts and in which stabilization treatment has been carried out, and how to organize an exhibition with the restriction that the approximately 190,000 artifacts, expected to remain untreated, cannot be exhibited.

Future plans

As mentioned earlier, it took 20 days before the rescue operations of cultural properties commenced in Rikuzentakata City. In other areas, it took about a month. It is critical, Mr. Kamba stressed, to develop a societal system to allow for a quicker initial response while minimizing the loss and damage before the rescue begins. Establishing a Japanese National Commission for **Blue Shield** is one of the daunting tasks to be accomplished to this end.

Equally important is to organize and create a database from the vast knowledge and experiences accumulated concerning rescue and conservation of cultural properties as well as the memories of the disaster. Offering information about culture as well as disasters caused by natural hazards, the museum must function as the hub for DRR to widely share information around the world, Mr. Kamba stated. Expressing his hope that such knowledge would be adopted at schools to educate children, museums can contribute to building a more resilient society.

What is Blue Shield International?

Founded in 1996, Blue Shield International is a professional committee and independent organization dedicated to protecting the world's cultural heritage in armed conflicts and disasters caused by natural hazards. Blue Shield brings together the knowledge, experience, and international networks of the four expert organizations dealing with cultural heritage: International Council of Museums (ICOM), International Council on Archives (ICA), International Federation of Library Associations and Institutions (IFLA), and International Council on Monuments and Sites (ICOMOS). NICH, in partnership with National Diet Library and National Archives of Japan, is currently working on creating a Blue Shield National Committee in Japan.

Panel Discussion

Before commencing the discussion, Mr. Haga, Professor from Tohoku University, and Mr. Akutsu, Chief, Preservation Section, National Archives of Japan, gave a brief presentation.

Mitsuru Haga

Professor, Tohoku University

Highlighting the severe damage and lasting impact of the 2011 Great East Japan Earthquake and tsunami, Mr. Haga began the presentation by sharing that his house in Sendai City was destroyed and he lost all the research data and backup stored at the university following the disaster. Then, through the presentation, he invited the audience to look at the disasters caused not only by natural hazards but also by human hubris, and the roles of museums through historical-archeological, and philosophical perspectives.

Key concepts that inform the role of tsunami- and disaster-related museums

Referring to the conference theme: chronological perspectives, Mr. Haga introduced Kronos and Kairos, the two ancient Greek gods of time. The former governs the public and global time (for instance, concerning Sendai City or Japan as a nation state), and the latter private and local time. For Kairos, forgetting about negative events and experiences is allowed. However, for Kronos, it is not. Weathering memories (wearing thin with time) are societal violence and destruction of history, emerging as the realm of personal time intersects with that of public time, Mr. Haga stated.

To elaborate upon the “memories of disasters”, another key concept at this conference, he cited the concepts of an intended and unintended monument (*gewollte und ungewollte Denkmal*), defined by Alios Riegl in his book *Der moderne Denkmalkultus* (1903). Recognizing the memories of disasters as the *unintended* heritage (monument), Mr. Haga explained that Riegl expanded on the concept of monuments (heritage) to include the unintended as well as the intended, thereby elevating



the heritage to be of universal value. In this light, tsunami museums embody the heritage of universal value.

Introducing another concept, Mr. Haga explained that Kunio Yanagita (柳田国男), a renowned Japanese scholar, championed “inheritance of ignorance”: to pass on to future generations that we are ignorant. Mr. Haga argued that tsunami museums are instrumental for the “inheritance of ignorance” (「無知の相続」). Further recognizing the value of ignorance, he presented a term from Zen Buddhism: “*sapius* (wisdom) and profound folly” (智愚). While universities and museums promote and encourage wisdom, the significance of tsunami museums lies in their ability to speak about and pass down the folly to future generations, which is nothing but an execution of “inheritance of ignorance”. He reminded the audience that “the unexpected” (想定外) happens because we base our thinking around knowledge; what we know. The best we can do is to pass on our ignorance along with knowledge and prepare

ourselves to the extent possible. For instance, Japan has a countrywide documentary heritage networks involving local authorities, archives, libraries, museums, and universities to prepare for disasters. The work of such networks entails not only preserving historical documents but also helping the communities shattered by disasters to recover their identities and dynamism by giving them back a sense of continuity.

Disaster preparedness measures for cultural properties

Japan was prepared to some degree to preserve documentary heritage when the disaster struck in 2011, Mr. Haga continued. Miyagi Documentary Heritage Network had been working on creating a digital archive of documentary heritage even before March 2011. After the earthquake and tsunami, the network mobilized volunteers and worked with experts from Tohoku University and other institutions to rescue documentary heritage. Stressing the challenges they faced in treating the documents damaged by salt water brought by the tsunami, he urged the audience to ask Japan for its expertise in this area.

Rescue of cultural properties is nothing more than the critical care done in “ER” (emergency room), added Mr. Haga, and the entire process of treating and repairing the properties takes a long time.

Moreover, he stressed that the job descriptions of staff at cultural institutions need to explicitly include the rescue of cultural properties in times of disaster so that they can receive greater support, budgets, and other resources and avail for employee insurance coverage.

Mr. Haga also urged the audience to create a cultural heritage map and mark active fault lines within, and share with relevant individuals and institutions. One needs to be careful as to who can access the map to avoid thefts of the mapped properties.

Needless to say, the Sendai Framework for Disaster Risk Reduction should be referred in reviewing and developing tsunami and earthquake countermeasures.

Furthermore, in times of disaster, institutions will lack human resource to deal with the rescue operations of cultural properties. Thus, one should be ready to rescue various kinds of cultural properties including both tangible and intangible cultural properties beyond their specialized areas, advised Mr. Haga.

Encouraging to learn from Japan’s failures and achievements

As is often stated, Japan is “forerunner of finding answer for unique set of emerging issues” (「課題先進国」). Emphasizing that Japan has historically coped with many disasters caused by natural hazards as well as human-induced ones such as nuclear meltdown, he encouraged the audience to learn from Japan’s failures and achievements, which Japan is willing to share with the rest of the world. For example, after a tsunami hit the nuclear power plant in Fukushima Prefecture, radioactive elements contaminated cultural properties in the surroundings. Researchers have published an article on the journal, ICOM Museum International (Vol.65, May 2015), explaining in detail the rescue processes and recommended countermeasures, while no such reporting on cultural properties was done in the aftermath of the accident in Chernobyl.

Online archives featuring memories and records of disasters such as the ones by National Diet Library (“Great East Japan Earthquake Archive HINAGIKU”) and by Tohoku University (“Michinoku Shinrokuden”) are also highly useful in educating the next generations about the threats of tsunamis and earthquakes.

Lastly, calling for “intergenerational ethics” as the fundamental concept of all, Mr. Haga pointed out that the pursuit of creativity, concerned with success only within one generation while claiming titles, rights, and money, lacks consideration for the consequences for the future. Instead, with intergenerational ethics in mind, individuals should appreciate “generativity”, a term coined by Erik Erikson: to think beyond one generation, not claim titles, rights, and money, but be responsible for the consequences that future generations may endure,

Mr. Haga urged. Museums, especially tsunami- and disaster-related museums, exist in this framework of thinking. Moreover, resilience and sustainability of the

society and the world, promoted by UNESCO, develop from embracing generativity.

Tomohiro Akutsu

Chief, Preservation Section, National Archives of Japan

Having studied paper restoration techniques, Mr. Akutsu has been restoring documents made of paper at National Archives of Japan (NAJ) over the past decade. There, his responsibilities include rescuing public, or administrative, documents damaged by disasters caused by natural hazards such as floods and tsunamis. The first time NAJ undertook such rescue was following the 2011 Great East Japan Earthquake and tsunami. With the aim of developing human resources and creating an environment so the municipal governments can independently restore and conserve the damaged documents, NAJ trained individuals and gave technical advice to seven municipalities in Iwate and Miyagi Prefectures. After NAJ had ended their activities in the affected area, Rikuzentakata City (Iwate Prefecture) and Ishinomaki City (Miyagi Prefecture) continued the efforts independently.

In September 2015, torrential rains fell in Kanto and Tohoku regions in Japan. On 10 September, approximately 40 km² in the area downstream of Kinu River running through Joso city (Ibaraki Prefecture) was flooded. As a result, the city's permanent archive was inundated, damaging administrative documents containing historical records about the city. Fungus grew in some documents.

This time again, NAJ similarly supported the municipality, and trained individuals hired by the city on how to clean, dry, and restore the documents in 2015 and 2016. While most documents have by now already been dried, Joso City is currently restoring the damaged documents.

In response to the events in September 2015, NAJ set up an in-house rescue team composed of experts in November. Upon requests from municipalities, the team



is to provide advice and send experts and material needed to rescue and restore the damaged documents while coordinating with other relevant organizations in providing support.

In November 2016, NAJ became the member of the Executive Committee of National Task Force for the Cultural Heritage Disaster Risk Mitigation Network (CH-DRM Net), after previously involved as an observer. The network was created in 2014 with the aim of establishing a framework for the disaster risk mitigation and rescue of cultural properties and preparing for large-scale disasters in the future. Its members include NICH and Independent Administrative Institution National Museum of Art, among others.

More recently, upon request from Tsukumi City (Oita Prefecture), NAJ provided advice on how to dry waterlogged documents after a typhoon caused heavy rains and subsequently flooded rivers in September 2017. In November 2017, NAJ sent its staff to the city to provide further support. Following torrential rains in July 2018, NAJ also extended its support to Seiyo City (Ehime Prefecture) by providing technical advice and material needed to restore damaged documents.

Panelists:

Mirta Lourenço, Chief, Section for Media Development and Society, Division of Freedom of Expression and Media Development, Communication and Information Sector, UNESCO

Nobuyuki Kamba, Emeritus Member, Tokyo National Museum

Mitsuru Haga, Professor, Tohoku University

Tomohiro Akutsu, Chief, Preservation Section, National Archives of Japan

Determining when to start the rescue operations of cultural properties

When should the rescue of cultural properties take place, how long after a disaster should it start? Mr. Kurihara, the moderator, questioned. As Mr. Kamba shared, it took about one month to start rescuing cultural properties after the 2011 Great East Japan Earthquake and tsunami. This was partly because the team needed time to prepare before they began the rescue operation, but also they were concerned that if they had started their rescue earlier, the public might criticize them as saving lives should come before saving cultural properties. Consequently, the Agency for Cultural Affairs struggled to determine the best time to commence the operation.

Roles of media for cultural heritage protection

In response to such concerns, Ms. Lourenço stressed the importance of raising awareness about the value of heritage through education, publicity, distribution of information about preservation techniques, and developing relationships with civil society organizations, among other measures, including the observation of World Day for Audiovisual Heritage on 27 October. She also mentioned the importance of upstream preservation policies, increasing access to documentary and audiovisual heritage (digitization).

Ms Lourenço affirmed that cultural heritage is the memory of humankind and represents our knowledge, identity, and history. Furthermore, looting of cultural properties sometimes occur in times of disaster, she added, as protection of cultural heritage can be overlooked when the priority is saving people's lives. Media can contribute to preventing this risk by raising awareness about the value of protecting heritage. This

includes personal and family archives, which are important for linking generations through memory.

Reflecting back on the 1995 Great Hanshin-Awaji Earthquake, Mr. Kurihara commented that few people at that time were familiar with the concept of rescuing cultural properties. Following the 2011 Great East Japan Earthquake and tsunami, he noticed a greater awareness among the public. Yet, more efforts are needed to ensure the society fully embraces and appreciates the value of rescuing cultural properties following disasters.

Characteristics of the rescue operations of cultural properties and public documents

Elaborating on the challenges of treating and repairing the cultural properties damaged by tsunamis, Mr. Kamba, a conservation science expert, highlighted that tsunamis are not clean sea water but contain sludge, salt, oil residues, and bacteria: the four elements that deteriorate the material. Artifacts covered with these elements take decades to recover.

What is unique in Japan is the documents made of washi, Japanese paper, using Japanese ink, explained Mr. Kamba. The ink does not dissolve and the paper stays intact even when immersed in water. Thus, cleaning such documents are relatively easy. On the other hand, paints on western oil and watercolor paintings can dissolve or come off when they come in contact with water, thus making them very difficult to clean. We need to continuously research and develop techniques to treat and repair such properties, underlined Mr. Kamba. Since not many precedents of treating and repairing documents damaged by tsunamis exist, the people involved are doing their best in the midst of uncertainty.

