



# World Tsunami Museum Conference

## Conference Report

5 November, 2017

Ishigaki, Okinawa, Japan

**Co-organizers** United Nations Office for Disaster Risk Reduction (UNISDR) Office in Japan  
Ministry of Foreign Affairs (MOFA) of Japan  
Japan International Cooperation Agency (JICA)

**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

**Cooperation** International Research Institute of Disaster Science (IRIDeS), Tohoku University

## Acknowledgement

The World Tsunami Museum Conference is supported by the Government of Japan through its financial contribution to UNISDR for World Tsunami Awareness Day.



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# Introduction

## About the conference

“World Tsunami Awareness Day” was created by consensus in December 2015 at the United Nations General Assembly by a resolution jointly proposed by 142 countries, including Japan. Japan took a leading role in the creation of “World Tsunami Awareness Day” to both raise public awareness of the risks posed by tsunamis, and to improve mitigation and preparedness measures.

The designation of November 5 as “World Tsunami Awareness Day” comes from the famous “Inamura-no-Hi” story about Goryo Hamaguchi, 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 in 1854. This led to the evacuation of the village. Then, he made efforts for the recovery and reconstruction of the village.

To preserve the history of damages caused by tsunamis and record the experiences and measures taken after the disaster, tsunami museums have been established around the world, such as the Pacific Tsunami Museum in Hawaii and the Aceh Tsunami Museum in Indonesia. It is important to pass on these records kept in tsunami museums to the next generation, to share these experiences and lessons learned with people around the world, and to promote preparedness measures for future tsunamis.

The first World Tsunami Museum Conference was held in Ishigaki City, Okinawa Prefecture, Japan, which suffered significant casualties from the 1771 Great Meiwa Tsunami. Observing the World Tsunami Awareness Day on 5 November 2017, the objective of this Conference is to promote cooperation among museums as centers of disaster risk reduction education by inviting representatives from tsunami museums around the world. In this regard, the conference also aimed to enhance discussions on how these experiences and lessons learned from the damages caused by tsunamis and other natural hazards may be passed down to the future generations, so that they can reduce disaster risks and prepare for future tsunamis.

This conference was the result of collaboration between the Ministry of Foreign Affairs of Japan, Japan International Cooperation Agency (JICA), and the UNISDR Office in Japan.

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# Participating Museums and Institutions



**Aceh Tsunami Museum**

Banda Aceh, Indonesia  
Established in 2009



**Museum of Lisbon**

Lisbon, Portugal  
Established in 1909



**Community Tsunami Education Centre and Tsunami Museum**

Telwatta, Sri Lanka  
Established in 2007



**International Tsunami Museum**

Khao Lak, Thailand  
Established in 2006



**Bursa Disaster Training Center**

Bursa, Turkey  
Established in 2013



**Pacific Tsunami Museum**

Hawaii, USA  
Established in 1994



**Inamura-no-Hi no Yakata**

Wakayama, Japan  
Established in 2007



**Disaster Reduction and Human Renovation Institute**

Hyogo, Japan  
Established in 2002



**Hiroshima City Ebayama Museum of Meteorology**

Hiroshima, Japan  
Established in 1992



**National Office of Emergency of the Interior Ministry (ONEMI)**

Chile

# Program

## 10:00 Opening Session

Opening Remarks: **Yuki Matsuoka**, Head, UNISDR Office in Japan, on behalf of **Kirsi Madi**, Director, United Nations Office for Disaster Risk Reduction (UNISDR)

Welcoming Remarks: **Yoshitaka Nakayama**, Mayor of Ishigaki City

Remarks by Guests: **Teru Fukui**, Member of the House of Representatives, Liberal Democratic Party of Japan

Introduction of Participants

Moderator: **Makiko Ohashi**  
Japan International Cooperation Agency (JICA)

## 10:20 Session 1 “Knowing: How the Terror of Tsunamis has been Passed Down”

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

### **Presentation of the Activities by Participating Museums**

USA	Pacific Tsunami Museum
Indonesia	Aceh Tsunami Museum
Thailand	International Tsunami Museum
Sri Lanka	Community Tsunami Education Centre and Tsunami Museum
Portugal	Museum of Lisbon
Turkey	Bursa Disaster Training Center
Japan	Inamura-no Hi no Yakata
Japan	Disaster Reduction and Human Renovation Institution
Japan	Hiroshima City Ebayama Museum of Meteorology

## 11:40 3D Documentary Movie Presentation “The Great Tsunami in Japan”

Speaker: **Michihiro Chikata**, Visiting Professor of IRIDeS, Tohoku University

## 12:30 **Lunch**

## 13:30 Session 2 “Realizing: Field Museums Existing Nearby”

Speaker: **Kazuhisa Goto**, Associate Professor of IRIDeS, Tohoku University

Theme: “Threat of Large Tsunamis Inferred from Tsunami Boulders”

Speaker: **Shuichi Kawashima**, Professor of IRIDeS, Tohoku University

Theme: “Folklores About Stones Coming Up from the Sea”

**14:20**      **Session 3 “Preserving: Database for Passing the Records down from Generation to Generation”**

Facilitator: **Anawat Suppasri**, Associate Professor of IRIDeS, Tohoku University

Panelists:

<b>Ricardo Toro Tassara</b>	National Director, National Office of Emergency of the Interior Ministry (Chile)
<b>Paulo Almeida Fernandes</b>	Coordinator, Museum of Lisbon (Portugal)
<b>Muzailin Affan</b>	Director of International Office, Syiah Kuala University (Indonesia)
<b>Yoshinobu Fukasawa</b>	Research Fellow, Disaster Reduction and Human Renovation Institution (Japan)
<b>Yasunori Yamamoto</b>	Chief Curator, Hiroshima City Ebayama Museum of Meteorology (Japan)
<b>Akihiro Shibayama</b>	Associate Professor of IRIDeS, Tohoku University (Japan)

**15:20**      **Coffee Break**

**15:30**      **Session 4 “Passing On: Role of Tsunami Museums as Centers for Knowledge Transmission”**

Facilitator: **Natsuko Chubachi**, Assistant Professor of IRIDeS, Tohoku University

Panelists:

<b>Marlene Murray</b>	Director, Pacific Tsunami Museum (USA)
<b>Pryanthi Pascuel Handi</b>	Assistant Manager, Community Tsunami Education Centre and Tsunami Museum (Sri Lanka)
<b>Abdullah Yiğit</b>	Director, Bursa Disaster Training Center (Turkey)
<b>Ratchaneekorn Thongthip</b>	Director, International Tsunami Museum (Thailand)
<b>Hiroyoshi Nishi</b>	Director Emeritus, Inamura-no-Hi no Yakata (Japan)

**16:30**      **Session 5 Special Lecture**

Speaker: **Muzailin Affan**, Director of International Office, Syiah Kuala University  
Theme: “Recovery from a Disaster”

Speaker: **Masanao Ozaki**, Governor of Kochi Prefecture  
Theme: “Efforts against Tsunamis by the Local Government”

**17:20**      **Closing Session**

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

Closing Remarks: **Junji Wakui**, Deputy Director General, and Group Director for Disaster Risk Reduction Group, Global Environment Department, JICA

# Biography of Speakers



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 Director-General, International Bureau, Liberal Democratic Party (LDP). Held positions including 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.

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Masanao Ozaki

Governor of Kochi Prefecture

Japan

Graduated from the Faculty of Economics, University of Tokyo in March 1991. Entered the Ministry of Finance in April 1991. Held positions including First Secretary at the Indonesian Embassy of the Ministry of Foreign Affairs, Chief within the Budget Bureau, and Secretary to the Deputy Chief Cabinet Secretary, Prime Minister's Residence Office. Retired from the Ministry of Finance in October 2007. Became Governor of Kochi Prefecture in December 2007 (currently third term).

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Yoshitaka Nakayama

Mayor of Ishigaki City

Japan

Graduated from Kindai University. Joined Nomura Securities Co. Ltd in 1991. Elected as Member of Ishigaki City Assembly in September 2006. In March 2010, elected as 18th Mayor of Ishigaki City, and was re-elected in March 2014.



## Speakers from Museums and Institutions



Ricardo Toro Tassara

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

Chile

He achieved the rank of General in the Chilean Army (ret.). During his career, he was a military observer with the United Nations in the Middle East and served with United Nations Stabilization Mission in Haiti (MINUSTAH) as Head of Operations and later as Deputy Commander. On 20 December 2012, he became National Director of ONEMI. In this role, he was in charge of coordinating the response to multiple emergencies, including earthquakes, massive mudflows and wild fires. During his administration, the labor of the National System of Civil Protection was reinforced, along with the work of prevention and education to the community. Besides, he participated as a speaker at global and regional platforms for disaster risk reduction in 2016 and 2017. In October 2017 he was designated as a member of the advisory group of the Central Emergency Response Fund – CERF.



Muzailin Affan

Director, International Office, Syiah Kuala  
University  
Advisor, Aceh Tsunami Museum

Indonesia

Received M.Sc. from University of Science, Malaysia in 2004, and Ph.D. from Tohoku University in 2015. Working as Director of International Office since 2012. Has experience as Field Advisor and Coordinator for numerous projects, including with JICA for the Aceh Reconstruction Project.



Paulo Almeida Fernandes

Coordinator, Museum of Lisbon

Portugal

Received Ph.D. in History of Art from University of Coimbra.  
Working as Coordinator at the Museum of Lisbon – Pimenta Palace,  
Headquarters of the Museum of Lisbon.



Pryanthi Pascuel Handi

Assistant Manager, Community Tsunami  
Museum

Sri Lanka

Working as Assistant Manager at the Community Tsunami Museum. Key member of the team who established the Community Tsunami Museum. Board Member of the Community Tsunami Early-Warning Center. She is a tsunami survivor and active volunteer from the Village of Peraliya, where a train was toppled over on 2004 Indian Ocean Earthquake and Tsunami. Educates communities, especially women and children on Tsunami preparedness.



Ratchaneekorn Thongthip      Director, International Tsunami Museum  
Director, Tsunami Memorial Museum  
Thailand

Received B.Ed. and M.A. in Political Science from Chulalongkorn University, and B.A. in Political Science, Ramkhamhaeng University. Working as Director of International Tsunami Museum, Phang-Nga Province since 2006. Also working as President of Institute for Education and Culture (NPO), Committee of National Strategic Public Benefit Organization Planning Ministry of Social Development and Human Security, Committee of National Social Welfare, Phang-Nga Province, Committee of Promotion and Protection of Children, Youth, the Elderly and Vulnerable Groups, Phang-Nga Province, etc.

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Abdullah Yiğit                      Director, Bursa Disaster Training Center  
Turkey

Received Bachelor's Degree in Economics from Anadolu University. Started to work as a Search and Rescue Officer in 2001. Promoted as a training specialist in 2012. Responsible for training activities at Search and Rescue Directorate until 2015. Working as Director at the Bursa Disaster Training Center since March 2015.