To point out the characteristics of public documents with

regards to its rescue amidst disasters, Mr. Akutsu mentioned that the material is not always robust and formats vary especially in modern times like today. Moreover, unlike cultural properties and artwork, people need to use some of the administrative documents shortly after the disaster. For example, NAJ supported Miyako City (Iwate Prefecture) to restore and conserve the cadaster damaged by the tsunami in 2011. While the team was working on cleaning and removing salt from the documents, the city hall requested to view certain pages. They subsequently sent the copy of the pages to the city government. Another aspect of public documents that differs from cultural properties is that it is not always necessary to conserve the original copy; some documents are to be stored permanently and others only a limited length of time.

Further to Mr. Haga's call to ensure that job descriptions explicitly state staff's duty to rescue cultural properties in times of disasters, Mr. Kurihara commented that while the national and municipal governments in Japan are required to create a Disaster Management Basic Plan according to Disaster Countermeasures Basic Act, only a few municipal governments include the disaster preparedness measures concerning cultural properties. The exceptions are municipalities like Hyogo Prefecture and ones in Tohoku region that have experienced the disasters caused by natural hazards in the past. Mr. Kurihara added that NICH works with the aim to have all the municipalities to include plans about rescue and conservation of cultural properties.

UNESCO as a platform for knowledge sharing about protecting cultural properties

Asked about how Japan can contribute in passing down memories of disasters caused by natural hazards like tsunamis, Mr. Haga presented the vision of the world in which each country shares their failures and achievements with one another with UNESCO providing an incredibly useful platform for such purposes. As disasters caused by natural and human-induced hazards occur around the world, an institution like UNESCO is instrumental in creating opportunities for nation states

to widely share their knowledge regarding protecting cultural properties from disasters.

In concluding Part 2 of the conference, Mr. Kurihara stressed the importance of cooperating with international institutions and countries around the world as we work to preserve and pass down the memories and records from the past.

Closing Session

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Closing Session

Summary

Yuichi Ono

Professor of IRIDeS, Tohoku University

At the end of the conference, Mr. Ono stated the following key points highlighted during the conference:

1. Importance of the investment in DRR to reduce human and economic losses caused by tsunamis and associated disasters was stressed in accordance with the Sendai Framework for Disaster Risk Reduction. The concepts of resilience (social resilience), human security, and sustainable ways of management were underlined as well.
2. Chronologically speaking, one of the common challenges is to educate the youth and children who do not have direct tsunami and earthquake experiences against the changing environment.
3. Expectations from the soft network of World Tsunami Museum Conference were addressed, which include an exchange of ideas, materials, and assets even through the ICT and other technology available to us.
4. The primary importance of the location for each museum was addressed. It reflects the experiences of that particular place and localized risks and disaster knowledge; it also affects the mutual learning among the local population and the greater community that visit and benefit from the museum.
5. The museum has the role as a connector between scientific data, local knowledge, outside experts, stories, and experiences, with the actions of offering education and learning opportunities, training, and even a place for evacuation.
6. We must recognize the value of preserving and exhibiting artifacts and ruins (such as school buildings, housing foundation, an entire town, photographs etc.) and their power to convey the reality of what happened at the time of disaster; personal stories recounted by the people who lived through the experience can greatly enhance the transmission of information.
7. At the same time, we need to balance the use of physical objects with other technological opportunities, virtual connections, and digital and social media.
8. The power of the arts to contribute to revitalization and recovery of a tsunami-affected community was addressed.
9. Various ways to rescue, conserve, and repair tsunami-affected cultural heritage were mentioned. This is one of the indicators of the Global Targets of the Sendai Framework for Disaster Risk Reduction.
10. Better communication through media about risks and emergencies using accurate information before, during, and after the disaster would be crucial to saving not only lives but also cultural heritage and museums.
11. Networks such as CH-DRM Net and Blue Shield International to protect the cultural properties of museums, libraries, and archives have been formed



nationally and internationally to prepare against future disasters.

12. Rescue of cultural heritage, including tangible and intangible heritage, and recovery of museums themselves take time. One-month delay before starting the rescue operation of heritage may be appropriate because if it begins sooner, it may interfere with the life-saving activities. However, something must be done to protect the loss of cultural properties during this time.

13. Learning about the history of the community through records of disasters as well as the community's culture would be valuable for the community to recover better.
14. The concepts of Kairos and Kronos, inheritance of ignorance, creativity and generativity to ensure resilience and sustainability should be integrated into the management of tsunami museums.
15. Sharing of what went well and what did not go well with the international community through a platform like UNESCO is valuable.

Closing Remarks

Johei Sasaki

Executive Director, Kyoto National Museum

In recognizing the extensive impact that disasters can have on museums, archives, and libraries, document storage facilities, and even individual houses, a cross-sectoral approach to cultural properties is required when rescuing cultural properties following disasters, Mr. Sasaki stated. After the 2011 Great East Japan Earthquake and tsunami, NICH established CH-DRM Net, composed of 24 member organizations, as mentioned by Mr. Akutsu earlier. Moreover, Japanese National Committee for ICOM and Japan ICOMOS National Committee have formed a preparatory committee for the establishment of Blue Shield National Committee, in view of joining the international framework. Future

collaboration between these organizations and WTMC will certainly create synergies, he anticipated.

Mr. Sasaki also invited the participants to join the 25th General Conference of ICOM to be held in Kyoto, Japan in September 2019 with the theme "Museums as Cultural Hubs: the Future of Tradition". Expecting over 3,000 participants, it will be the third time the Conference convened in Asia and the very first time in Japan. Citing the fire that consumed Brazil's National Museum in September 2018, safety measures including disaster countermeasures are an important issue for ICOM. He added that ICOM Kyoto 2019 will have sessions dedicated to DRR, during which he hopes to share the discussions held today.



Closing Remarks

Hiroyuki Shimatani

Executive Director, Kyushu National Museum

With all prefectures in Kyushu Island of Japan facing the ocean, Mr. Shimatani fully appreciated the threats of tsunamis and the importance of being prepared. He recalled that Kyushu National Museum, as a member of CH-DRM, took the lead in rescuing cultural properties when Kumamoto Earthquake in 2016 caused extensive damages in the area although it did not trigger a tsunami.

Since volcanic eruptions and water-related disasters frequently strike many communities in Kyushu and Yamaguchi Prefecture, Kyushu National Museum guided the establishment of Kyushu and Yamaguchi Museum Partnership Committee in 2014 and has been working closely with many partners in the region. Of course, while it is better not to experience disasters caused by natural hazards, Mr. Shimatani is convinced that these measures will be useful in the future.

Expressing his deep gratitude to Mr. Teru Fukui and the organizers of the 2nd WTMC along with all people concerned, Mr. Shimatani told the audience that the outcomes of the conference would be shared in Kyushu the following day during the ICOM-ASPAC Annual Conference. ICOM-ASPAC is the regional alliance of ICOM in the Asia-Pacific region; the conference theme is “Cultural Heritage for Sustainable Future - Natural Disaster and Museum”. As a precursor to the 25th ICOM General Conference, participants from Bangladesh, Bhutan, China, Japan, Nepal, Republic of Korea, Taiwan, and Vanuatu along with the President and Vice President of ICOM were expected to join the event.



Annex

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Comments from Participants following the Conference

Participants were interviewed to share some of their thoughts on the conference and tsunami- and disaster-related museums, what they have learned, and their future hopes.



“Heritage of ignorance” is the keyword from today’s conference. What we know is so little. And we weren’t even aware of our ignorance. We want to make sure that tsunami museums pass this message to future generations. I wish to make this as one of our goals in our endeavor.

Teru Fukui, Member of the House of Representatives, Liberal Democratic Party of Japan



To be here has been a good experience and to add all the values that we need to improve all the activities in relation to the memories and heritage that happened after each emergency. It is very important to prepare our next generations and for them to know about the disasters that happened in the country. I have been learning about this at the two conferences, last year and this year; one of the ways to make sure the memory and heritage are passed on to the younger generations is to have a museum and have the network for all the museums to exchange their experiences in educating the people.

Ricardo Toro Tassara, National Director, National Office of Emergency of the Interior Ministry (ONEMI) (Chile)



It is very important that tsunami museums around the world came together to join the conference in Japan today. I expect that the network created from this conference will become valuable when a tsunami, unfortunately, occurs again. I look forward to seeing this conference organized regularly, for the third and fourth time in the future. I also hope this conference can continue to collaborate with ICOM.

Yuji Kurihara, Executive Vice Director, Kyoto National Museum



It is very important to preserve and transmit knowledge, identity, and cultural elements from generation to generation. This is not only an issue of cultural objects or items but also who we are as a society. In this context, it is as important to think of the national items as well as the personal ones. Even family documents like photo albums and films can tell us a lot about how we live our lives. They may be useful for future generations in the same way that we see photo albums or films from our grandmothers and ancestors and understand our society from a more personal point of view.

Mirta Lourenço, Chief, Section for Media Development and Society, Division of Freedom of Expression and Media Development, Communication and Information Sector, UNESCO



When we store as data and exchange with others the vast knowledge, experiences, and memories we gain after disasters, we can create a safety net of an even higher level. This conference gave me an opportunity to reach a conviction for the importance of such efforts. I look forward to contributing to this process.

Nobuyuki Kamba, Emeritus Member, Tokyo National Museum



The conference was a great opportunity to meet others who work in museums that specialize in disasters caused by tsunamis and earthquakes.

One of the important things we discussed today is what museums can do for the younger generations. Naturally, we take actions after a disaster happens. But we can be proactive even before the disaster.

Hafnidar, Head, Tsunami Museum (Indonesia)



Some of the museums present today have been operating for more than ten years. It was useful to hear about the ways they manage the museum and raise awareness about the disaster in the community. I hope to capitalize on my learning from today when I return to China and wish that more people will visit our Memorial in the future.

Feng Zhengbi, Director, 5.12 Wenchuan Earthquake Memorial Museum Management Center (China)

Reporting of WTMC at ICOM-ASPAC Annual Conference 2018

In a dedicated session at the ICOM-ASPAC Annual Conference held on 1 December 2018 in Kyushu, Japan, the outcomes of the 2nd WTMC was shared. As a precursor to the 25th ICOM General Conference, the Annual Conference was organized by ICOM-ASPAC, the regional alliance of ICOM in the Asia-Pacific region and one of the co-organizers of the 2nd WTMC. The conference theme was “Cultural Heritage for Sustainable Future - Natural Disaster and Museum”.

The moderator for the session was Mr. Yuichi Ono, Professor of Tohoku University. The session panelists were:

- Ms. Yuki Matsuoka, Head of UNISDR Office in Japan
- Mr. Ricardo Toro Tassara, National Director, National Office of Emergency of the Interior Ministry (ONEMI) (Chile)
- Ms. Hafnidar, Head, Tsunami Museum (Indonesia)
- Ms. Feng Zhengbi, Director, 5.12 Wenchuan Earthquake Memorial Museum Management Center (China)
- Mr. Hiroyoshi Nishi, Director Emeritus, Inamura-no-Hi no Yakata (Japan)

Ms. Matsuoka shared with the audience the objective and significance of WTMC which started in 2017, followed by Mr. Ono, who presented the theme of this year's conference, participating museums, and the summary of discussions points. Ms. Hafnidar, Ms. Zhengbi, and Mr. Nishi also presented about their work at their respective museums.

During a panel discussion, participants responded to a question raised by Mr. Ono regarding their expectations towards the next WTMC.

Sharing that Tsunami Museum under her leadership has organized an essay contest among young visitors, Ms. Hafnidar suggested a potential theme for the future WTMC to focus on the young generation.

Mr. Toro commented that the WTMC is a great initiative and is expected to continue on a regular basis. Having participated in the two WTMC, he told the audience that he learned a lot from other participating museums and is committed to sharing his learning with museums in Chile.

Meanwhile, Ms. Zhengbi stressed that building resilience and Build Back Better from disasters are the key culture for disaster-related museums to foster. By learning from each other and through collaborative activities, the museums can cultivate such culture, she added.

Lastly, as tsunami- and disaster-related museums need to explore new activities and materials for the exhibitions to be sustainable and to continuously mobilize visitors, Mr. Nishi expressed that learning from other museums is critical and that WTMC provides such precious opportunities.

Museums and museum professionals from countries and territories such as Bangladesh, Bhutan, China, Japan, Republic of Korea, Nepal, Taiwan, and Vanuatu attended the conference, along with the President and Vice President of ICOM. With such a relevant audience, it was a great opportunity to share the outcome of the 2nd WTMC held the previous day.



Panel discussion during the ICOM-ASPAC Annual Conference 2018

Article on WTMC Published on UNISDR Website

Tsunami Museums meet in Japan

By Yuki Matsuoka

The world must overcome “its desire to forget” was the message from a leading Japanese advocate for tsunami risk awareness at the 2nd World Tsunami Museum Conference.

Member of the House of Representatives, Mr. Teru Fukui, spoke of Japan’s national resilience movement, and extending the movement to the rest of the world.

Mr. Fukui emphasized the importance of investment in infrastructure to reduce human and economic losses caused by tsunami and associated disasters, a key target of the Sendai Framework for Disaster Risk Reduction, the global plan for reducing disaster losses.

“The lessons learned from disasters should be imprinted into our genes and we must overcome our desire to forget”, he told the gathering of 156 participants from 17 countries.

In welcome remarks, the Executive Director of the Tokyo National Museum, Mr. Masami Zeniya, highlighted the roles of museums in post-disaster recovery of cultural heritage as well as in “passing down the memories of damages caused by tsunamis to future generations”.

Representatives from 5.12 Wenchuan Earthquake Memorial Museum Management Center; Tsunami Museum (Aceh) Indonesia; and Okushiri Isle Museum from Hokkaido in Japan shared their challenges and best practices by reflecting on the years of experiences since their museums’ establishment.

Sendai City, the epicentre of the 2011 Great East Japan Earthquake and Tsunami, recently established the Arahama Elementary School as a museum. Ms. Kazuko Kohri, Mayor of Sendai, emphasized that it was the “mission of Sendai City to share memories and make sure these efforts will not be forgotten.”

Speakers recognized a challenge to educate youth and children who do not have direct tsunami and earthquake experiences.

Ms. Hafnidar, Head, Tsunami Museum (Aceh) in Indonesia emphasized the importance of making a museum a center of inclusiveness and shared her wish to increase further the number of young visitors.

They also noted that the network established at World Tsunami Museum Conferences can be capitalized on to exchange ideas, material, and assets through ICT and other technologies.

Building upon the 1st World Tsunami Museum Conference, held in November 2017, in Okinawa, the 2nd World Tsunami Museum Conference took place in Tokyo on 30 November, 2018.

The conference attracted approximately 156 participants from 17 countries. Speakers included representatives from (tsunami) museums, universities, municipalities, and government agencies from Japan, China, Chile, Indonesia and UNESCO.

Held back-to-back with the 66th National Convention of Museum, closing remarks were offered by Mr. Johei Sasaki, Executive Director of the Kyoko National Museum, highlighting the need for a cross-sectoral approach and the concept of “*museums as cultural hubs*”.

The 2nd World Tsunami Museum Conference was organized by the Ministry of Foreign Affairs (MOFA) of Japan, ERIA, and UNISDR Office in Japan. Cooperation was provided by IRIDeS, Tohoku University. The conference was hosted at the Tokyo National Museum.

Participants came from Benin, China, Chile, Republic of Congo, Guatemala, Haiti, Indonesia, Iran, Jamaica, Japan, Republic of Korea, Maldives, Mexico, Moldova, Philippines, Sri Lanka, and Uganda.

List of Participating Organization

National Office of Emergency of the Interior Ministry (ONEMI)	Chile
Tsunami Museum (Aceh Culture and Tourism Department)	Indonesia
5.12 Wenchuan Earthquake Memorial Museum	China
United Nations Organization for Education, Science and Culture (UNESCO)	
Liberal Democratic Party of Japan	Japan
International Research Institute of Disaster Science (IRIDeS), Tohoku University	Japan
Institute for Excellence in Higher Education, Tohoku University	Japan
Sendai City, Miyagi Prefecture	Japan
Okushiri Isle Tsunami Museum	Japan
Okushiri Town Board of Education	Japan
International Council of Museums Asia-Pacific Alliance (ICOM-ASPAC)	Japan
Japanese National Committee for ICOM	Japan
Tokyo National Museum	Japan
Kyoto National Museum	Japan
Kyushu National Museum	Japan
National Archives of Japan	Japan
National Resilience Promotion Headquarters	Japan
Cabinet Office	Japan
Ministry of Land, Infrastructure, Transport and Tourism	Japan
Ministry of Education, Culture, Sports, Science and Technology	Japan
Japanese Association of Museums	Japan
Japan International Cooperation Agency (JICA)	Japan
Ministry of Foreign Affairs	Japan
Economic Research Institute for ASEAN and East Asia (ERIA)	
United Nations Office for Disaster Risk Reduction (UNISDR)	
Embassy of the Republic of Benin in Japan	Benin
Embassy of the Republic of Chile in Japan	Chile
Embassy of the People's Republic of China in Japan	China
Embassy of the Republic of Congo in Japan	Republic of Congo
Embassy of the Republic of Haiti in Japan	Haiti
Embassy of the Islamic Republic of Iran in Japan	Iran
Embassy of Jamaica in Japan	Jamaica
Embassy of the Republic of Maldives in Japan	Maldives
Embassy of the United Mexican States in Japan	Mexico
Embassy of the Republic of Moldova in Japan	Moldova

Embassy of the Republic of the Philippines in Japan	Philippines
Embassy of the Democratic Socialist Republic of Sri Lanka in Japan	Sri Lanka
Embassy of the Republic of Uganda in Japan	Uganda
Chuo University	Japan
Ibaraki University	Japan
Musashi University	Japan
The Open University of Japan	Japan
Ritsumeikan University	Japan
United Nations University - Institute for the Advanced Study of Sustainability (UNU-IAS)	
Tokyo Metropolitan Government	Japan
International Tsunami Disaster Prevention Society	Japan
Akita Prefectural Museum	Japan
Busan Museum	Republic of Korea
Casa K'ojom	Guatemala
Disaster Reduction and Human Renovation Institute (DRI)	Japan
Edo-Tokyo Museum	Japan
Ibaraki Nature Museum	Japan
Iwate Prefectural Museum	Japan
Kanagawa Prefectural Museum of Natural History	Japan
Kawasaki City Museum	Japan
Miyazaki History and Culture Center	Japan
Nagasaki Prefectural Art Museum	Japan
National Museum of Ethnology	Japan
Niigata Prefectural Museum of History	Japan
Nishinomiya Shell Museum	Japan
Ofunato City Museum	Japan
Parthenon Tama	Japan
Rikuzentakata City Museum	Japan
Sano Art Museum	Japan
Sendai City Tomizawa Site Museum	Japan
Suiheisha History Museum	Japan
Tokushima Prefectural Museum	Japan
Tokyo Reconstruction Memorial Hall	Japan

Seven private sector entities and five non-profit organizations attended the conference.

Slides of Presentations

第2回 世界津波博物館会議
東京国立博物館 講堂

津波による脅威の伝承の重要性

Importance of passing down lessons and communicating about the threats of disasters from generation to generation

東北大学 災害科学国際研究所 所長
津波工学研究分野 今村 文彦 教授

Prof. Fumihiko Imamura,
Director of IRIDeS, Prof. of Tsunami Eng., Tohoku University

TOHOKU
UNIVERSITY

<http://irides.tohoku.ac.jp/>

IRIDeS
International Research Institute
of Disaster Science

津波の脅威 Threat of tsunamis

- 低頻度大災害(人的被害が大きい)
- Low frequency and high impact
 - 一度発生すると広域に影響し、人的被害が大きい
 - 1998～2017年の20年間に(UNISDR11月2日発表)
 - 津波による死者が世界で25万人を超え
 - 家屋流失などの経済損失額が2800億ドル(約31兆7000億円)
- しかし、発生から猶予時間もあり、適切な避難を実施すれば、**人的被害をゼロにすることも可能**

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津波(被害)には多様性がある

Various hazard/damage of tsunamis

- 浸水 Inundation (海水だけでなく土砂も含む)
- 流れの強さ Current (タンカーなど大型船舶も漂流)
- 波力の破壊力 Wave force (木造建物は土台のみ残り流失)
- 流れにより、浸食・堆積 Sedimentation (土砂移動) ⇒ 地形変化
- 来襲の後に、津波火災 tsunami fire

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来襲する津波(仙台平野)

The tsunami attacking Sendai area



(毎日新聞) http://www.boston.com/bigpicture/2011/03/mamoru_sasakawa_tsunami.html

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他の2次災害

Other 2nd damage

- 浸水域+地形変化 560km² Inundated area
- 液状化 Liquefaction
- 火災 Fire



Prof. Yasuda, Tokyo Dentai University



来襲する津波(津波火災) Tsunami fire



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IRIDeS
International Research Institute
of Disaster Science

外力	誘因	影響（拡大要因）	被害
浸水（泥水） Inundation	海水（塩分）、土砂移動、火災発生	溺死（呼吸困難、津波難、大規模延焼、海水植物枯	地域崩壊、消失、農業被害
流れ Current	漂流物・船舶、土砂、可燃物	破壊、浸食、堆積、火災延焼、土砂移動	家屋・施設被害、インフラ被害、環境破壊
波力 Wave force	浸水×流れ ²	破壊力（破壊増）	家屋・施設被害、インフラ被害

伝承の必要性と博物館の役割

Importance of transfer memory/lesson and role of tsunami museum

- 低頻度大災害＝＞忘れやすい
 - 過去の経験が伝承しにくい
- 博物館の役割
 - 記録（経験）の収集・管理、展示；客観性 Collection and Subjectivity
 - 記憶の共有化（個人＝＞集団）；主観性 Objectivity
 - 教訓の体系化（時代・世代を超えて）；普遍性 universality
 - 将来のリスク評価の支援（過去・現在そして未来）；予測性 Predictability

Keiko Adachi, Guide, Okushiri Isle Tsunami Museum, Japan



奥尻町の概要



経度	139度31分03秒
緯度	42度10分11秒
面積	143km ²
人口	男 1,394人 (2018.10.31)
	女 1,256人 (")
	計 2,650人 (")
世帯数	1537世帯 (")

北海道南西沖地震の概要

- 発生: 平成5年7月12日午後10時17分
- 震源: 北海道南西沖 (N.42° 47', E. 139° 12')
- 震源の深さと規模: 34km, マグニチュード 7.8
- 奥尻島は震度6の烈震と推定されている



津波来襲後の火災 (青苗地区)



津波被害状況 (青苗地区)



津波の到達高さ

地区名	津波到達高
稲穂地区	7m
勘太浜地区	8m
球浦・赤石地区	4m
松江地区	21m
青苗地区	5m
米岡地区	22m
藻内地区	19m
ホヤ石地区	15m
神威脇地区	7.5m



地震による斜面崩壊



津波被害状況 (稲穂地区)



応急仮設住宅



人工地盤による防災機能を備えた漁港



整備された防潮堤



ピロティ構造を採用した小学校



青苗地区の街並み(平成9年8月)



復興した青苗地区と奥尻島津波館



奥尻島津波館



198のひかり



朱炎と玄斎

奥尻島津波館(内観)



慰霊碑「時空翔」と津波館周辺での周年活動



災害対策本部での情報整理



津波から逃れるため高台へ避難

防災ロールプレイ



日本で唯一の防災フットパス



ご清聴ありがとうございます



December 26, 2004
World Disaster Memory

160 kilometers of earth's
crust are damaged in the
depths of the sea.

Millions of tons of water
spilled into the Banda
mainland and became a
deadly wave.

More than

230,000 people died

635,384 people houseless

151,982 houses and schools
damaged



Museum's story

Built by BRR NAD-NIAS

Februari 23rd, 2009 opened by
president

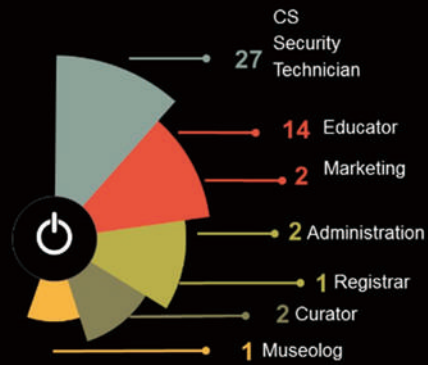
Management under MoU

Mei 8th, 2011 opened for
public access by governor



Infographic of Staffs

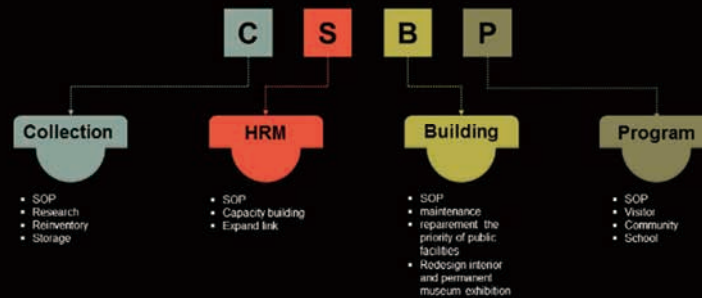
Some employees have been working since the first time museum was accessible to the public while others are new ones. Now they are from various scientific disciplines such as museology, disaster experts, economics, communications, educations, etc.