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Marlene Murray                      Executive Director, Pacific Tsunami Museum  
U.S.A.

Graduated with a degree in Business Administration from the University of Hawaii. Worked in the travel industry including eight years at The New Otani Kaimana Beach Hotel in Waikiki. Began work at The Pacific Tsunami Museum in 2011 as Principal Investigator for a United States Department of Education Grant on tsunami education and became Executive Director in 2013.

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Yoshinobu Fukasawa              Research Fellow (In charge of TeLL-Net),  
Disaster Reduction and Human Renovation  
Institution  
Japan

Received M.E. from Tokyo Institute of Technology. Engaged in national territorial planning, regional development, and disaster risk reduction in Ministry of Land, Infrastructure, Transport, and Tourism until 2011. From 2002 to 2005, worked as Deputy Executive Director at Disaster Reduction and Human Renovation Institution (DRI) in Kobe. From 2012 to June 2017, led the UN-Habitat Regional Office for Asia and Pacific. Joined private sector thereafter.



Hiroyoshi Nishi                      Director Emeritus, Inamura-no-Hi no Yakata

Japan

Received Master's Degree in Engineering from Tokushima University. Worked as Assistant Professor at the National Institute of Technology in Wakayama College from 1973 to 1992.

Was a Member of the House of Representative from 1993 to 2012, and served at various Committees including Education, Science and Technology, and Special Committee on Disasters. In 2016, became Director Emeritus at Inamura-no-Hi no Yakata.

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Yasunori Yamamoto                      Chief Curator, Hiroshima City Ebayama Museum of Meteorology

Japan

Received B.S. from the Department of Applied Science, Okayama University of Science in 1990. Worked at a science museum in Hiroshima city from 1992 before becoming Curator at Ebayama Museum of Meteorology in 2011. Organizes exhibitions on disaster reduction and goes to elementary schools to teach children about disaster prevention.

### Speakers and Facilitators from Tohoku University



Shuichi Kawashima                      Professor, International Research Institute of Disaster Science at Tohoku University

Japan

Received Ph.D. in literature from the Graduate University of Advanced Studies. Former director of the Rias Ark Art Museum and a researcher at the Institute for the Study of Japanese Folk Culture (ISJFC) at Kanagawa University. He has been in the current position since 2013, specialized in folklore studies and disaster culture. He is also a director of the Japanese Folklore Association and a chair of the Nippon Skipjack Society. Published books such as "Live in Tsunami's Town" (2012).

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Yuichi Ono                                  Professor, International Research Institute of Disaster Science at Tohoku University

Japan

Received Ph.D. from Kent State University in Geography. Worked at World Meteorological Organization, United Nations International Strategy for Disaster Reduction, United Nations Economic and Social Commission for Asia and Pacific. Specialized in tornado disaster risks, disaster damage and loss statistics, and international policy making in disaster risk reduction. Director-General of the World Bosai Forum (in Sendai).



Michihiro Chikata Visiting Professor, International Research Institute of Disaster Science at Tohoku University  
Japan

Worked as NHK (Japan Broadcasting Corporation) Bangkok Staff Correspondent and NHK Geneva Bureau Chief before becoming Executive Staff Correspondent in Tokyo and Executive Producer for “NHK Special” Programming in Tokyo.



Kazuhisa Goto Associate Professor, International Research Institute of Disaster Science at Tohoku University  
Japan

Received Doctor of Science from the University of Tokyo. Worked at the University of Tokyo, Tohoku University and Chiba Institute of Technology. Specializes in Sedimentology and Geology.



Anawat Suppasri Associate Professor, International Research Institute of Disaster Science at Tohoku University  
Thailand

Received Ph.D. from Tohoku University in Civil Engineering. Working at IRIDeS since its establishment in 2012. Specialized in coastal engineering, risk assessment and disaster education. Received awards from Japan Society of Civil Engineers, Japan Federation of Ocean Engineering Societies, Japan Society for Natural Disaster Science and Royal Thai Embassy based on high research performance and activities.



Akihiro Shibayama Associate Professor, International Research Institute of Disaster Science at Tohoku University  
Japan

Received Ph.D. from Kogakuin University in Engineering. Worked at the National Institute of Information and Communications Technology and Graduate School of Engineering at Tohoku University. Specialized in disaster information engineering and earthquake engineering. Received a Principal Award for Science and Technology, Science and Technology Promotion Category in disaster archive from the Commendation for Science and Technology 2015 by the Ministry of Education, Culture, Sports, Science and Technology.



Natsuko Chubachi Assistant Professor, International Research Institute of Disaster Science at Tohoku University  
Japan

Received B.A. from Kyoto University and Ph.D. from Queen’s University, Canada in Geography. Worked as a researcher at the Consulate-General of Japan in Honolulu from 2005 to 2008, engaged in archive of Japanese migration history. Working as Assistant Professor in the IRIDeS Public Relations Office since 2014 to bridge science and society.

# Part 1

## Opening







# Opening Remarks

Yuki Matsuoka  
Head of UNISDR  
Office in Japan

On behalf of  
Kirsi Madi  
Director of UNISDR

Today marks the second observance of World Tsunami Awareness Day. This World Tsunami Museum Conference is held on beautiful Ishigaki Island in Okinawa Prefecture; an island which is also exposed to tsunami risks as historical evidence shows.

Since 1996, 250,900 people have died in 21 countries affected by 30 tsunamis. Tsunamis also pose a significant threat to major infrastructures either built or planned for in coastal areas. The significance of this threat was demonstrated in March 2011 by the Great East Japan Earthquake and Tsunami.

The designation of November 5 as the World Tsunami Awareness Day comes from the famous “Inamura-no-Hi” story.

Today, the fundamentals of disaster risk reduction are celebrated in this story which transmits to new generations, the importance of early warning systems; the value of traditional and local knowledge; and, the need to both build back better, as well as invest in resilient infrastructure. Goryo Hamaguchi was people-centred and inclusive in his approach. He wanted to reduce loss of life, the numbers of people affected by disasters, economic losses and damage to critical infrastructure.

And those are precisely the key targets for reducing disaster losses outlined in the Sendai Framework for Disaster Risk Reduction (2015-2030) which was adopted

at the Third United Nations World Conference on Disaster Risk Reduction held in the tsunami-affected city of Sendai in 2015.

On World Tsunami Awareness Day, we remind ourselves how important it is to reduce existing levels of risk, and to avoid creating risk in the future. Tsunamis may be rare events, but they are the deadliest of all natural hazards.

A number of museums from around the world are taking part in this conference. As cultural facilities, preservers of past experience and indigenous knowledge, museums have very important roles to play in educating the public about past disaster events.

These roles include: 1) raising public awareness by facilitating understanding of the risks to which the public is exposed; 2) preserving records and accumulating knowledge for people to learn from the past; 3) passing this knowledge on to future generations. All of these important roles contribute to strengthening preparedness and building the resilience of our societies to future disasters.

I hope this conference will provide opportunities to participating museums and local government officials to learn from each other, as well as foster networking for their future collaborations and joint efforts.



# Welcoming Remarks

Yoshitaka  
Nakayama

Mayor of Ishigaki  
City

I would first like to give a warm welcome to those who have come from all over the world to this World Tsunami Museum Conference, which commemorates World Tsunami Awareness Day. To raise global awareness of the threat of tsunamis and the need to prepare for them, the United Nations General Assembly designated the 5th of November as World Tsunami Awareness Day in December 2015. The fact that such an important event for this international day is held here, in Ishigaki city, is very significant for us.

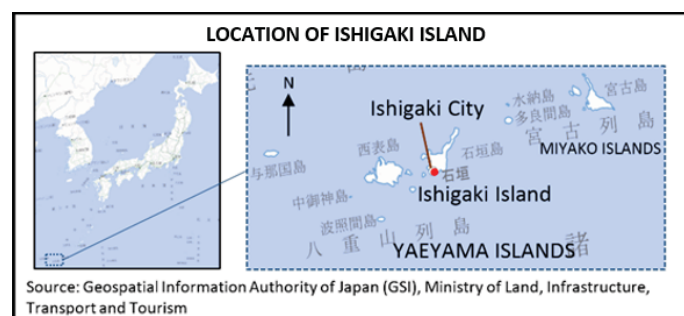
The experience of previous tsunamis and other disasters and the lesson learned from these experiences will be shared at this conference today. Additionally, there will be discussions on how to pass these experiences and lessons to future generations.

A tsunami called the Meiwa Tsunami—considered as one of the biggest tsunamis in the world—hit this island in the year 1771, about 240 years ago. Around nine thousand people (almost half of the population of this island at that time) lost their lives. Remnants of the past tsunamis can be found at various places around this island today. Stories of the 1771 Meiwa Tsunami have also been preserved and passed down. In view of this history, Ishigaki city has adopted a number of measures to prepare for future tsunamis, so that it can quickly carry out appropriate emergency response measures. Should a tsunami arrive, the goal is that all residents and tourists will be safe.

To achieve this goal, the city has made risk reduction efforts and regulations unique to Ishigaki Island. These include running evacuation drills and strengthening the resilience of local communities

For the museums represented at this conference today, each respective country has experienced disastrous tsunamis similar to the one that occurred in Ishigaki Island. Therefore, I think this is a great opportunity for everyone to share and further examine the various efforts being made to raise awareness about tsunamis and the measures for risk reduction.

Finally, I hope that by sharing these ideas and experiences amongst each other, we can all help increase the preparedness for tsunamis at the local level in our respective countries. My wish is that through such efforts, people will not lose their lives to tsunamis.



# Remarks by Guest

Teru Fukui

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



It was in October 2011 when we started the “National Resilience Movement”, which should be a philosophy to promote a global cultural movement for resilience. Disaster risk reduction is the first priority agenda within the movement. In December 2015, the General Assembly of the United Nations designated 5 November as “World Tsunami Awareness Day.” To celebrate World Tsunami Awareness Day, the High School Students Summit was first held last year. This year, we have the first World Tsunami Museum Conference. I hope that these events will be held every year somewhere in the world.

The word 'National' in the “National Resilience Movement” refers to all the nation states in the world, not just Japan, in the hopes that no one in the world will lose their lives to disasters caused by natural hazards. A tsunami will definitely come, so when it does, we need to evacuate. That is the key message we need to pass, from generation to generation. However, humans are naturally forgetful and therefore we need to make disaster risk

reduction and preparedness part of our daily lives, and of our culture. We need to ensure that tsunami museums become a regular sightseeing destination, for example. Like how people in Japan frequently climb a hill to pray at a shrine, walking along evacuation routes should become part of our daily routine, to the point we are all unconsciously practicing how to evacuate. That is the ultimate goal of this movement.

While we obviously have museums in museum buildings, there are also important reminders of past tsunamis outside, such as in geological deposits. There is a need to be also aware of such 'field museums'. I think the establishment of this conference today will be of great benefit for the global society. As one of the advocates of the “National Resilience Movement”, I would like to give my deep gratitude to everyone here for their contributions, and hope that this conference will end fruitfully. My hope is that this will continue annually for years on.



A few exhibits were displayed by the Ministry of Land, Infrastructure, Transport and Tourism at the venue of this conference. One of the exhibits was a signpost warning about tsunamis, damaged by the 2011 Great East Japan Earthquake and Tsunami. This signpost was later recovered in Rikuzentakata City, Iwate Prefecture.



# Part 2

## Sessions



# Session 1

## Knowing: How the Terror of Tsunamis has been Passed Down

In session 1 titled “Knowing: How the Terror of Tsunamis has been Passed Down,” various activities of tsunami museums in Japan and across the world were presented. This session was chaired by Mr. Ono from the International Research Institute of Disaster Science (IRIDeS), Tohoku University.



*Mr. Yuichi Ono, Professor, IRIDeS, Tohoku University (Facilitator)*

We human beings forget things. We sometimes do not remember what we ate last night. For the memories related to tsunamis, how can we pass down the experience and information to the next generations or the other part of the world? How do we do that? There are many ways. From this perspective, in this conference we focus on tsunami museums which are participating from all over the world. In this session, experts from tsunami museums will share the general information about their tsunami museums along with their knowledge and wisdom.

## Pacific Tsunami Museum, USA

*Ms. Marlene Murray, Director*

Our preparation as a society towards future disasters must be underpinned by our study of the past and not only on more recent occurrences, but much further back in history as well. This was the message shared by Ms. Marlene Murray, Director of the Pacific Tsunami Museum in the USA. Situated in downtown Hilo, Hawaii, the locality has suffered more death and destruction from tsunami than any other place in the USA. Two severe tsunamis, recorded in 1946 and 1960 generated by earthquakes near the Aleutian Islands and Chile respectively, resulted in significant loss of life. Hawaii Island itself, being home to an active volcano and being surrounded by the Pacific Ring of Fire, is seismically very active. Should a locally generated tsunami occur, those on the Island only have about five minutes or less to move to a higher ground.

Today, the Pacific Tsunami Museum continues to strive with its mission to provide tsunami education and awareness to save lives, preserving cultural history, and serving as a memorial to past tsunamis. Obtaining its revenue from admissions, donations, membership and grant writing, the museum is dedicated to

improving the understanding among visitors of tsunamis and how to save their own lives and the lives of others when faced with the threat of a tsunami.

The museum operates a variety of exhibits, so people will not only remember the facts and figures, but also appreciate the stories of survivors. Meanwhile, other exhibits help educate visitors on the science of tsunamis and how early warning systems work. As a commemoration to the 2004 Indian Ocean Earthquake and Tsunami, as well as the 2011 Great East Japan Earthquake and Tsunami, special exhibits are maintained for both disasters.



## Aceh Tsunami Museum, Indonesia

*Mr. Muzailin Affan, Director of International Office, Syiah Kuala University (on behalf of Aceh Tsunami Museum)*

In 2004, following the Indian Ocean Earthquake and Tsunami, the Province of Aceh, Indonesia, was irrevocably impacted suffering almost 200,000 lives lost or missing, in a catastrophe which remains etched in the living memory of many even today. Yet for Mr. Muzailin Affan, Director of the International Office, Syiah Kuala University and Advisor to the Aceh Tsunami Museum, he was left with one evident question: “What can I do to improve the situation?”

Mr. Affan expanded on the many memories, lessons learned and experiences resulting from the 2004 tsunami, all of which warrant preservation. In 2009 the President of Indonesia inaugurated the Aceh Tsunami Museum, which was constructed in memory of the earthquake and tsunami. Becoming fully operational in 2011, the museum remains a place to ensure remembrance is passed to future generations and not only for the Acehnese or people of Indonesia, but for people around the world. Additionally, the museum recognizes the great lengths to which Aceh has built back better over the 12 years that passed since the tsunami, paying special tribute to the governments, NGOs, and humanitarian workers who assisted with the recovery.



Merging contemporary architecture and practical design, the exterior of the museum is modeled after the shape of sea waves, and serves as both an evacuation center and a public space for the local community to conduct activities there. Currently most international visitors are from Brunei, Malaysia, and Singapore. The museum is committed to achieving its target aiming for one million visitors in 2018. This ambitious target is supported by an extensive international collaboration: Embassy of Japan in Indonesia, Japan International Cooperation Association (JICA), Tohoku University, Japan Foundation, Asian Disaster Reduction Center (ADRC), Disaster Reduction and Human Renovation Institution (Kobe Earthquake Memorial Museum), Earth Observatory of Singapore and Inamura-no-Hi no Yakata Museum in Wakayama. Such collaborations allow the cross-sharing of tsunami history from other countries.

## International Tsunami Museum, Thailand

*Ms. Ratchaneekorn Thongthip, Director*

Operating in two sites in the Province of Phang Nga, Thailand, the International Tsunami Museum and Tsunami Memorial Museum were formed by student leaders who were strongly committed to social work supporting tsunami-related events. Opening its doors on 19 July 2006, the International Tsunami Museum’s purpose is to increase awareness about tsunamis and other natural hazards. The Institute for Education and Culture, a non-profit organization, operates the International Tsunami Museum and Tsunami Memorial Museum, which have been recognized for its outstanding social contributions at the province level. The Institute for Education and Culture was awarded

by the Board of National Social Welfare and the Ministry of Social Development and Human Security, as well as the National Council on Social Welfare of Thailand.



Open from 9:00am to 9:00pm every day, both are humble museums open all year round and receive no

direct funding from other organizations. With both museums registered as public benefit organizations, museum management is administered by a committee comprised of a number of academic lecturers and the Director, Ms. Ratchaneekorn Thongthip. Small personal contributions allowed the hiring of an officer to take care of the museum. Most generously, entrance to the museum is entirely free for the local residents, children and schools, and donations are used for supporting the local children.

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## Community Tsunami Education Centre and Tsunami Museum, Sri Lanka

*Ms. Pryanthi Pascuel Handi, Assistant Manager*

Ms. Pryanthi Pascuel Handi, who is now working and managing the Community Tsunami Education Centre and Tsunami Museum, is a survivor of the 2004 Indian Ocean Earthquake and Tsunami. The Tsunami also struck the shores of Peraliya, Telwatta in the Goa District of Sri Lanka. Ms. Handi still clearly remembers the fighting moment, saving the life of her eldest son and the feeling of losing everything else as a result of the tsunami. According to the Sri Lanka National Operations, over 30,000 lives were lost due to the tsunami. The museum opened in the aftermath of the tsunami near Ground Zero and where the train “Queen of Oceans” was dramatically washed away by the tsunami, believed to be among the worst train accidents in the world.

Today, the museum is thriving, welcoming 60,000 visitors every year with half being international visitors, over 15,000 local volunteers, 13,000 school children and the remaining being researchers. Nevertheless, a few operational challenges were cited including the need to improve the exhibits and to build a three-

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## Museum of Lisbon, Portugal

*Mr. Paulo Almeida Fernandes, Coordinator*

While the Museum of Lisbon is not a museum solely dedicated to disasters, it does have an exhibit on the Great Lisbon Earthquake. This exhibit paints a portrait of the 8.7 magnitude earthquake which struck Lisbon on 1 November 1755 (the Holy Day of All Saints’ Day) at around 9:40am local time, causing imminent

When Ms. Thongthip was asked about her motivation to continue assisting the local children after 11 years, she answered “If adults do not help them, then who will?” The museums also operate art classes and a youth leadership program alongside traditional exhibits which include animations and videos of tsunami survivor stories as well as information on early warning systems. Visitorship of the museums include ambassadors, international university study tours and notable celebrities.

dimensional model for the Tsunami Education Gallery. Most importantly, Ms. Handi also emphasized the need to improve relationships with the government and NGOs to ensure the museum can remain open.



Facilitating a science education role and social change role, the tsunami museum provides information on tsunami preparedness and also contributes to community awareness activities. Commemorating the anniversary of the 2004 Indian Ocean Earthquake and Tsunami every year, different galleries are featured including a dedicated gallery to recognize the tremendous contribution by volunteers following the disaster. In addition, the museum also operates special programs for school children to develop the habit of emergency preparedness.

emotional distress throughout the city. With the first shaking compared to the passing of a carriage, which lasted for 7 to 8 minutes, by the end of the earthquake over 2 catastrophes had already struck Lisbon with several fires consuming the cities and continuing to burn for 6 days. Even though the living memory of the earthquake remains in some of Lisbon’s most important monuments, the city did not experience such an earthquake like that since 1755, and many Portuguese have forgotten about the disaster.





Hence, we have much to learn even from those disasters over 260 years ago shared museum Coordinator, Mr. Paulo Almeida Fernandes. Reconstruction of the city commenced on 29 November 1755 and proceeded throughout the nineteenth century, but even today it is still not finished. Reconstruction techniques used back then to ensure infrastructure elasticity in multistorey buildings to withstand earthquakes, still have practical

## Bursa Disaster Training Center, Turkey

*Mr. Abdullah Yiğit, Director*

Bursa Disaster Training Center is a public organization, which is being operated under Prime Ministry Disaster and Emergency Management Presidency. Upon visiting Japan and many disaster management facilities in 2005, the Governor of Bursa at the time considered why Turkey did not have similar facilities. Thus, preparations were started by exchanging opinions with JICA in 2013, and the Bursa Disaster Training Center was put into service. The first mission of this center is to train all sectors of society on topics related to natural, technological and human-induced disasters. The Center possesses 12 simulation systems and a seminal hall, where trainings are carried out. After an increasing number of visitors in recent years, more than 90,000 visitors were trained until today.

As elaborated upon by the Center's Director, Mr. Abdullah Yiğit, after an earthquake happened in Bodrum in July 2017, there was a small scale tsunami that generated waves reaching 30 to 40 centimeters in height. In Turkey lies the North Anatolian fault line, which is 1,200 kilometers long and this fault line slides up to 1.5 centimeters to the west annually. For example, during the 1939 Erzincan earthquake, more

applications today. Working with civil protection agencies, local universities and scientific institutes, a unique exhibition in November 2015 called "When Lisbon Shakes" was developed allowing visitors to experience earthquake simulation generators and learn how to respond during an earthquake. As such, this exhibition is considered to be the "sincere contribution of the museum to awaken the conscientiousness and resilience in a city which has forgotten its past."