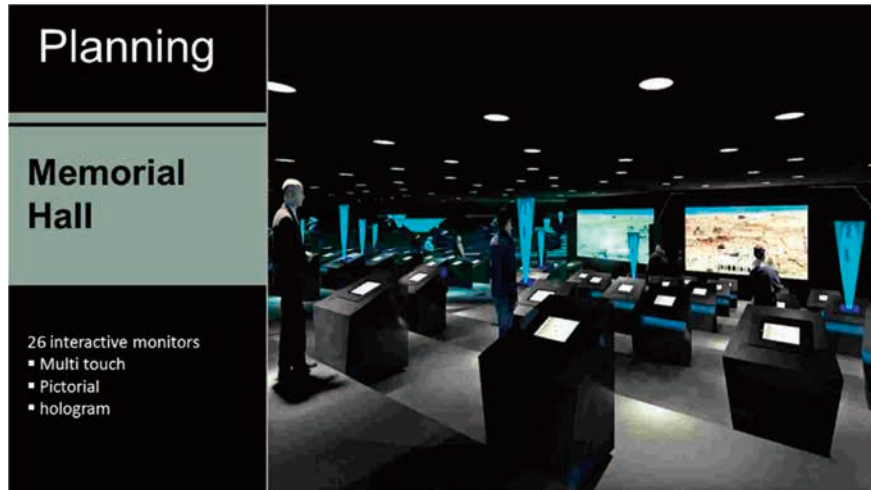
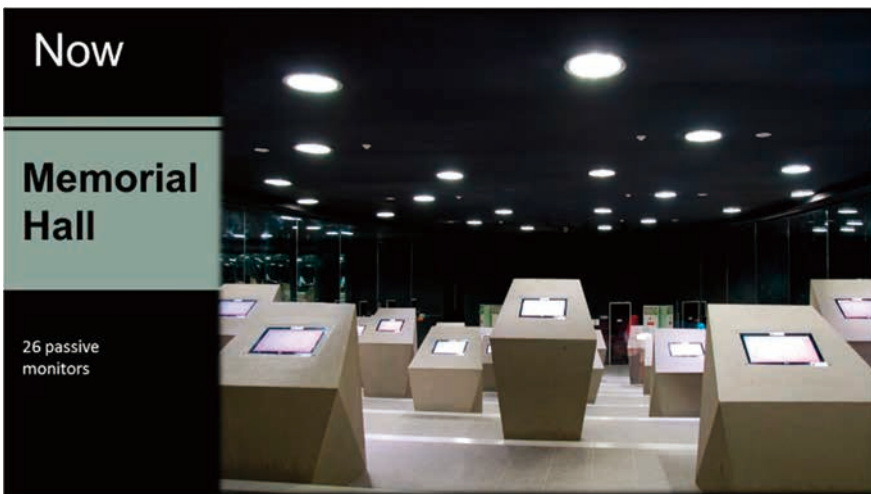
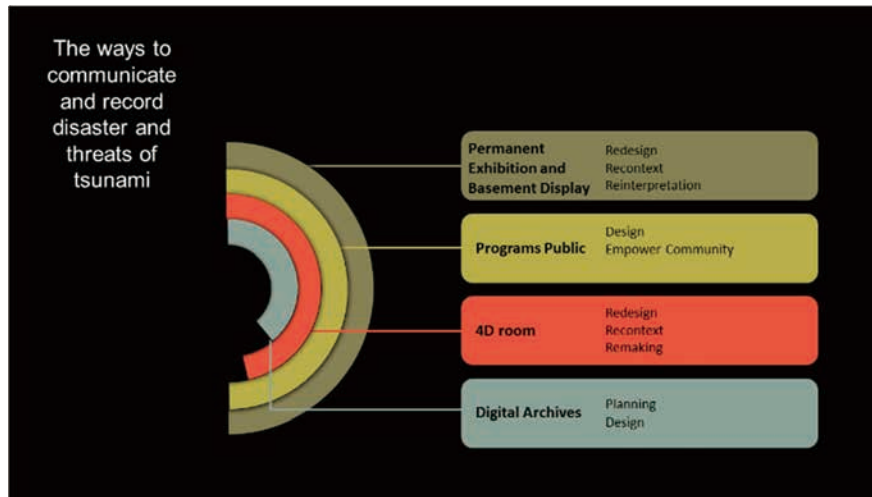
Visitor number

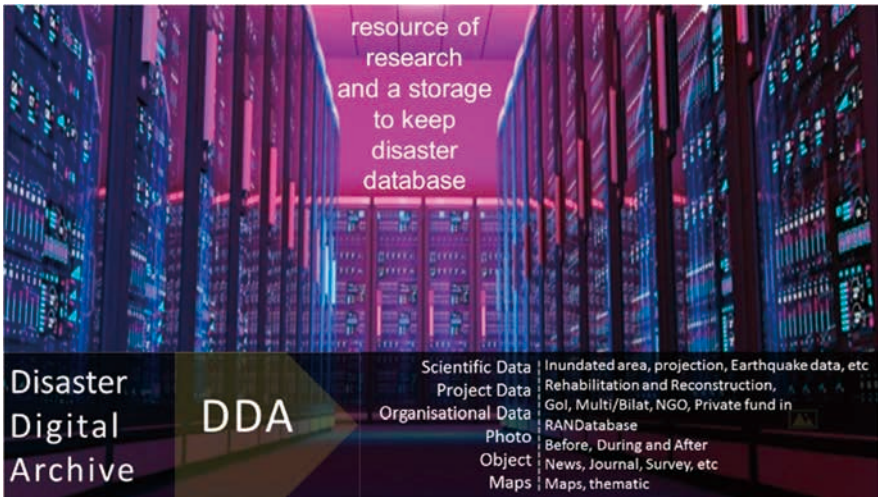
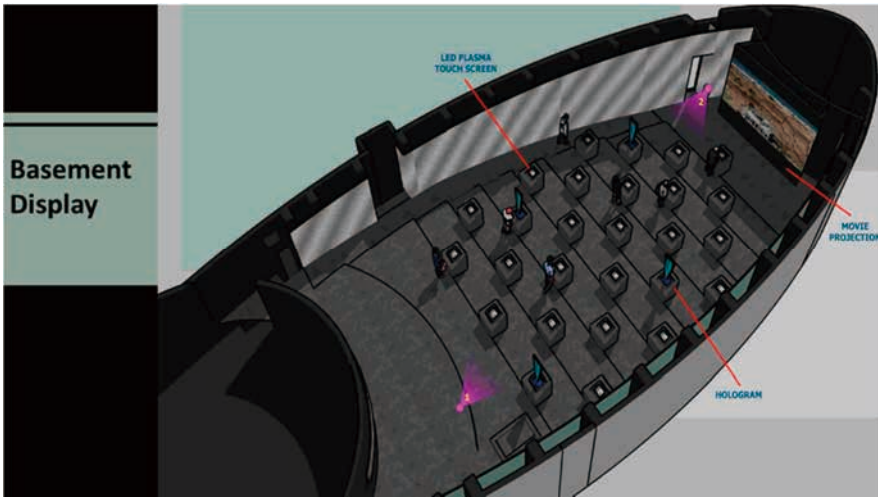
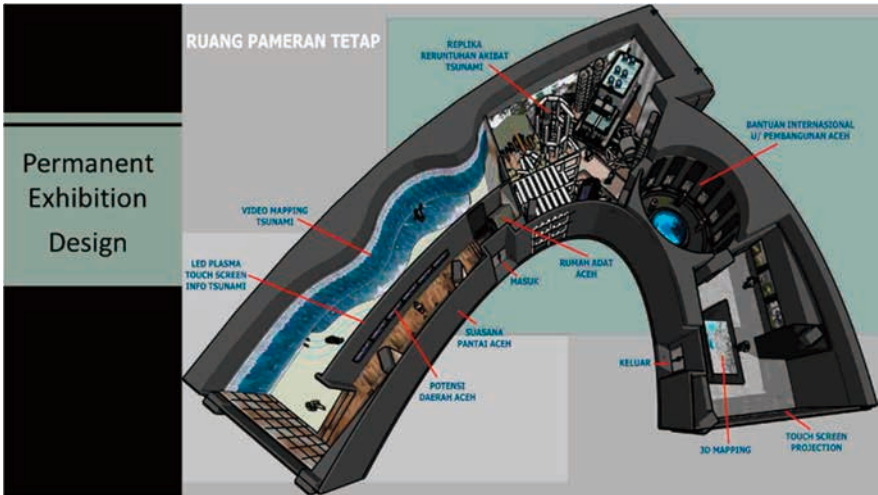
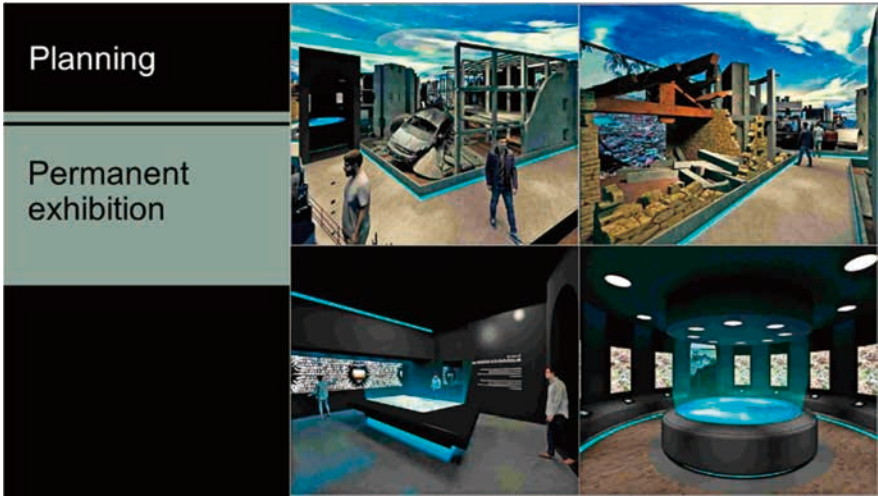


Remanagement 2018



museum
tsunami
planning

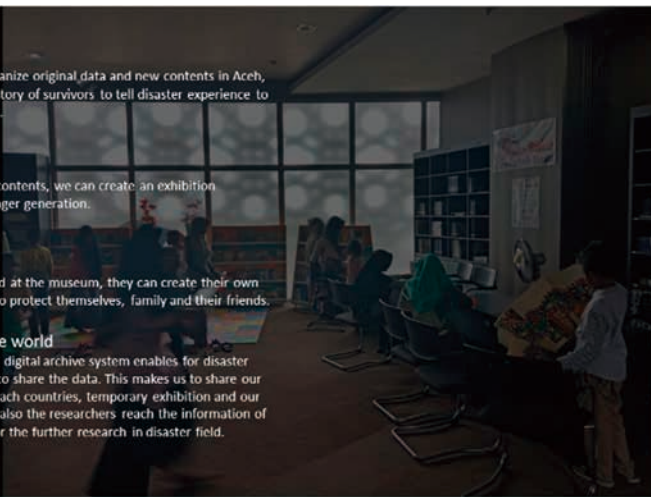




2018

↓

- Know**
Recollect and organize original data and new contents in Aceh, especially oral history of survivors to tell disaster experience to young generation.
- Acquire**
Based on stored contents, we can create an exhibition adequate to younger generation.
- Make actions**
What they learned at the museum, they can create their own evacuation plan to protect themselves, family and their friends.
- Connect to the world**
Common disaster digital archive system enables for disaster related museum to share the data. This makes us to share our local wisdom of each countries, temporary exhibition and our daily events, and also the researchers reach the information of each museums for the further research in disaster field.

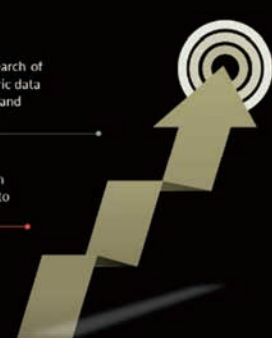


- We are currently approach some institution for funding all planning and also finding creative team
- Finding partners who wants to work on with us specially for digital archive
- Evaluate all planning and progress



next

-  Becoming a center of inclusive disaster research of the world. Museum could record oral historic data and collect more collections of Earthquake and Tsunami 2004
-  Museum could communicate and collaborate with many stakeholders to accomplish the museum role in communicating and sharing the disaster experience to the world
-  Museum could serve by inclusive the visitors and increase young generation number



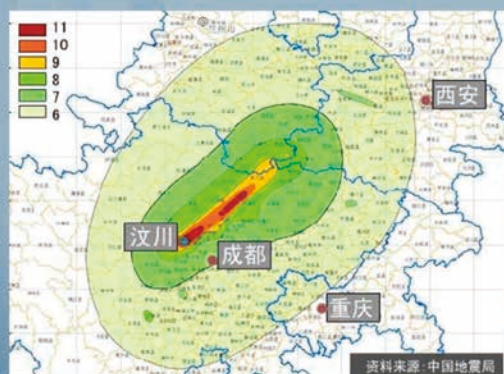

saleum

Exploit Unique Advantageous Resources Explore New Ways to Prevent Disaster



Director of the 5.12 Wenchuan Earthquake Memorial Museum Management Center
Ms.Feng Zhengbi

I、The general situation of 5·12 Wenchuan Earthquake Memorial Museum



5·12 Wenchuan earthquake affected vast areas including 10 provinces, such as Sichuan, Gansu and Shanxi province.

Disaster area: 500,000 square kilometers
perished and disappeared : 89149

Injured: 374643
Economic losses: 845.1 billion yuan(RMB)

资料来源:中国地震局



The museum is located in Qushan Town in Beichuan Qiang Autonomous County, Mianyang City, Sichuan Province, China.

Museum



Main Pavilion 《Everlasting Memories》



Sub-pavilion: Science Popularization Experience Center

Relics Site



Beichuan Earthquake Relic Site



Sha Ba earthquake fault



Tangjiaashan Barrier Lake

The place where the extraordinary events of human history are recorded is unique, unique and unrepeatable with the factions of education, memorial, exhibition, scientific research and publicity.



Original appearance protection

The largest earthquake site

The most typical of destruction

The most comprehensive Secondary disasters

With a protection area of 1.2 square kilometers, it is of high scientific research value and is a precious resource that cannot be duplicated by carrying out earthquake disaster research and disaster prevention and mitigation education.



5.12 Wenchuan Earthquake Memorial Museum
covers an area **142,300** square meters , Construction area of **142,80** square meters
The exhibition area of **108,00** square meters



The Unprecedented Disaster Wreaks Havoc



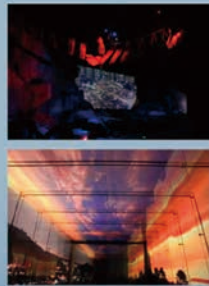
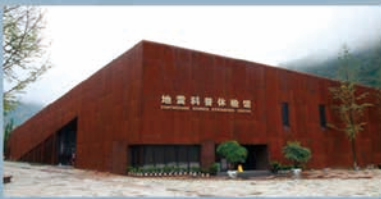
People are United as One in Quake Relief



Post-disaster Reconstruction Creates Miracles Scientific



Development and Revitalization A Monument in the New Era



Sub-pavilion (Science Experience center) : The theme is Feel the earthquake,spread knowledge, love life , with the exhibition aera of 1,560 square meters



15.2 million people have been visited the museum including 3,582 batch foreign researchers and Government affairs team.

II、Major measures to prevent and mitigate natural disasters



First: borrow wisdom.

We hire well-known historical and disaster prevention research experts as consultants.



We've planned and held the national red venues social education theory and practice symposium.



Jilin University professor : deputy director of the museum science committee of the China Museum Association, Shi Jixiang,



School of Marxism, Renmin University of China Doctor, professor, doctoral supervisor, Tao Wenbiao



Li Hongqiang, party secretary and professor of the academy of social sciences



the Party School of the CPC central committee, professor Shen Qianliang,

Second: Look government for help

We fight for social education activities such as disaster prevention and mitigation. Together with government, we have built social education practice base to integrate the earthquake memorial hall into the social education activities such as disaster prevention and mitigation, which gives full play to the social education functions of the memorial hall.

Third: walking into schools



Ziyun primary school



No.3 Torch primary School

2. Pay attention to innovation of social education activities such as disaster prevention and mitigation.

First: plan and hold education activities.



Plan and organize the public to participate in the education activities for disaster prevention and mitigation more than 140 times, and the number of people receiving education has reached more than 1.7 million.

Second, enrich the connotation of traditional anniversaries and festivals.



Pay attention to the protection and communication of traditional culture and try to build the country's soft power.

Third: expand social education methods of disaster prevention and mitigation.



3. Explore the inclusiveness of social education such as disaster prevention and mitigation.

First: Competitions on safety



Since 2014, five consecutive "earthquake memorial cup" essay and painting competitions have been held under the theme of safety.



No.3 Torch primary school



Mianyang Foreign Languages School



Nanshan Bilingual school

More than 80 schools in and outside the city organized all teachers and students to carry out social education activities such as disaster prevention and reduction.



800 thousand people participate, there are over 1.2 million works

Second: Attract specialist teams



We have reached strategic cooperation agreements with professional training institutions such as Mianyang Siyang sports co.ltd. and Mianyang future education, and completed the construction of the disaster prevention and reduction training base of Enda Qiang village in Shaba and the disaster prevention and reduction development training base in Leigu town.

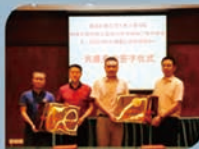
Third: Cooperate with Universities



Sichuan College of Traditional Chinese Medicine



Mianyang Normal University



Southwestern University Of Finance And Economics



PLA Nanjing Army Command College



Sichuan University-The Hong Kong Polytechnic University
Institute for Disaster Management and Reconstruction



Tianfu College of Southwestern
University Of Finance and Economics



Earthquake relief culture research center



In August 2016, the magazine of red venue work newsletter came out.

III Vision for future work



1.Try to build education base for all the public

2.Make every effort to build a social education team

3.Do our best to perform social education functions

Sendai City's Efforts to Create Records and Preserve Memories of the Tsunami

Kazuko Kohri
(Mayor of the City of Sendai)

1. Sendai City Overview
2. Overview of the Great East Japan Earthquake (GEJE)
3. Sendai City's Efforts to Record and Share Information about the Disaster
4. Ruins of the Great East Japan Earthquake: Sendai Arahama Elementary School
5. Concluding Summary

2nd World Tsunami Museum Conference 2018
30 November 2018,

P1

1. Sendai City Overview

1-1. Introduction to Sendai



- Population: 1,088,027 (as of June 1, 2018)
- Largest city in the Tohoku region
- Political and economic center of the Tohoku region

	Population	Households	(Ref) Population of Miyagi Pref.
June 1, 2018	1,088,027	513,791	2,315,614
March 1, 2011	1,046,737	465,811	2,346,853
Increase or decrease	-41,290	-47,980	▲31,239

Geography

- Area: 786.30 sq km
- Western region consists of mountainous terrain at elevations in the 1,000 meter range
- Central region consists of hilly terrain, through which 3 rivers flow eastward
- Eastern region consists of a lowland plain (Sendai Heiya)

P2

1. Sendai City Overview

1-2. History of Earthquakes and Tsunamis



Past major tsunami floods in Tohoku

- Yayoi Era: Earthquake occurred 2,000 years ago
- 869: Jogan Earthquake
- 1611: Keicho Sanriku Earthquake
- 1896: Meiji Sanriku Earthquake
- 1933: Showa Sanriku Earthquake
- 2011: Great East Japan Earthquake

⇒ occur every 400-800 years



Namiwake-jinja Shrine
Built where the receding floodwater flow separated into two during a historical tsunami flooding.

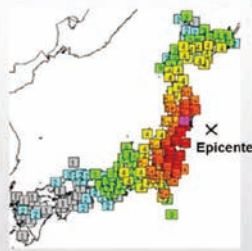


Kutsukata Ruins
Remains of soil eroded by a tsunami roughly 2,000 years ago

P3

2. Overview of the Great East Japan Earthquake (GEJE)

2-1. Overview of Damage Sustained by the Earthquake



Date/time of occurrence: March 11, 2011 around 14:46
Epicenter location: Off the Sanriku Coast (38° 01' N, 142° 05' E)
Size: Magnitude 9.0
Intensity recorded in Sendai: 6 upper ~ 5 lower
Tsunami warning issued: March 11, 14:49
Tsunami profile: 7.1 m in height (estimated level at Sendai Port)
The first tsunami wave arrived 60 minutes after the earthquake occurred.

Overview of damage

	Deaths	Completely Collapsed
Miyagi	10,466	83,003
Iwate	5,137	19,507
Fukushima	3,816	15,224
Aomori	3	4
Nationwide	19,541	121,772

Source: National Police Agency (deaths and building damage as of Dec 8, 2017)

P4

2. Overview of the Great East Japan Earthquake (GEJE)

2-3. Outline of Damage (Sendai City)



P5

2. Overview of the Great East Japan Earthquake (GEJE)

2-2. Damage to Sendai City

Human Casualties (As of Mar 1, 2017)

	Within Sendai City	Residents of Sendai City
Deaths	904 people	809 people
Missing	27 people	
Injured	2,275 people	

Building Damage (As of Sep 22, 2013)

	Within Sendai City
Completely Collapsed	30,034
Severely Damaged	27,016
Partially Damaged	82,593
Minor Damage	116,046

Damage to residential areas (As of July 2013)

	Within Sendai City
Number of damaged land lots (rated as "dangerous" and "requires caution")	5,726

Estimated Cost of Damage (As of Mar 1, 2018) (in billions of yen)

City-Owned Facilities	Approx. 252.3
Other Public Facilities	Approx. 145.2
Houses & Residential Land	Approx. 608.6
Commerce and Trade	Approx. 214.7
Agriculture, Forestry and Fisheries	Approx. 73.5

⇒ Approx. 1.3043 trillion yen

P6

2. Overview of the Great East Japan Earthquake (GEJE)

2-4. Communities Affected by the Tsunami (Fujitsuka Area)



P7

2. Overview of the Great East Japan Earthquake (GEJE)

2-5. Schools Affected by the Tsunami in the Eastern Part of the City



P8

3. Sendai City's Efforts to Record and Share Information about the Disaster

3-2. Tsunami Disaster Preparedness Countermeasures

Multiple Defenses

Reduce tsunami damage by elevating prefectural roads

Evacuation

Secure evacuation facilities

Relocation

Relocate to safe inland areas



P9

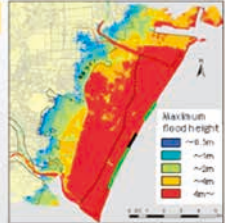
3. Sendai City's Efforts to Record and Share Information about the Disaster

3-2-2. Multiple Defenses

TSUNAMI SIMULATION

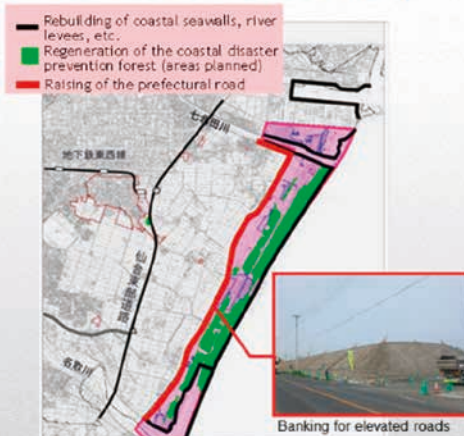
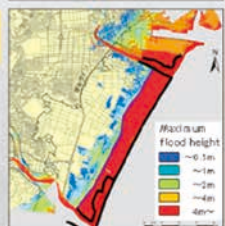
Projection Base