The Museum changed its name from the Lisbon City Museum to the Museum of Lisbon. With a more ambitious program, the new Museum will be opening its sixth public space in 2018. Perceived as a gateway to the wider world, the historical city of Lisbon along with its multi-cultural past and present offers a truly illustrative example of how time-tested classical history and the people who characterize it can still play an important role in contemporary culture.

than 36,000 lives were lost and in 1999, an earthquake in Izmit costs 17,000 lives. In Marmara Sea, tsunami occurrence probability is once in every 100 years. According to scientific predictions, if an earthquake of magnitude 8 occurs, waves which are 5 meters in height may be formed and these waves will reach the shore coastline in 8 minutes and advance onto the shore for a distance of 150 meters.



From 2014 to 2015, together with the cooperation of JICA, 32 trainers from Turkey were sent to Japan to gain experience within similar facilities. As a follow-up exchange from 2015 to 2017, a Japanese expert came to Turkey to provide training to visitors. Whilst in 2016 after the Kumamoto Earthquake, as a symbolic gesture reinforcing the deepened partnership between Turkey and Japan, trainers and visitors of the Bursa Training

Center sent letters of goodwill to support the victims. Mr. Yiğit left participants with the following message:

“When sorrow is shared, it will be reduced. If we share knowledge and love, they will increase.”

## Inamura-no-Hi no Yakata, Japan

*Mr. Hiroyoshi Nishi, Director Emeritus*

Mr. Hiroyoshi Nishi, Director Emeritus spoke on behalf of Mr. Sakiyama, the Director of Inamura-no-Hi no Yakata who was participating a broadcast for tsunami awareness raising on World Tsunami Awareness Day to Japan and the world. Mr. Nishi shared the legacy of Mr. Hamaguchi whose story was used in school textbooks dating back to the 1940s and are still used in Japanese elementary schools today.

In 1854, a strong earthquake occurred and a massive tsunami struck the Kii Peninsula district in Wakayama Prefecture. At the time, Mr. Hamaguchi was 35 years old, and was involved in the soy sauce production business. Setting fire to some rice sheaves, Mr. Hamaguchi was able to evacuate the villagers to a safe place by guiding them and using the fire as a landmark. Over the subsequent four years, Mr. Hamaguchi dedicated his time and personal finances, to support the recovery efforts of the village, including building a 600 meters long, 20 meters wide, and 5 meters high dike at a cost of 500 million yen. Building the dike not only created livelihood opportunities for the local villagers, but also enabled them to stay in the community without having to leave. In time, Mr. Hamaguchi assumed the position of the Minister of

Post and Telecommunications and the first chairman of the Wakayama Prefectural Assembly. He was later involved in the political campaign to develop the National Diet of Japan.



Today, Mr. Hamaguchi's legacy continues to play an important role in tsunami awareness and preparedness. The Tsunami Education Center is behind his old residence. Incorporating three-dimensional learning exhibits and an Aceh Museum corner, the museum rises 9 meters in height, serving the secondary purpose as an evacuation center in the case of a tsunami. Together with the local community, the Inamura-no-Hi Festival is also conducted annually. The Festival gathers 600 people regularly including Mr. Nishi himself, in addition to students from elementary and junior high school. Lighting torches to represent how people evacuated, Mr. Nishi stressed the importance not to forget past times and what had occurred.

## Disaster Reduction and Human Renovation Institution (DRI), Japan

*Mr. Yoshinobu Fukasawa, Research Fellow*

In the late 1940s through 1950s in Japan, meteorological disasters sometimes claimed over 5,000 lives in a year. However, after massive investments in infrastructure over years to resist the impacts of powerful hazards, significant reduction in mortality was achieved. Relative ease was felt in Japan, knowing that technology backed-up by a strong economy can “prevent” disasters.

That was until the 1995 Great Hanshin-Awaji Earthquake, which claimed 6,434 lives, resulted in 43,792 casualties and 249,180 collapsed houses. This led to the important lesson that disasters cannot be prevented even with extensive and robust countermeasures and that we can only “reduce” the associated damages and risks, stressed Mr. Fukasawa. Consequently, the word “disaster prevention” was replaced with “disaster reduction”. Certainly, a much bigger earthquake and tsunami that struck Japan in 2011 further reaffirmed this.

In DRI, the stories that are shared capture the actual emotions following a disaster such as feelings of fear, regret, anger, sadness or warmth from the community.

Over 160,000 first account records have been collected from citizens, be it artifacts, audio-visual materials, etc., out of which 800 items are exhibited in the museum.



The exhibition allows visitors to reflect upon the importance of ordinary daily life and serve as a reminder of disaster risk reduction. DRI also functions

## Hiroshima City Ebayama Museum of Meteorology, Japan

*Mr. Yasunori Yamamoto, Chief Curator*

On top of a hill about 30 meters above sea level and facing the sea near Hiroshima Bay sits the Ebayama Museum of Meteorology, within visible distance of the Hiroshima Peace Memorial Park. At the former observatory, a piece of shattered window glass from when the atomic bomb was dropped remains lodged in the wall, serving as a permanent reminder of the tragic events and playing its role of passing down information about the history of the museum.

Themed on meteorology, science, and disaster prevention, the museum features devices and exhibits intended to give visitors the opportunity to experience tsunamis and other disasters in more interesting and innovative ways, so as to keep visitors engaged and more likely to return. Mr. Yasunori Yamamoto, chief curator, shared some of the many simulations available at the museum: visitors are able to put their heads into a compartment in order to face the oncoming waves of a tsunami; experience liquefaction in a simulated environment; be subjected to the difficulty of escaping a floor with water at 50 centimeters in depth; open a door against the force of water; walk inside flooded streets strewn with debris; and observe how a tornado is formed.

as a training center for local government officials including mayors, providing comprehensive lectures on disaster management, desktop drills, etc., coordinated by researchers. These provide an opportunity for both practitioners and researchers to learn from each other.

“Museums are a hub of many different forms of telling live lessons,” shared Mr. Fukasawa, referring to museums and such activities as a “consortium of storytelling.” Sharing his belief that storytelling might relieve the wounded hearth of a victim, emotional release was highlighted as the engine for personal reconstruction. Lastly, an existing international network of organizations and individuals that are engaged in telling live lessons of disasters in various disaster-affected places (TeLL-Net) was highlighted by Mr. Fukasawa as one of the vehicles to promote the spirit of World Tsunami Awareness Day.

In Hiroshima, tsunami awareness is not so high. However, according to research, Hiroshima is still susceptible to damage and people there could be victims. Utilizing tsunami science to present a prediction of a tsunami should a Nankai megathrust earthquake occur, the museum also aims to educate the local community on disaster risk reduction and management. With complacency all too easily settling in and people often forgetting or forming the belief that they are safe, the museum seeks to provide motivation for local citizens to act. Certainly, not knowing when the next disaster caused by natural hazards will be, the museum hopes to build upon and share lessons learned, in order to build a better connection with its visitors.





# Feature Session

## 3D Documentary Movie Presentation “The Great Tsunami in Japan”

*Mr. Michihiro Chikata, Visiting Professor, IRIDeS, Tohoku University*

Mr. Michihiro Chikata, Visiting Professor at IRIDeS, Tohoku University is also an experienced journalist from Japan Broadcasting Corporation (NHK). At the Conference, Mr. Chikata shared the background for the initial production of the movie, describing his absolute dismay at the terrible scenes following the 2011 Great East Japan Earthquake and Tsunami. Before March 2011, he has already covered numerous disasters as a journalist in extreme and difficult circumstances both in Japan and in other parts of the world. Arriving to Kobe, the very afternoon of the 1995 Great Hanshin-Awaji Earthquake, he spent a month there covering the devastation of the earthquake. For Mr. Chikata, the 2011 earthquake was one of the worst disasters he has ever seen. Since then, he visited the coastal area many times to see what changes have occurred and listened to the stories of the people living there.

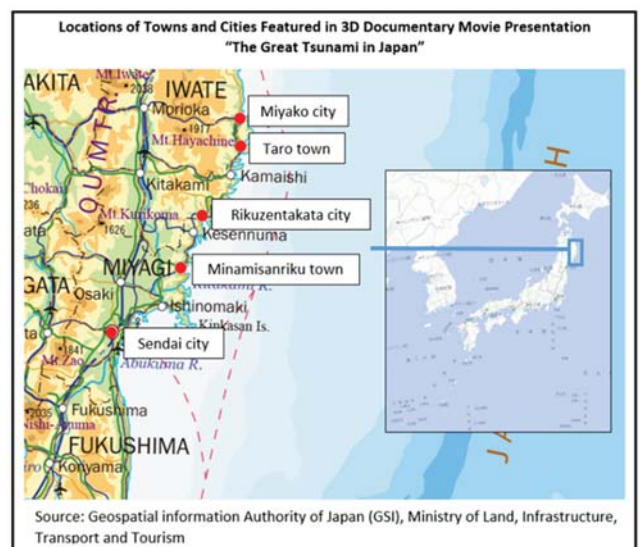


Mr. Chikata was involved in the filmmaking process of *The Great Tsunami in Japan* as the executive producer and the director of photography. The focus of the movie was on the changes in the coastal landscape during the first three years after the disaster. Mr. Chikata described the movie as a “poignant story of tsunami and people living in the region.” Featuring narratives from survivors who lost loved ones during the tsunami, they narrated their experiences of the disaster. Remembering a land which had changed beyond any stretch of the imagination, these victims continued to speak of their desire and sense of responsibility to pass down both their memories and experiences to future generations, even when they

found it uncomfortable talking about their current circumstances.

The movie was filmed in several locations in the Tohoku region, including Taro (town), Miyako City (where the famous coastal wall was destroyed), and Rikuzentakata City. It was in Rikuzentakata City where all but one of the two-kilometer shoreline of 70,000 pine trees was washed away. Even the disaster-prevention building in Minamisanriku (town) was stripped bare and engulfed by the tsunami. The movie was originally shot on land, sea, and air, and was developed into a three-dimensional movie during post-production. With the cooperation of NHK Media Technology, Inc., a specially edited version of the movie was shown at the Conference.

After showing the movie, Mr. Chikata elaborated on the progress of development at the filmed locations. He says that many people have moved up the mountainside in Taro (town) into their new houses, which were built within the last two years. Overlooking the former residential areas, baseball fields can be seen in the distance with shouts from matches echoing through the town. In Rikuzentakata City, the land has been raised approximately 10 to 12 meters, and a sea wall that is 12.5 meters high is nearing completion. Meanwhile in Minamisanriku (town), a newly built shopping center is one of the most flourishing establishments in the area.