The tsunami of Mar.11 was reproduced



The premise for the reconstruction plan

Flood height on the west of the embankment road
⇒ 2 m or less



Road Elevation Project

Full length completion scheduled for the fall of 2019

Entire Extension Length: approx. 10 km

Road Width: approx. 10 m

Bank Height: approx. 6 m

P10

3. Sendai City's Efforts to Record and Share Information about the Disaster

3-2-3. Evacuation



P11

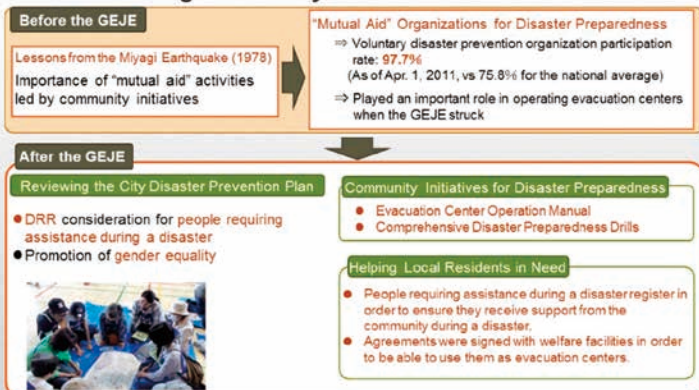
3-2-4. Relocation



P12

3. Sendai City's Efforts to Record and Share Information about the Disaster

3-4-1. Promoting Community Disaster Prevention



P13

3. Sendai City's Efforts to Record and Share Information about the Disaster

3-5. Share our experiences and memories of the GEJE to the future and the world



P14

4. Ruins of the Great East Japan Earthquake: Sendai Arahama Elementary School

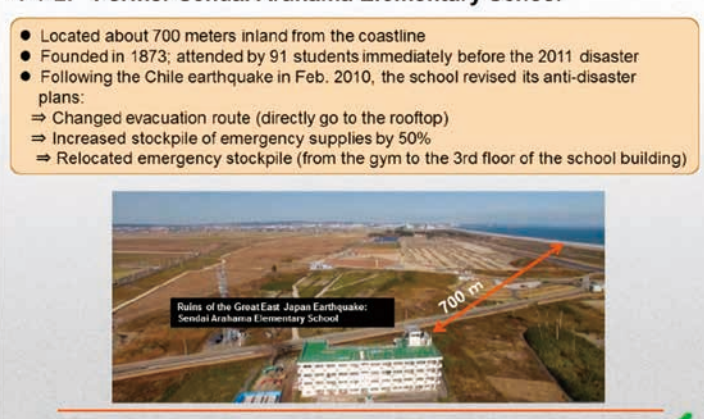
4-1-1. Arahama Area



P15

4. Ruins of the Great East Japan Earthquake: Sendai Arahama Elementary School

4-1-2. Former Sendai Arahama Elementary School



P16

4. Ruins of the Great East Japan Earthquake: Sendai Arahama Elementary School

4-1-3. Arahama Elementary School hit by the GEJE

- Flooded by the tsunami about 60 minutes after the earthquake occurred
- Water reached 40 cm above the second floor of the building
- A total of 320 people, including students, were rescued from the inundated building
- More than 190 people were killed in the surrounding area



Arahama Elementary School Flooded by the Tsunami



Arahama Area After the Disaster



Evacuees Rescued from Arahama Elementary School the Next Morning

P17

4. Ruins of the Great East Japan Earthquake: Sendai Arahama Elementary School

4-2. Reopening as a Ruins of the Great East Japan Earthquake

Opened Apr. 30, 2017 to share the impact of the tsunami and lessons learned from the disaster to future generations, with the hope of preventing similar tragedies in the future

- Outside of the School Building/1st Floor/2nd Floor
 - ⇒ Damaged structures; photos taken immediately after the disaster
- 4th Floor
 - ⇒ Movie summarizing activities over 27 hours after the disaster / historical and cultural exhibitions of the Arahama Area
- Rooftop
 - ⇒ Landscape photos comparing before and after the disaster / information on the status of reconstruction-related work



P18

4. Ruins of the Great East Japan Earthquake: Sendai Arahama Elementary School

East Side of the Building



1st Floor Corridor



Grade 1, Class 1 Classroom

P19

4. Ruins of the Great East Japan Earthquake: Sendai Arahama Elementary School



[Exhibition Room]
The 3.11 Memories of Arahama



[Exhibition Room]
The History and Culture of the Arahama Area & The Memories of Arahama Elementary School



[Video]
27 hours, Arahama Elementary School/
march 11.2011

P20

4. Ruins of the Great East Japan Earthquake: Sendai Arahama Elementary School

Total number of visitors:
130,537 (as of Nov. 11, 2018)



Visitors from the Japan Sumo Association

Tour of the Facility by Former Resident Staff

Offers a precious opportunity to listen to disaster survivors' stories regarding:

- Life in the Arahama Area before the disaster
- What happened on March 11, 2011
- Life today for relocated disaster survivors



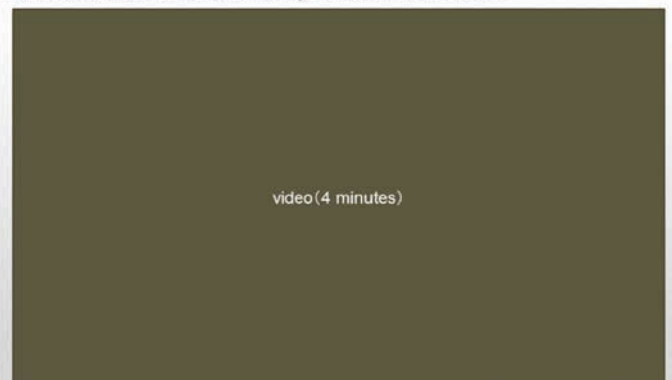
UNITAR-related training



P21

4. Ruins of the Great East Japan Earthquake: Sendai Arahama Elementary School

4-3. 27 hours, Arahama Elementary School/March 11.2011



video (4 minutes)

P22

4. Ruins of the Great East Japan Earthquake: Sendai Arahama Elementary School

4-4. Sharing Memories of the ruins of Arahama Elementary School

Preserving the Foundation Remains of Former Residences

- Open to the public from the summer of 2019
- Includes residential foundation structures destroyed by the tsunami and eroded land surfaces
- Aims to convey the powerful impact of the tsunami and the memories of the people before the disaster



Development Through Education

- Done in cooperation with educational institutions
- Invite visitors to the remains and promote training
- Children/students write messages for disaster prevention

Utilization of Former Residential Sites

Convey, Connect, Create:
Attractive new coastal area development of Sendai for the future

- Starting from 2018
- Lease land for citizens' activities, etc.
- Use the land for business related to sports, sightseeing orchards, etc.



P23

5. Concluding Summary

- Develop coastal areas as part of post-disaster town and landscape development
- Develop human and community capabilities for DRR
- Share experiences and memories of the disaster by giving public access to the disaster remains, etc.

It is the mission of disaster-struck Sendai City to record and share memories of the disaster.

Information Dissemination



Sendai City's Recovery Records



World BOSAI Forum 2019

Issues to be Addressed

In order to maintain public disaster awareness even long after a disaster, it is essential to foster a community culture that passes on records and memories of the disaster to future generations.

How can such a community culture be fostered?

P24

**Thank You for Your Attention
and Consideration !**



<https://sendai-resilience.jp/en/>

Oficina Nacional
de Emergencia

Ministerio del Interior
y Seguridad Pública



Gobierno de Chile

World Tsunami Museum Conference

National Emergency Office of Chile



RICARDO TORO TASSARA
ONEMI National Director
2018
rtoro@onemi.gov.cl

Oficina Nacional
de Emergencia

Ministerio del Interior
y Seguridad Pública

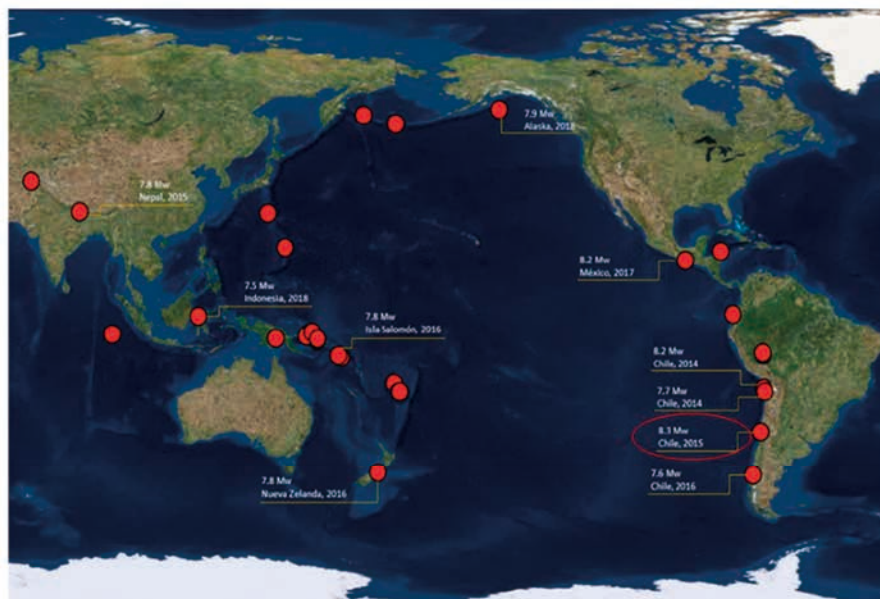


Gobierno de Chile

EARTHQUAKE 27/F 2010



EARTHQUAKES OF MAGNITUDE 7.5 OR SUPERIOR, 2014 - 2018



Between 2014-2018 worldwide have occurred 29 earthquakes of 7.5 magnitude or superior, 25 of them with epicentre in the Pacific Rim..

MAJOR EMERGENCIES IN CHILE (SINCE 2014)



ASSOCIATIVE AGREEMENT WITH JAPAN



ONEMI STRENGTHENING PROJECT FOR THE DEVELOPMENT OF CAPABILITIES IN THE FIELD OF DISASTER RISK REDUCTION



ONEMI STRENGTHENING PROJECT FOR THE DEVELOPMENT OF CAPABILITIES IN THE FIELD OF DISASTER RISK REDUCTION

Result 1

Determine the priority organizational functions of ONEMI as a national agency for DRR

Result 2

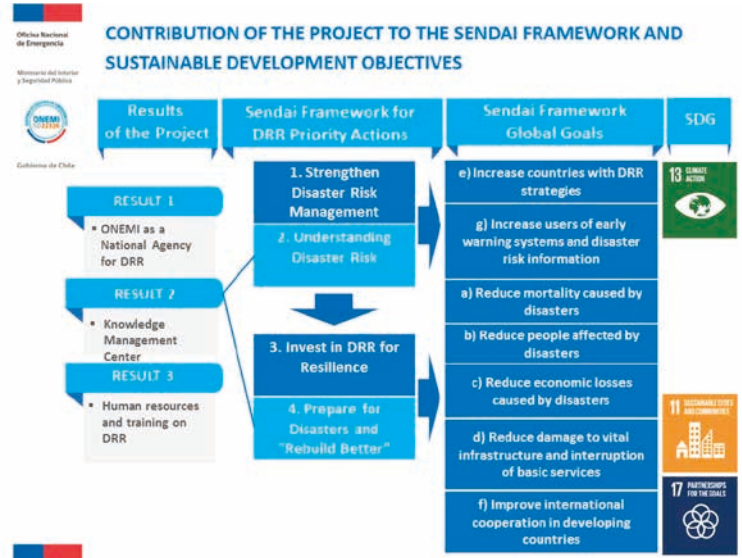
Conceptually design and determine the implementation strategy of the Knowledge Management System

Result 3

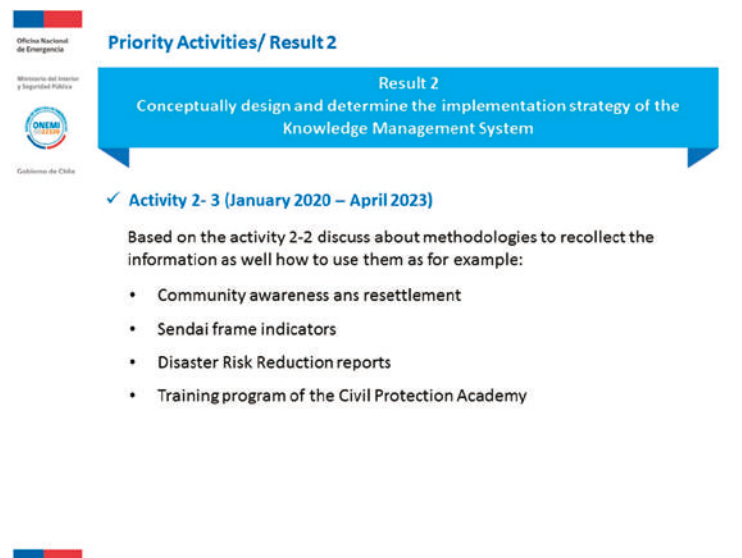
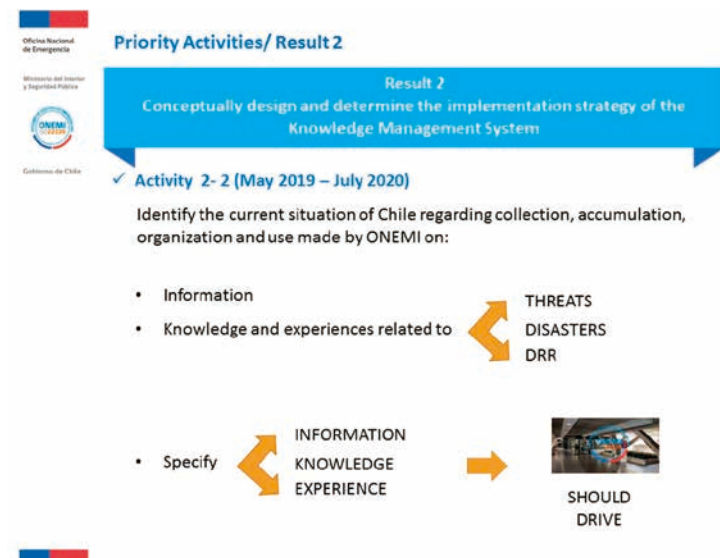
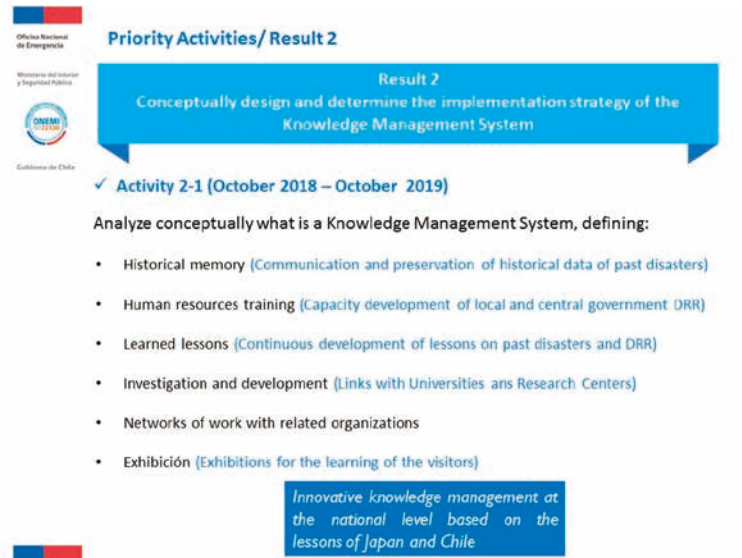
Establish the mechanism for the development of human resources and their training on Disaster Risk Reduction in the Civil Protection Academy and the Department of Community Prevention of ONEMI.

1. STRENGTHENING OF ONEMI

2. CONTRIBUTION OF THE PROJECT TO THE SENDAI FRAMEWORK AND SUSTAINABLE DEVELOPMENT OBJECTIVES



3. PRIORITY ACTIVITIES RESULT 2



Oficina Nacional de Emergencia

Ministerio del Interior y Seguridad Pública

ONEMI ISO 22320

Gobierno de Chile

4. COMPLEMENTARY PROJECT IN CONJUNCTION WITH THE CHILEAN NATIONAL SERVICE OF CULTURAL HERITAGE. DEVELOPMENT OF A VIRTUAL PLATFORM.

Oficina Nacional de Emergencia

Ministerio del Interior y Seguridad Pública

ONEMI ISO 22320

Gobierno de Chile



VIRTUAL Chile

Oficina Nacional de Emergencia

Ministerio del Interior y Seguridad Pública

ONEMI ISO 22320

Gobierno de Chile

FIRST STAGE (PILOT) (2018 – 2019)



Memory Hypocenters

Museums

Heritage Sites

Hub

Criteria

National Representativeness

Oficina Nacional de Emergencia

Ministerio del Interior y Seguridad Pública

ONEMI ISO 22320

Gobierno de Chile



CULTURE FOR ALL

TECHNOLOGY FOR CULTURAL DEVELOPMENT

CONNECTIVITY

DESCENTRALIZATION

Generate a platform that hosts a virtual network of heritage sites that allows the virtualization of museums, exhibitions and other initiatives on a national scale.

Mirta Lourenço, Chief, Section for Media Development and Society,
Division of Freedom of Expression and Media Development, Communication and Information Sector, UNESCO



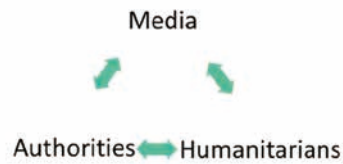
Effective Communication to Empower Audiences

Allow:

- Diverse sources
- Access to sites
- Addressing rumors and disinformation



Importance of Coordination

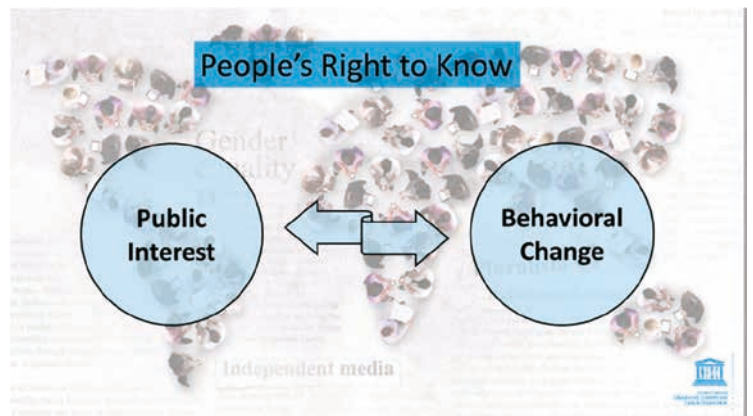


Media in Community Engagement

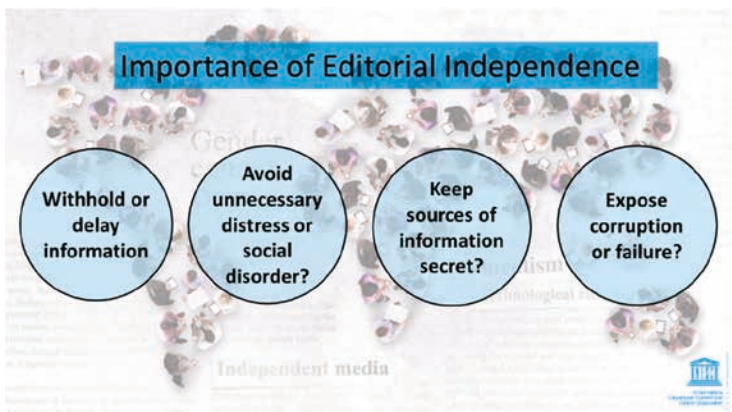
- Response to emergency
- Reverse communication



People's Right to Know



Importance of Editorial Independence



UNESCO

- Media policy and capacity building
- Broker for dialogue between media and humanitarians
- Safeguarding free, independent, pluralistic media

Mirta Lourenço
Chief
Media Development and Society
Communication and Information
UNESCO

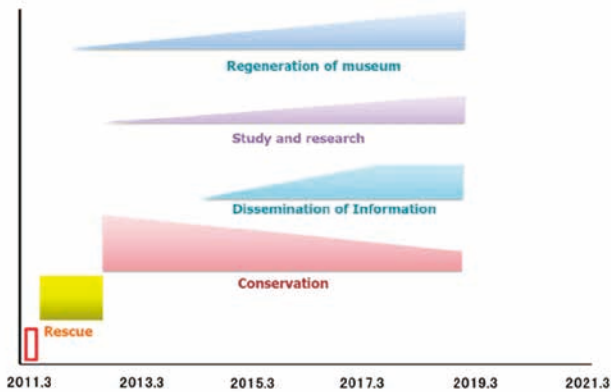


東北地方太平洋沖地震 及び津波によって被災した文化遺産の保全 Conservation of cultural heritage suffered from the Tohoku Region Pacific Coast Earthquake and Tsunami

Nobuyuki KAMBA, Conservation Scientist
Former Supervisor of Conservation and Restoration Section
and honorary member, Tokyo National Museum



Progress of the project



The Muse of museum



博物館資料を持ち
去らないで下さい
高田の自然・歴史・文化を
復元する大事な宝物です
市教委

Rescue Operation in Iwate Prefecture

The self-defense force helped to remove debris at 26 April 2011



Stabilisation Processing of the Objects

Colloidal sediment, salt are dissolved in water and removed, the germs are sterilized with an aqueous solution of sodium hypochlorite (NaClO)



Printed materials on a
cardboard



Hanging scrolls were dismantled
and cleaned



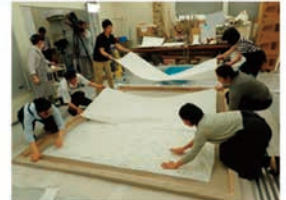
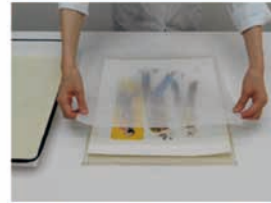
Dissemination of Information

Y. Nakamura played the organ which was restored on 31 Jan. 2015



Tackle Many Challenges

such as water color and canvas paintings, and lacquer wares



Untreated objects of 190,000 pieces



June 2011



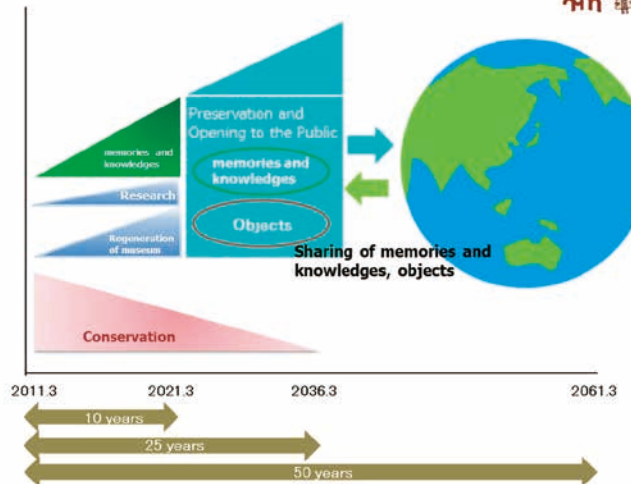
November 2011



June 2011



November 2011



Thank you for your attention

We are looking forward to seeing you at the 2019 ICOM General Conference in Kyoto



Iwate Prefectural Museum



Rikuzentakata City Museum



Tokyo National Musuem

第2回 世界津波博物館会議 2018
2nd World Tsunami Museum Conference 2018
テーマ:
時間軸から見た「津波博物館」の役割 - 災害を風化させないため将来の世代にどう伝承すべきか
Theme Roles of Tsunami Museums from *chronological perspectives* - keeping the memories and lessons alive and passing them down for future generations
第2部:
災害の記憶の保存・継承に向けて
Towards conservation and inheritance of *the memories of disasters*

無知の相続
あるいは津波博物館と「世界の記憶 MoW」の可能性

2018年11月30日 東京、東京国立博物館
芳賀 満 Mitsuru HAGA
東北大学教授
Professor, Tohoku University, Japan
ユネスコ「世界の記憶」選考委員会副委員長
Vice Chairperson, Japanese National Committee for Memory of the World (MoW), UNESCO
ユネスコアジア・パシフィック地域「世界の記憶」執行部副議長
Vice Chairperson, Memory of the World Committee for Asia and the Pacific (MOWCAP), UNESCO

古代ギリシアの二柱の時の神
Two Greek Goods of Time

クロノス Kronos
公的な時間
Public and global Time

カイロス Kairos
私的な時間
Private and local Time

カイロスとクロノス Kairos and Kronos

- ・「**カイロスの私的な時間**」における個はつらいことの忘却は許される。
- ・しかし「**クロノスの公的な時間**」において公には忘却は決して許されない。
- ・忘却の河に流す＝社会的暴力、歴史への暴力と破壊

風化 Wearing thin with time

- ・カイロスとクロノスの交差
- ・「公の時間」における「私（個人、ローカル）の時間」という問題



つらい思い出を
残して忘れる
アリアドネ
Ariadne's story
on Samsara's lap
(Wall painting,
Pompeii, Italy)

公 Public

私 Private

第十八号艦沈没
船体
Case of shipwreck
by museum
11th March 2011

A.Riegl, *Der moderne Denkmalkultus* (『記念物文化』), 1903

遺産、モニュメント＝「人間の記憶の営みの為のもの」

gewollte Denkmal 「欲された遺産、正の遺産」
+
ungewollte Denkmal 「欲されなかった遺産、負の遺産」

遺産、モニュメント
＝「権力者への奉仕の道具」のみであった状態から
→「**全人類共通の遺産**」へ → 国連、ユネスコ

Denk・mal = denken (考える) + das Mal (染み、印、標)
＝ 考えるための標(導、しるべ)

gewollte Denkmal は勿論、考えるための標、
ungewollte Denkmalこそ、人間について考えるための標



「無知の相続」
Inheritance of Ignorance

柳田国男 YANAGITA Kunio (1875年-1962年)
連続講演「農村青年と語る 第13回」(1953年(昭和28年)7月20日)

- ・「このわれわれがなんにも知らずにおったのだということを次の世代に伝えたいのであります。」
- ・「われわれの一生の間に、考えて考えて、この程度までわかったが、これから先はわからんとか、この理由だけは数えあげることができるが、あの理由だけはわからんといったようないくつかの研究を試みた結果、ここまで私たちは理解することができなかったから、これから先へは次の若い諸君がやってくれというような相続」

(『日本人とはなにか』河出書房、2015年、pp.160-170.)