*Participants are watching the 3D movie wearing special glasses.*

## The Great Tsunami in Japan

### *Reflecting on the 2011 disaster*

**Filmed and produced by NHK Media Technology Inc.**

**Special edition: 24 minutes (Original length: 80 minutes)**

This unique 3D documentary film is the first of its kind, unveiling previously untold personal stories, and exploring the humble but resolute spirit of those who inhabit this disaster-prone region of Japan. These people feel it is their duty to tell future generations about their personal experience of disasters. This new-born courage to speak out, three years after the disaster struck, stems from respect for loved ones lost in the 2011 giant tsunami, and recognition that their own miraculous survival was often determined by bizarre coincidence, or just a few seconds or centimeters.

This is a story about humankind and tsunami told by remarkable people who in the face of unparalleled devastation, champion the power of life and hope.

## Session 2

### Realizing: Field Museums Existing Nearby

In session 2 titled “Realizing: Field Museums Existing Nearby”, Mr. Goto and Mr. Kawashima from IRIDeS, Tohoku University made presentations based on their research. In their presentations, they showed that we could learn a lot about tsunamis not only from conventional museums but also from “field museums.”

### Threat of Large Tsunamis Inferred from Tsunami Boulders

*Mr. Kazuhisa Goto, Associate Professor, IRIDeS, Tohoku University*

As a national policy, the Government of Japan made a commitment to prepare for the largest possible tsunami, supporting the expansion of academic research in certain fields including geology. In the presentation Mr. Kazuhisa Goto, Associate Professor of IRIDeS, Tohoku University, presented his findings based on geological examinations of tsunami boulders and deposits. Both earthquakes and tsunamis are a natural occurrence and are difficult to predict. However, by studying the material composition of tsunami boulders washed ashore and the movement of these large boulders caused by subsequent tsunamis, it is possible to determine the age of the boulders and calculate an estimated tsunami recurrence interval.

According to a researcher from Tohoku University, a tsunami recurrence interval of 150 to 400 years is estimated for the region impacted by the 1771 Great Meiwa Tsunami. While this passage of time can be considered quite long and these calculations are speculative, they demonstrate that a large tsunami is well overdue. The 220 ton boulder, formerly a large coral formation washed ashore by the 1771 Great Meiwa Tsunami, is a reminder of the horror of the huge tsunami. In 2013, it was declared a national monument in Japan.

By examining tsunami deposits in combination with historical records, it is possible to estimate the height of past tsunamis. For example, in the case of the Tohoku region, by examining the different soil layers, it is possible to conclude that a large tsunami hit the region in 1611, while another soil layer informs that there was a volcanic eruption in the year 915. Meanwhile, a study of 400 years of historical records along the Ryukyu Trench and 100 locations in the Ryukyu Islands suggest that the highest waves could be as high as 30 meters.

Nonetheless, as explained by Mr. Goto, the very different coastlines and scenery of the Ryukyu Islands suggest that not all areas are prone to tsunamis. The southern part is spotted with tsunami boulders while across the Central to Northern Ryukyu Islands, there are no tsunami boulders. In the Central and Northern Ryukyu Islands, it is believed that no large tsunami has occurred for at least 2,300 years. The coral reefs in this area act as a natural break, changing the way in which the waves react and dissipating the intensity of the tsunami. However, further research is required to determine why some areas are more prone to tsunamis than others.



At the end of the presentation, Mr. Goto emphasized the importance of tsunami deposits as educational tools. These tsunami boulders can be found all over the world, including Hawaii, Thailand, Tonga and New Zealand, and are deeply rooted in traditional folklore. Often moving several times due to subsequent tsunamis, these boulders are easier to maintain than man-made structures which require a lot of effort and money, serving as good field museums. The rocks in Tonga, for instance tells the tale of the legend of Maui the demigod, who threw the rock to catch a bird. These stories behind tsunami boulders and deposits in Japan are now found in the science textbooks of Japanese elementary schools.

## Folklores about Stones Coming Up from the Sea

*Mr. Shuichi Kawashima, Professor, IRIDeS, Tohoku University*

Many stones are not just simple stones, but possess a rich history and even have human memories attached to them. On an engraved stone brought to the shore following the tsunami in 1933 in Northern Japan, a story is shared about three men. Reminiscing their younger days, one man recalled a stone buried in the soil which they had used to dry their bodies by laying on top of the stone after swimming. One man light-heartedly said, “Maybe we need another tsunami to uncover the stone.” Four hours later, the 2011 Great East Japan Earthquake and Tsunami struck. The tip of the stone mentioned in the story earlier was later uncovered two weeks after the tsunami.



Mr. Kawashima shared several stories about tsunami boulders (large geological formations as a result of tsunamis) in his presentation. A tsunami boulder can be found at a golf course in Miyako Island; when people tried to move the boulder trouble befell on them. As a result, the boulder was brought back and it was later believed that moving the boulder will bring bad luck. In Shimoji Island, a large tsunami boulder named “Obiwa” is a symbol of recovery after a tsunami, and remains today by the request of the local community.

The boulder looks like a man’s torso with a belt, hence its name (“Obi” means belt and “Iwa” means a large rock or boulder in Japanese).

In another story, a group of fishermen was out at sea in Sanriku, Miyagi Prefecture and saw some stones at the bottom of the sea. At low-tide, these stones had become visible and they decided to enshrine one of the stones ashore. Since then, the fishermen enjoyed a really good catch throughout that year until one day, a construction worker unknowingly broke the stone. Then one of the family members of the workers became ill. Upon consulting a local shaman, the worker was advised that the illness was caused by the stone and so he attempted to repair the broken stone.



There are many similar stories about stones that can be found from the far northern to the southern reaches of Japan, shared by Mr. Shuichi Kawashima, a Professor from IRIDeS, Tohoku University, who is doing research on folklore about tsunami boulders in Japan. In many cases, these geological formations left by tsunamis have a strong connection with local legends and are preserved by the people of that community as a symbol of the rebuilding that took place in their town. They are thought to be connected with the “god of the sea,” these stones and the memories within them bring us closer to the nature and the ancient history surrounding us.



# Session 3

Preserving:

## Database for Passing the Records down from Generation to Generation

In session 3 titled “Preserving: Database for Passing the Records down from Generation to Generation,” it is discussed how museums collect, share and preserve information in the digital age. This session was chaired by Mr. Suppasri from IRIDeS, Tohoku University.

### *Moderator:*

Mr. Anawat Suppasri, Associate Professor, IRIDeS, Tohoku University

### *Panelists:*

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

Mr. Paulo Almeida Fernandes, Coordinator, Museum of Lisbon, Portugal

Mr. Muzailin Affan, Director of International Office, Syiah Kuala University, Indonesia

Mr. Yoshinobu Fukasawa, Research Fellow, Disaster Reduction and Human Renovation Institution, Japan

Mr. Yasunori Yamamoto, Chief Curator, Hiroshima City Ebayama Museum of Meteorology, Japan

Mr. Akihiro Shibayama, Associate Professor, IRIDeS, Tohoku University, Japan

## Data Collection

Despite the geographical separation and cultural differences, a lot is shared between Chile and Japan on account of the many disasters experienced. An agreement signed between Chile and Japan will see the construction of a new museum to pass down the knowledge to the next generations with support from the Government of Japan and JICA. Mr. Toro of Chile explained that Mr. Hamaguchi was a major source of inspiration for the design of the museum’s programs.



The project aims to build a museum that goes beyond the infrastructure itself which stands as a national network to integrate ancestral and scientific knowledge. Both technical and scientific information will be collected, including stories from before the 1960s. Similar to Japan, a memorial site will also be built so that tsunami awareness is not limited to the exhibitions at the museum.

Mr. Fernandes of Portugal shared that the Museum of Lisbon, which was established in 1909, had been collecting material evidence and ancient documents from prehistoric times until present. The municipal archives concerning the 1775 Lisbon Earthquake commenced right after the disaster, which was considered to be a turning point in the history of the city. As such, even today there are still documents and public art which continue to appear in auctions and collections.

The Aceh Tsunami Museum includes over 200 tangible assets and other intangible assets that cannot be brought into the museum, such as a ship which was washed ashore after the tsunami sitting atop a house or the lone surviving mosque. The museum also administers a collection of tsunami survivor records, learning from the Disaster Reduction and Human Renovation Institution (DRI)’s experience of storytelling.

Furthermore, building upon the Reconstruction Aceh-Nias Database (RANdatabase) which collected data throughout the post-disaster rehabilitation and reconstruction of Aceh, satellite imagery is also maintained to assess the pre-disaster situation and post-disaster impacts.

Meanwhile, over 160,000 items including pictures, documents and audio-visual records are preserved at DRI. Many of the documents and items were collected as part of job creation activities designed by the local government after the 1995 Great Hanshin-Awaji Earthquake, whereby those who became unemployed because of the Earthquake were hired with small monetary support to collect items from those who hoped the local government to preserve such items as records of important lessons. Out of those preserved items, 800 items are presented by the museum on exhibit, and are regularly replaced.

In the case of Ebayama Museum of Meteorology, shared Mr. Yamamoto of Japan, photos about disasters

are not collected since the Museum's purpose is to pass on knowledge about science and meteorology. Meanwhile, about 120,000 forms of web data and over 400,000 files are maintained at Tohoku University as part of a Great East Japan Tsunami Archive called *Michinoku-Shinrokuden*. While the collection process for the archive remains ongoing, the university is also involved in activities conducted by other museums.



## Preserving Data

Chile collects a great amount of digital data and physical objects related to ongoing projects to enlarge permanent and temporary collections, shared Mr. Toro of Chile. According to him, the main challenge is the permanent acquisition and storage of new information to ensure sustainability of the project. Reinforcing Mr. Toro's point, the Museum of Lisbon is also in the process of digitalizing most of its extensive repository into high-quality photographs. This will require the support of a restoration department led by five experts in the field of data preservation. The intention is to produce a compendium of inventory sheets which will allow the museum to more easily engage with universities and researchers.

At the Aceh Tsunami Museum, an immense digital archive project called the Digital Archives of Tsunami in Aceh (DATA) is presently underway in collaboration with Tohoku University and Syiah Kuala University to more effectively disseminate information on the exhibits of the museum to a wider audience. On account of the physical structures administered by the museum, Mr. Affan of Indonesia highlighted the challenges of corrosion and maintenance cost. Meanwhile, he also emphasized the need to quickly

record the stories of survivors before they pass away or move away, commencing a voluntary storytelling initiative in 2017 every Saturday.



One challenge that Mr. Fukasawa raised was the difficulty in preserving physical records of disasters on site, especially in intensively urbanized areas. With this respect, many remains are well preserved in the area hit by the Mt. Unzen eruption in the 1990s. Continuing to receive items from the community as they are and maintaining an inventory of over 160,000 documents, finding the right level of analysis was also a key consideration shared. While tempted to go into a deep analysis of the repository, this could become an

endless job. Managing little actual data and mainly self-contained exhibits, the primary concern for the Ebayama Museum of Meteorology was one of physical space. However, the museum premise itself was recognized as an important monument to preserve the memory of the atomic bomb which was dropped on

Hiroshima. In addition, a landslide protection archive and website was maintained on account of the susceptibility of areas of Hiroshima to landslides. While at Tohoku University, data is preserved on a dedicated server managing 0.5 terabytes of data.