「智愚」
sapius and gu (profound folly)

井上有一

一般に博物館や大学は知を饒舌に語り推奨し過ぎる。
無知、愚を語る、あるいは黙示する場があっても良い。
これからの文化学習機関は、愚をこそ語るべき。
愚かさは、智より重く深いから。



想定外

But still what will happen
will be
beyond
expectations, calculation, measurement
and possibilities.

Preparedness is all that matters.

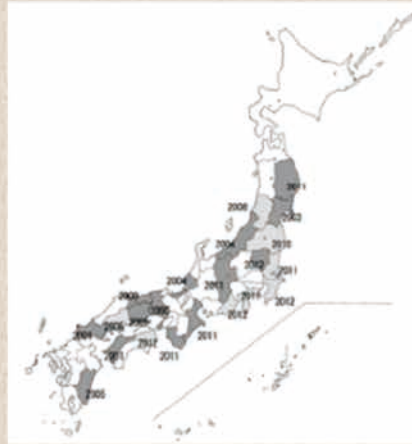
One can do only what is already prepared,
at the most.

Photos by courtesy of
Prof. Akhiro Kijima, Tohoku University



Be prepared:

Build countrywide **heritage networks**
between local authorities, archives, libraries,
museums and universities



Documentary heritage networks
in Japan

日本学術会議 史学委員会 文化財の保護と活用に関する分科会
『文化財の次世代への確かな継承—
災害を前提とした保護対策の構築を目指して—』
2014年6月24日発行 p.19.

Preserving documentary heritage
→ Documental Heritage Rescue Network
(資料ネット)

“Not only entails historical preservation,
but also helping shattered and endangered **communities**
recover their identity and dynamism
by giving them back a sense of their continuity”.

(<http://miyagi-shiryu-net.blogspot.com>)

Preserving documentary heritage
(資料ネット)

Japan was prepared, to a certain degree.

- 1995.1.17. Great Hanshin Earthquake, Magnitude 6.9.
→ In 1995, “NPO Kobe documentary heritage net-work”
(<http://siryo-net.jp>) was established.
- 2003.7.26. Great Miyagi Earthquake, Magnitude 6.4.
→ In 2003, “NPO Miyagi documentary heritage network”
(<http://miyagi-shiryu-net.blogspot.com>) was established.
- **2011.3.11** Tohoku earthquake and tsunami

Rescue the cultural heritage
= Nothing more than
“critical care in ER (Emergency Room)”.

Later,
the cultural heritage
need to leave the ER, recover well, get dressed,
put tie and hat on
and go out on the street again.

Set the official rules in advance
to fit the realities of disaster.

What is your job description ?
→ In that,
“to rescue cultural heritage at the time of disaster”
should be clearly described.

Otherwise, you will be
→ volunteer, working alone, on your own risk,
during your private vacation, with your own money,
and not covered by workers' insurance.

“Cultural heritage
(= National treasures, important cultural heritage, not-yet designated cultural property etc.
Temples, shrines etc.
Archives, libraries, museums etc.)

location map”
on the Google Earth
with active-fault lines added.

But attention to
“Information Disclosure” !
Membership system is needed.
Or, “treasure hunting map” → risk of robbery.

Sendai Framework
for Disaster Risk Reduction,

United Nations Office
for Disaster Risk Reduction

(<https://www.unisdr.org/we/coordinate/sendai-framework>)

At the time of disaster: not enough manpower.
→ One must cope and coordinate over a large area.

→ One will need to cope with
not only documentary heritage
but also with many other kinds
of cultural properties,

e.g., arts, historical architectures, folkcraft articles, a specimen of
animals, plants, minerals, fossils, or rocks.

Not just tangible cultural properties,
but also in-tangible cultural properties,

e.g., traditional performing art, festivals,
craftmanship, wisdom regarding the nature etc.

International Research Center
for Intangible Cultural Heritage in the Asia-Pacific Region
under the Auspices of UNESCO (IRCI)
(<https://www.irci.jp>), in Japan.
Established in 2011 as a Category 2 Centre of UNESCO
to promote the 2003 Convention and its implementation, and to enhance the safeguarding
of intangible cultural heritage (ICH) through instigating and coordinating research
in the Asia-Pacific region.

Japan is Forerunner of Finding Answer

「課題先進国」

for **Natural Disaster**

and

for **other unique set of Emerging Issues**,

like Environmental Problems, **Radiation Hazard**,

Declining Birth Rates, Depopulation, Population Ageing, Energy Supply Problems,
few other countries have ever faced.

Please learn from
Japan's failures and achievements.

Japan is willing to share them with you.

2011.3.11
Tohoku earthquake and tsunami

2011.3.11
Tsunami hit
Fukushima nuclear power plants

Fukushima **nuclear power plants** → Hit by tsunami

→ All power supply loss → Explosion

→ **Radioactive contaminated cultural properties.**

● **Radio-iodine in the air** has a half-life of 8 days.

Do not approach the radioactive contaminated zone for at least 8 days, preferably 3 half-lives (=24 days).

● **Radioactive cesium in the soil.** Study and analyze the current of the air, rain and geographical features of the land. Mapping the contamination status and its official announcement by the government is needed.

● Wall should be thicker than 20 cm. **Stop air-conditioner.**

● Archives, libraries and museums are good refuge shelters.

● **Geiger-Mueller counter** is needed. Cultural properties with more than 1,300cpm, leave behind.

● Workers (male) should be in their 50's or older. Integrate radiation exposure.

● **Management of Radioactive contaminated cultural properties report:**

→ Soviet, **Chernobyl**, no report → Japan, yes

See: C. Sano, Y. Yamamoto, "Rescued Historical Objects: Revitalising the Local Community of the Fukushima Restricted Area", **ICOM Museum International** Vol.65, Issue 1-4, May 2015.

Education for disaster prevention

Disaster Archives on the internet;

"National Diet Library

Great East Japan Earthquake Archive HINAGIKU"

(<http://kn.ndl.go.jp/#/>)

"Michinoku Shinrokuden"

(Great East Japan Earthquake Archive

by Tohoku University)

(<http://shinrokuden.irides.tohoku.ac.jp>)

For the future

→ **"Inter-Generational Ethics" 世代間倫理**

is the fundamental concept of all.

Defect of democracy ?

Not yet born future generation can not vote today.

The principle that sovereignty resides in the people

↓

The principle that sovereignty resides in the people of the future

= Preserving cultural heritage, because

it is the Future people that owns the Present, consisting of assets from the Past.

= Sustainability

Creativity ⇔ **Revolutionary**

創造性

一世代を視野に、所有権、権利の主張。
しかしその結果の責任はとらない態度。

Success within one-generation is the main concern.
Claim title and rights (and money), but feel indifferent
towards consequences of new inventions in the future.

Generativity ⇔ **Visionary**

世代継承生成性

~ Erik Erikson

~ Steve Jobs and William Blake

一世代を超える視野をもち、権利を要求しない。
しかし責任を負う倫理的態度。

Inter-Generational Ethics is the concern.
Don't claim rights,
but think of future generations
and feel responsible towards consequences
of what we do now.

Resilience and Sustainability

理系学問、科学・技術、大学
現代社会一般の価値観・評価基準
→「トランス・サイエンスの時代」、
「リスク社会」

「世代間倫理」
歴史学、倫理学
博物館、
特に津波博物館

Thank you very much.

Mitsuru HAGA

mhaga@m.tohoku.ac.jp

国立公文書館
NATIONAL ARCHIVES OF JAPAN

第2回世界津波博物館会議 2018

日本の国立公文書館による被災公文書等の救援活動

独立行政法人国立公文書館
業務課保存係
阿久津智広

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国立公文書館
NATIONAL ARCHIVES OF JAPAN

主な活動

2011年～2012年 東日本大震災「被災公文書等修復支援事業」

2015年9月 平成27年9月関東・東北豪雨

11月 被災公文書等救援チームの設置

2015年～2016年 茨城県常総市で救援活動の実施

2016年11月 文化遺産防災ネットワーク推進会議への参加

2017年9月 平成29年台風18号による大雨、河川氾濫

11月 大分県津久見市での救援活動の実施

2018年7月 平成30年7月豪雨

7月・9月 愛媛県西予市への技術的助言、物品提供

2

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国立公文書館
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東日本大震災「被災公文書等修復支援事業」

年度	研修内容	実施場所
2011年度	水損による被災公文書等の洗浄及び乾燥に係る技術研修 ※東京文書救援隊が考案した復旧システムを活用	岩手県…山田町、陸前高田市 宮城県…気仙沼市、石巻市、仙台市
2012年度	水損による被災公文書等の洗浄及び乾燥に係る技術研修 破損した文書の繕い等に係る技術研修	岩手県…陸前高田市、大船渡市 宮城県…気仙沼市、石巻市、女川町

被災公文書等の修復及び保全を独自に行うことのできる人材を育成

被災した地方自治体が、自らの手で、被災公文書等の修復及び保全に、継続的に取り組むことができる環境を整備

3

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国立公文書館
NATIONAL ARCHIVES OF JAPAN

平成27年9月関東・東北豪雨

9月10日、常総市内を流れる鬼怒川が氾濫し、下流域が約40km²にわたり浸水

常総市役所の永年文書庫に浸水し、同庫に保存されていた同市の活動や歴史的事実を記録した行政文書が水損

（出典）常総市「平成27年9月関東・東北豪雨による常総市被災状況」

カビが発生している被災公文書等

虫喰いのある被災公文書等

4

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茨城県常総市における救援活動の実施

被災した常総市が、水損した行政文書を早急に救援し、かつ、重要な歴史資料として保全・保存に取り組む環境を整備するよう、被災地の住民から、その救援及び保全に必要な技術を習得した人材を育成

年度	研修内容
2015年度	被災公文書等の洗浄及び乾燥に係る技術研修 ※東京文書救援隊が考案した復旧システムを活用
2016年度	破損した文書の繕いに係る技術研修

研修の様子

常総市は、研修により育成した人材を活用することで、被災公文書等の保全に継続的に取り組んでいるところ

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被災公文書等救援チーム

救援の流れ

第一段階：場所、物資、人材の確保、被災公文書等の搬出

第二段階：物資、人員の確保、被災公文書等の仕分け（内容・状態）、仕分けを基に処理①-A洗浄作業②自然乾燥（風乾燥）③真空凍結乾燥のための前処理（ハダリング等）

第三段階：物資、人員の確保、仕分けを基に処理④-B洗浄作業⑤Bペーパー・ドライ⑥クリーニング作業⑦真空凍結乾燥

保全

関係機関との連絡・調整

関係機関：文化遺産防災ネットワーク推進会議（国立文化財機構文化防災ネットワーク）、国文学研究資料館、ボランティア関係団体等

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主な活動

2017年9月 平成29年台風18号による大雨、河川氾濫

11月 大分県津久見市での救援活動の実施



2018年7月 平成30年7月豪雨

7月・9月 愛媛県西予市への技術的助言、物品提供



Group photo at the 2nd World Tsunami Museum Conference 2018

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2018



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