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## Data Sharing

Suggesting the Internet as a primary platform for the modern sharing of data, ONEMI Chile highlighted the need to connect different information sources including public and private data. In addition, the importance of active engagement of both public and private sectors to disseminate information via digital media was mentioned. Certainly, popular platforms such as Facebook and Instagram were key communication channels for the Museum of Lisbon in disseminating information on programs and exhibits. A new web sharing platform was also recently purchased by the museum to make its exhibitions available online.

However, as highlighted by Mr. Affan, internet and digital data is getting cheaper and so the challenge will be managing and sharing the information. One important way to ensure the sharing of information was through indigenous knowledge and cross-collaboration. Similar to the story of Mr. Hamaguchi, are the songs, short poems, and lullabies passed down through generations of fishermen from the island of Simeulue (Indonesia), who were able to dramatically

overcome “smong” or tsunami by retreating to higher ground. Mr. Affan mentioned an on-going collaborative project between the Aceh Tsunami Museum and Inamura-no-Hi no Yakata. Furthermore, he encouraged others to plan similar cooperative initiatives between museums in the future.

At DRI, efforts are being made to expose the researchers to the disaster-affected people and the phenomenon itself. Moreover, concerns were shared by Mr. Fukasawa regarding the handling and sharing of items, as some of the data managed may contain confidential information.

Mr. Yamamoto of the Ebayama Museum of Meteorology pointed out a necessity to further discuss how to share information between the museum and Hiroshima Prefecture, since the museum mainly obtains sources from the prefectural archive. Mr. Shibayama mentioned the need to prepare for future changes in the format of commonly-used information, from the existing JPEG file format to new and emerging formats. Increasing the number of English data will also be required.

# Session 4

Passing On:

## Role of Tsunami Museums as Centers for Knowledge Transmission

In session 4 titled “Passing On: Role of Tsunami Museums as Centers for Knowledge Transmission,” roles and challenges that museums face were discussed as well as basic visitor information. This session was chaired by Ms. Chubachi from IRIDeS, Tohoku University.

### *Moderator:*

Ms. Natsuko Chubachi, Associate Professor, IRIDeS, Tohoku University

### *Panelists:*

Ms. Marlene Murray, Director, Pacific Tsunami Museum, USA

Ms. Pryanthi Pascuel Handi, Assistant Manager, Community Tsunami Education Centre and Tsunami Museum, Sri Lanka

Mr. Abdullah Yiğit, Director, Bursa Disaster Training Center, Turkey

Ms. Ratchaneekorn Thongthip, Director, International Tsunami Museum, Thailand

Mr. Hiroyoshi Nishi, Director Emeritus, Inamura-no-Hi no Yakata, Japan

## Visitor Information

Since the Pacific Tsunami Museum was established 23 years ago, the museum welcomes around 20,000 visitors with ten percent being local residents and ninety percent from mainland United States and foreign tourists every year. Slightly increasing each year, a surge in visitors over 2017 was attributed to a nearby volcanic activity, prompting interest and curiosity among the public and researchers. At the Community Tsunami Education Centre and Tsunami Museum established in 2007, an estimated 60,000 visitors are welcomed per year of which 13,000 are school children, 15,000 being Sri Lankan locals, 30,000 being foreigners along with 2,000 researchers.



Over 10,000 visitors are welcomed to the International Tsunami Museum in Khao Lak, Thailand, largely on

account of the area being a popular tourist destination. Sadly, many tourists passed away following the tsunami in 2004, with survivors and families often returning back to reflect on their memories. Being reminded of lost loved ones is of course never easy, shared Ms. Thongthip, with visitors oftentimes simply sitting in front of the museum and crying. To improve visitorship, the museum invites many school children to know what happened and offers free entry to the local community.

While the town is now commemorating the 114<sup>th</sup> tsunami memorial, the Inamura-no-Hi no Yakata museum which was established 10 years ago, is succeeding upon the festival tradition of the city for the past 100 years. Over the past decade, the museum has welcomed more than 310,000 visitors and around 30,000 annually of which 8,000 are young students. Of this number, it is estimated that seventy percent are group visits, sixty five percent are female visitors and about one percent are foreign tourists. Certainly the designation of World Tsunami Awareness Day in 2015 along with inclusion of the story of Inamura-no-Hi in the school curriculum has helped boost the number of visitors. Similarly, the Bursa Disaster Training Center in Turkey also welcomes approximately 30,000 visitors per year, among which 24,000 are elementary school children and 2,400 from the local community and others in 2016.



## Role of Tsunami Museums

Green spaces often used as soccer fields are visible across the landscape of Hilo, Hawaii. However, for many of the young population of the city, few know these developments are the result of the deadly 1946 Aleutian Tsunami. At that time, a lot was destroyed by the tsunami with many building in the same area. Following the devastation of the 1960 Tsunami, the community quickly learned and adapted. Since then, almost three generations have grown up without experiencing the catastrophic impact of tsunamis. Hence, a key mission of the museum is to educate the community that a tsunami is inevitable and only a matter of time.



Today, the Pacific Tsunami Museum delivers on that mission by conducting open days allowing free admission, such as during April which is Tsunami Awareness Month, bringing in scientists and expert guest speakers. Activity days focused on children are also on the schedule with a big fundraiser put together every April. Similarly, an educational role along with a memorial and social change role are at the heart of the mission of the Community Tsunami Education Centre and Tsunami Museum in Sri Lanka. The museum engages with victims by conducting activities on the anniversary date of the 2004 Indian Ocean Earthquake and Tsunami annually.

## Issues and Challenges

Funding was cited as a common challenge amongst the museum directors, as they have to spend inordinate amounts of time fundraising while simultaneously managing other grants to support the core educational mission of the museum. As shared by Ms. Murray of the United States, raising the admission fee too much is not a suitable solution either, expressing with regret

According to Ms. Thongthip, a key role of the museum is to be an information source for people in Thailand who are not aware of the danger of tsunamis. She recalls when signs of a tsunami arriving became evident in 2004, such as when the sea level was retracting, many people went out to catch fish, unaware that a tsunami was on the way. Meanwhile, another role of the museum is to help support improve the lives of the local children and poor people. Featured programs include a tsunami preparedness initiative, environment program, and youth leadership activities which also engage with children through art and play to help them convey their feelings.

In a similar way, the first priority of Inamura-no-Hi no Yakata is to pass down the tsunami memorial which has been held for 114 years by the local people, especially to the young people by keeping the story of Mr. Hamaguchi alive. The museum has also distributed leaflets to all the residents of the community to improve tsunami awareness every month. Three years ago, the museum began inviting guest speakers from different fields of work and countries to provide a series of lectures.

The largest goal of the Bursa Disaster Training Center is raising awareness on disaster caused by natural hazards amongst local citizens. Not knowing when the next disasters will strike, it is important that people are always prepared and also never forget their experiences from previous disasters. A disaster prevention meeting is held on the first Wednesday of every month. Earthquake Awareness Week events are held every year from 1 to 7 March in order to raise citizens' earthquake awareness in Turkey. Through the trainings delivered at the Centre, it is hoped that this education will be passed onto others within the community.

when visitors arrive but do not stay because of the admission fee. Certainly with every visitor who leaves, there is a lost opportunity for improving tsunami awareness.

Like the International Tsunami Museum in Thailand, the Community Tsunami Education Centre and Tsunami Museum in Sri Lanka is run completely on volunteer contributions. The land upon which the



museum in Sri Lanka is built is also donated by an existing Board Member, which poses potential issues for the long-term future of the museum. Preferably in the future, the museum will be able to purchase and own the land itself.



A few operational challenges were mentioned by Ms. Handi, including a need to develop proper museum exhibits in place of laminated printouts, as well as the

need to build a three-dimensional model of the tsunami train wreck accident. The International Tsunami Museum in Thailand was established with the help of donations from committee members of the museum amounting to US\$2,000, and relies solely on the money from tourists to support the operations of the museum. Many of the photos, objects and material artefacts were donated by the local people and tourists as well.

A key challenge shared by Mr. Nishi of Japan was that there were no curators at the museum. With only 7,000 people living in the town, maintaining a strong local support base was also considered to be an issue. A shortage of qualified staff members was described as among the challenges by the Bursa Disaster Training Center. As shared by Mr. Yiğit, people are not often paying attention to disasters until they strike and only start talking about it afterwards. For this reason, it is important to raise awareness now.

# Session 5

## Special Lecture

In session 5, Mr. Muzailin Affan, Director of International Office, Syiah Kuala University and Advisor, Aceh Tsunami Museum gave a lecture based on his research. Then, Mr. Masanao Ozaki, Governor of Kochi Prefecture, gave a lecture on “Kochi’s Tsunami Effort.”

### Recovery from a Disaster – the Case of Banda Aceh City

*Mr. Muzailin Affan, Director of International Office, Syiah Kuala University and Advisor, Aceh Tsunami Museum*

The purpose of recovery is the process of restoring a community to the condition before the disaster or at a minimum to a one which is considered stable. However, this process should also include the development of supportive social fabric and political system, along with economic activities that are able to anticipate disaster risk within society, shared Mr. Muzailin Affan, Director of the International Office, Syiah Kuala University.

For Mr. Affan, who is also an Advisor to the Aceh Tsunami Museum, the 2004 Indian Ocean Earthquake and Tsunami was transformative; he lost six of the dearest people in his life. He recalls calling family members immediately after the earthquake when the telephone lines were still connected, and back then there was no sense of urgency to evacuate because he had no idea a tsunami would arrive after a big earthquake. Today, Mr. Affan carries these lessons close to heart as he carries out his personal mission to help inform the next generation to better prepare for disasters.



Effective recovery is not simply about helping the affected population recover quickly but should be balanced with the quality of recovery. Following the disaster Banda Aceh City, the capital city of Province of

Aceh, was hugely destroyed resulting in the loss of over one-third of the population of the city in a single day. To help illustrate his point, Mr. Affan provided a comparison of two villages in Banda Aceh City with similar locations and whose primary occupation for many of the villagers was the same. However, what distinguished the two villages was their different approach towards reconstruction and the variation in the outcomes, with the recovery for one village, Alue Deah Tengoh, being donor-driven and the other, Lambung, led by the community.



Many villages were constructed with the kind support of various agencies and non-government organizations following the disaster. For the case of Alue Deah Tengoh, recovery was supported by multiple donors. The residents were shown the land upon which their new houses would be built, the houses were constructed and they were subsequently provided the keys. In Alue Deah Tengoh, around 30 percent of houses were constructed by 2005 and 90 percent completed by 2008, demonstrating the speed of recovery. Despite the donors’ good intentions, the new houses were built differently depending on the donor, which resulted in some villagers being less content about their new house than other villagers. On the other hand, in the village of Lambung, whose recovery was more community-led, the residents would first sit together with the local government to consult upon what kind of roads and facilities were required. Discussions continued for over two years with little progress and in the end only one type of housing was

provided in Lampung. Nevertheless, an examination of the existing land value per square meter according to present day estimates revealed that land value in villages where recovery was donor-less is less than the land value in villages where recovery was led by the community. A key contributing factor for the relative success of the recovery in the community-led village was the inclusive planning which resulted in the better provision of public services.

Prior to the tsunami, a large fish pond was located in the city which has now diminished in size due to sea-water inundation. While many of the dense mangroves along the coastal areas are no longer present, vegetation is returning back and in some areas increased. Regardless, one challenge that persists is advising people to resettle in areas away from the coast, largely because there are economic opportunities being close to the sea, as well as other factors related to better quality of life. As emphasized by Mr. Affan, Indonesia did not have a “bosai” agency to lead this process at the time.

In more recent years, under the instructive guidance of the local government, interventions for disaster prevention is improving, as certain locations are being clearly designated as settlement areas.

However, without being able to provide alternate housing solutions to certain impacted families at the time, it has not been possible for the government to simply say not to return back. The increase in tax revenues suggests that more people are settling in the city. An issue that remains is how to reduce disaster risk for newly-arrived communities in these cities, in addition to those that have already resettled in hazard-prone areas.

Today, the population of Banda Aceh City has surpassed figures prior to the disaster reaching 256,983 in 2016, which is a unique situation. The staggering increase of 18,199 people within just the last four years, is largely attributed to migration and high birth rates. Mr. Affan is currently carefully monitoring the population growth of Banda Aceh City. Realizing that better education was needed, the local government along with the Aceh Tsunami Museum has promoted school preparedness initiatives including sending delegates to the High School Students Summit on World Tsunami Awareness Day 2016. Other activities have been conducted including local DRR campaigns and tsunami evacuation drills to increase public awareness, a “bike for disaster” event, and the installation of new escape roads and evacuation signage.

## Kochi’s Tsunami Effort

*Mr. Masanao Ozaki, Governor of Kochi Prefecture*



Home to the Yosakoi Festival along with some of the most beautiful natural environments, Kochi Prefecture is also right alongside the infamous and unpredictable Nankai Trough. According to research, there is a 70 percent likelihood that a tsunami will occur in the region within the next 30 years with historical evidence

pointing to at least three large earthquakes originating from the Nankai Trough in recent years. From this research, we are also able to extrapolate that many of the earthquakes have occurred either simultaneously or sequentially. A monument that remains standing in the Prefecture today, shows us the disaster in which the Prefecture was struck by seven tsunamis in a single day, with the fourth being the largest.

There are many examples of stones and rocks serving as monuments of past tsunamis throughout Japan, revealing the extent tsunamis can reach inland. Today with the assistance of computer simulations, these records of past tsunamis help predict future tsunamis and the potential damage they can cause. Based on such information, the worst-case scenario is that the expected tsunami will be larger than previous tsunamis. Being so close to the epicenter of the earthquake, a tsunami would reach the east part of the Prefecture within 3 minutes after the earthquake, allowing little time for evacuation.



Another challenge that Kochi Prefecture faces is that land subsidence is likely to occur immediately after the earthquake, shared Mr. Masanao Ozaki. With land subsiding and certain areas becoming increasingly susceptible to sea-water inundation, there are new social and physical vulnerabilities to consider. While computer simulations conducted in 2013 have helped to estimate the time expected before large-scale flooding occurs in Kochi Prefecture following a tsunami, including where and how flooding will impact the city, they also suggested a mortality rate as high as 42,000 people.



Based on these predictions, the prefectural government is taking proactive measures to reduce this anticipated mortality as much as possible. Mr. Ozaki introduced an overview of the action plan for countermeasures against a Nankai Trough Earthquake. The plan was divided into three sections based on different targets of the actions: to protect lives, to save lives and to start a new life. Various countermeasures against an earthquake emanating from the Nankai Trough were contained in this action plan including fire and safety interventions and ensuring proper medical treatment for victims.

Kochi Prefecture formulated the tsunami evacuation plan which covers all 508 regions in all 19 coastal municipalities by 2013. Based on the evacuation plan, evacuation sites and towers are built in a way that ensures enough time for the community to reach these sites before a tsunami hits. As of March 2017, 1,436 out of 1,445 evacuation sites were completed, and 101 out of 115 evacuation towers were built in the required cities as planned. In addition, the Prefecture is carefully observing evacuation routes throughout the Prefecture to make sure that they are well maintained.

With the aim of minimizing confusion among people which may lead to unmanaged resettlement, the local government together with the community are taking the initiative to ensure important social functions, such as medical assistance and evacuation sites, are properly allocated and planned beforehand.

Indeed, the effectiveness of our community recovery must be based on past experiences, emphasized Mr. Ozaki. We must take this time to learn from Aceh, Kobe, East Japan and from other disasters. He added that in this respect, we have great hopes for tsunami museums as they have a significant role to play in providing information to the local population and helping them prepare for future tsunamis. Mr. Paulo Fernandes, Coordinator of the Museum of Lisbon added a following remark about the importance of establishing an international network of earthquake and tsunami museums.



A question was posed by a participant of the museum conference to Mr. Ozaki regarding how to manage the foreign tourist population in Kochi Prefecture following a tsunami. He responded the importance of informing people and managing information flow through an alert or warning system. “We want to make sure they understand (the information) and we have to translate them into various languages,” he added. Focusing on the importance of maintaining a good working relationship with the community he further emphasized, “Every year, people come and go. We want to make sure these people continue to be educated.” Issuing pamphlets distributed to every residence in Kochi Prefecture, the local government is committed to passing this life-saving knowledge to the entire community.

# Part 3

## Closing



# Conclusion

At the end of the conference, Mr. Yuichi Ono from IRIDeS, Tohoku University provided the conclusion of the World Tsunami Museum Conference.



“Without proper understanding on disaster risks, we cannot take proper actions to save lives and assets,” shared Mr. Yuichi Ono, IRIDeS of Tohoku University. Indeed, the Sendai Framework for Disaster Risk Reduction states the importance of ‘understanding disaster risk’ among its four priorities.

Gathering approximately seventy people from eight countries including representatives from eight disaster related museums, a training center, and a national emergency management agency, the first World Tsunami Museum Conference generated vibrant dialogue amongst the participants. The Conference was successful with achieving its objectives of promoting cooperation among museums as centers of disaster prevention education, enriching the discussion on how these experiences and lessons learned from the damages caused by tsunamis and other natural hazards could be disseminated to other parts of the world and passed down to future generations.

Over the course of the conference, representatives shared information about their museum in terms of its concept, history, items, focus, partnership, activities, including public events. One of the biggest challenges cited by the participants was how to hand down the memories of tsunami to the following generations.

In particular, the following key highlights were mentioned by multiple representatives:

- activities involving youth and children
- importance of associating with science and scientists
- not only displaying materials but also sharing real experiences of the affected people
- some museums have multiple functions, including being a tsunami evacuation center of the community
- importance of networking (TeLL-Net)
- some museums were assisted or inspired by other countries (e.g. JICA)

A 3D video titled “The Great Tsunami in Japan” was also screened during the conference with special thanks to NHK Media Technology. The realistic images of the tsunami and the lives of the people impacted was very effective for sharing with other people.



Key observations in relation to the following nine items were made during the museum conference:

## Field museums

- Field tsunami museum is another way of handing down the memories. The tsunami boulders, including tsunami-stones which the participants of this conference observed and the site of the temple damaged by the Meiwa Tsunami in 1771, were well preserved to be used as educational tools that informs memories of tsunamis to the next generations.

- In addition, folklore (story-telling) is another effective way to hand down the memories of tsunamis as it penetrates into the emotional level. To keep memories for generations, it is said that commemorating events would need to be associated with people's mourning for the dead.
- Tsunami stones were also worshiped with great respect from local residents (e.g. dragon god). Being integrated into a legend, the risk of tsunamis was passed down to the next generations.



- The value of the museum is to serve for the local people (Thailand)
- Tsunami training program to work with academia, local government, etc. (Thailand)
- Hand down the Inamura-no-Hi tradition (114 years of history so far) for the next generations in the 200-300 year future (Inamura-no-Hi)
- Regular seminar series on Inamura-no-Hi and newsletter
- High school summit hosted last year (Inamura-no-Hi)
- Public opening: 1-7 March as an earthquake awareness week (Turkey)

## Key challenges

- Poor sharing in knowledge and wisdom
- Targets are not necessary oriented towards disaster victims
- Financial constraints are a common issue for private tsunami museums
- Fundraising can be very time consuming
- Lack of exhibiting items is another challenge
- Exposing young museum staff members to people
- Exhibition of items in a more understandable manner
- Lack of human resources, technical staff members, including internet managers
- Data in only one language limits international data sharing



## Databases

- Obtaining many kinds of data is crucial for tsunami museums.
- Handling a large number of data is a challenge for museum managers, especially in terms of data analysis and storage capacity.
- *Michinoku-shinrokuden*, the archiving project by the IRIDeS demonstrated that archiving technology can handle massive digital data. This opens a new way to preserve tsunami memories, in the form of photos and videos.
- There are concerns with whether certain data formats will continue to be usable for future generations.

## Unique activities and practices

- Tsunami Awareness Month – April for Hawaii
- Tsunami museum does not wait for children to come but sometimes go to see them at school (Hawaii)
- 400 survivors' video interviews – real experiences (Hawaii)
- Social change is the mission of the museum (Sri Lanka)



## Possible solutions

- Attract more visitors
- New funding from gambling fund
- Museum itself is an evacuation center (multi-purpose)
- Web-based information sharing in a multilingual atmosphere
- Physically sharing items with other museums – international exchange is encouraged

## Need of science

- Science is key: museums should connect with scientists, who could verify the facts
- Lack of researchers at tsunami museums is one of the challenges
- New scientific findings would stimulate people's interest

## Networking

- Beneficial to share how others are doing
- Strong interest in developing a network of tsunami museums around the world for sharing good practices and challenges (e.g. start with creating a website)
- Formal process to be considered for this initiative soon

## Recovery efforts of Aceh, Indonesia

While there are many projects operated by different agencies and donors, the importance of coordinating and integrating the “Build Back Better” concept was stressed. Furthermore, for long term recovery, it was emphasized that education at schools and universities will be important.

## Efforts against tsunamis by the Kochi Prefecture Government

Kochi Prefecture has many traces of previous tsunamis in many monuments, and faces high risks from the predicted Nankai Trough Earthquake and Tsunami. The results of modern computer simulations are based on historically recorded damages. According to the revised estimate issued by a government-panel of experts in 2012, Kuroshio town is forecast to face a 34-meter-high wave if an earthquake occurs in the Nankai Trough off Japan. Kuroshio-town with 34 meters of tsunamis and more than 10 meters in other places at the worst case and tsunamis would arrive within several minutes from the occurrence of earthquake. Land subsidence will worsen the impact of tsunamis.

In the words of Japanese physicist and author, Torahiko Terada, “Disasters strike when we forget them!” Referring to this, lead facilitator Mr. Ono remarked, “If we remember disasters well, they will not strike us harshly.”





# Closing Remarks

Junji Wakui

Deputy Director General,  
and Group Director for  
Disaster Risk Reduction  
Group, Global Environment  
Department  
JICA

On behalf of the organizers, in closing the World Tsunami Museum Conference, I wish to express my sincere gratitude to all the people including the distinguished guests, who have participated in today's conference to make it such a success, as well as to all the people who supported and were involved in many activities of this whole program.

I especially express my sincere appreciation to the participants who came all the way from 7 countries including Chile, Indonesia, Portugal, Sri Lanka, Thailand, Turkey and the USA, for their excellent presentations and discussions for today.

This program itself started at the end of October, and before today's conference, the participants have visited many sites in Japan. In Tohoku and Kansai we visited many museums in the area hit by the Great Hanshin-Awaji Earthquake and the Great East Japan Earthquake. We visited the Hamaguchi Goryo Archives in Wakayama Prefecture, and participated in the evacuation drill executed in Miyazaki, too. In Ishigaki Island, several tsunami marks were also visited. The schedule may have been hard, but I believe all these visits are very useful for the future activities of the museums which have a very important role in each country.

Second, I wish to express my appreciation to the facilitators and speakers for their excellent presentations and discussions. This conference highlighting tsunami museums is the very first and unique one ever held in the world. An excellent opportunity to exchange knowledge and information from each museum for knowing, realizing, preserving and passing on and to establish a network among them was provided. This could not be done without the valuable contributions by the remarkable facilitators and speakers.

Lastly, I am pleased to announce that the result of today's discussion is supposed to be shared in the High School Students Islands Summit on "World Tsunami Awareness Day" which will be held from 7 November at Naha city, Okinawa Main Island. We will move there and make a presentation. Since nobody knows when and where the next disaster will happen, it is even more important that our discussions are shared with younger generations, and I think doing so is the responsibility of all of us in this room as we discussed today.



# Part 4

## Annex



# Voices from Participating Museums

Participants of the conference were interviewed to share some of their thoughts and experiences on tsunami museums, including the role of museums in local communities, the ideas and processes behind the exhibitions, and their future hopes for what museums can do to raise awareness on tsunamis globally.

“We thought we were well-prepared for tsunamis, but none of us could have imagined that such a megatsunami would hit the Tohoku region. The 2011 Great East Japan Earthquake and Tsunami reminded us the need to rethink whether our preparation for tsunamis was sufficient or not.”

**Hiroyoshi Nishi**

Director Emeritus at Inamura-no-Hi no Yakata (Japan)



**Marlene Murray**

Director of Pacific Tsunami Museum (USA)



“Survivor interviews are so important because we learn lessons from them, we learn how they survived. The stories are real, so they are so compelling. (A tsunami survivor) says that the sound of a tsunami is so loud, like a hundred trains approaching...the tsunami looked like a big wall of black water.”

“The photos and objects in the museum are not just for people to watch and go home; behind these exhibits are the stories of those that experienced the disaster and the processes they went through. The museum’s role as a physical, social, and emotional hub for remembering disasters relies on its ability to tell stories in the disaster-hit area that visitors can empathize with and learn lessons from.”

**Yoshinobu Fukasawa**

Research Fellow at Disaster Reduction and Human Renovation Institute (Japan)





**Ratchaneekorn Thongthip**

Director of International Tsunami Museum (Thailand)



“In 2004, when the tsunami came, many people in Thailand had not heard of tsunami before. When the water turned back to the sea, they followed the sea level and called friends to catch the fish, which was very dangerous.”

“If we do not prepare (the children) now, when can we prepare them? To manage the museum is to be one member in our society.”

“It was a key moment to speak, to talk about the earthquake, but also to raise awareness for the future, because people seem to have forgotten the disaster that had come upon Lisbon in 1755...Because it is important for us not only to talk about the past, but to link past, present and future.”

**Paulo Almeida Fernandes**

Coordinator at Museum of Lisbon (Portugal)



**Muzailin Affan**

Director of International Office, Syiah Kuala University and Advisor for Aceh Tsunami Museum (Indonesia)



“This museum is the way we want to pass down the lessons learned to the next generations.

We are learning what happened in the past and also would like to know what we should do in the future.”

# Reporting for World Tsunami Museum Conference at High School Students Islands Summit on WTAD



*High School Students gather in Ginowan City, Okinawa Prefecture, Japan*

The High School Students Islands Summit for World Tsunami Awareness Day 2017 was held in Ginowan City, Okinawa Prefecture, Japan, from 7-8 of November 2017, two days after the World Tsunami Museum Conference. This was the second summit following the first one in 2016, which was held in Kuroshio city, Kochi Prefecture. 255 high school students from 26 countries attended the Summit, including countries where participants of the World Tsunami Museum Conference are from: Chile, Indonesia, Japan, Sri Lanka, Thailand, and United States.

At the Summit, students learned and shared ideas on disaster risk reduction, including ways to raise awareness about the threat of tsunamis and

teach their communities the importance of tsunami preparedness. During the Opening Ceremony on the first day of the Summit, Ms. Ratchaneekorn Thongthip gave a speech to report on the World Tsunami Museum Conference, summarising the key messages, challenges, and recommendations discussed.

Several points highlighted in the Conference were reported at the Summit, including the importance of tsunami museums for the young generation, and the active involvement of the young generation in this process of passing down the lessons learnt from previous disasters. The following is an excerpt from the speech delivered at the summit:

### *Speech Reporting for World Tsunami Museum Conference at High School Students Island Summit for WTAD 2017*

The Conference recognized important roles by museums as cultural facilities. We are preservers of past experience and indigenous knowledge, and have very important roles to play in educating the public about past disaster events. Our roles include:

- Raising public awareness by facilitating understanding of the disaster risks to which the public is exposed;
- Preserving records and accumulating knowledge for people to learn from the past, including maintaining data base;
- Passing this knowledge on to future generations.

All of these important roles contribute to changing a society by strengthening preparedness and building the resilience to future disasters. These roles by the Museums in the Society is critical as specified in the Sendai Framework for Disaster Risk Reduction 2015-2030 as Priority 1 "Understanding Risk".

Representatives of the participating museums discussed their challenges, including financial and human resource challenges, regarding how they can be sustainable.

While obtaining and maintaining many kinds of data is crucial for tsunami museums, handling a large number of data is a challenge for museum managers for analysis and storage capacity.

One of the biggest challenges is how we can efficiently hand down the memories and knowledge of tsunamis to the next generations.

From this perspective, we are very pleased to have the opportunity to interact with the participating students in this Summit. We would like to attract the young generation like you to come to the museums more frequently, which will contribute to cultivating the culture of disaster risk reduction.

It is important for the tsunami and disaster related museums to contribute to a social change for making communities more resilient, through

serving to local communities. Physical sharing of materials for exhibitions among participating museums can be explored, so that visitors to these museums can learn from other museums.

Recognizing field museums, like tsunami stones, as another way of handing down the memories of past disasters for public awareness.

Utilizing folklore (story-telling) is another effective way to pass on the memories of tsunamis as it would penetrate into the emotional level.

Good practices and lessons learned can be further shared among the participating museums from this perspective.

Science is key for the museums, since we can verify facts by working together with scientists. Scientific evidence to understand natural hazards and human stories need to be combined to be effectively communicating messages to the public.

Networking among museums is critical for sharing good practices and exploring solutions to our common challenges together.

This conference provided the rare opportunity for participating museums —despite being separated by vast oceans— to learn from each other as well as foster networking for their future collaborations and joint efforts.

Similarly, I encourage you to seize this opportunity over the next few days to nurture friendships that extend well beyond this Summit. I understand that high school students from countries where participating museums were represented are also attending this Summit. For those participating museums in the World Tsunami Museum Conference and participating students in this High School Islands Summit which includes Thailand, we hope this can be the beginning of a meaningful partnership which will continue when you return back together to your countries. We may have been strangers yesterday, but let us stand united with you as Youth Ambassadors for World Tsunami Awareness Day in building community resilience from today onwards.

# UNISDR Online Article for World Tsunami Museum Conference

## Japan hosts World Tsunami Museum Conference

By Yuki Matsuoka

Okinawa, 17 November - Directors and representatives from eight museums and organizations around the world, recently came together with government officials in the Japanese city of Ishigaki in Okinawa for the first ever World Tsunami Museum Conference.

The conference was held on 5 November to mark World Tsunami Awareness Day (WTAD) and may lead to the creation of an international network of disaster museums. Participants came from Chile, Indonesia, Japan, Portugal, Sri Lanka, Thailand, Turkey and the United States.

In welcome remarks, the Mayor of Ishigaki, Mr. Yoshitaka Nakayama, emphasized the role of local knowledge and the need to “learn from the past so we are all better prepared”. The city itself, suffered tremendous casualties from the 1771 Great Meiwa Tsunami which killed over half the population.

Member of the House of Representatives, Mr. Teru Fukui, stressed overcoming “our natural instinct which is to forget sad events. When it came to tsunamis he said there was a need to “make it a part of daily living to evacuate to higher ground as the natural thing to do”.

Aimed at strengthening cooperation among museums as centres of disaster prevention education, and for transferring knowledge and experiences to future generations, the conference was welcomed as a catalyst for discussions on a possible international network of disaster museums.

Approximately seventy people from 26 entities from Japan and abroad participated in this conference, including eight disaster museums, a training centre,

and a national emergency management agency. The conference also featured a special lecture on disaster recovery, and a unique 3D multimedia video with footage of the immediate aftermath and ongoing recovery of the 2011 Great East Japan Earthquake and Tsunami.

Throughout the conference, tsunami museums and participating organizations were recognized for their role as cultural facilities and preservers of knowledge, along with their ability to promote public awareness and pass down education.

According to Mr. Fukui, whatever form museums took, including “field museums”, such as rock soil and tsunami boulders, they all served as “monuments to past tsunamis”, possessing “great power to contribute to people's knowledge of disasters and disaster risk reduction”.

Recommendations from the conference included greater inter-country collaboration, especially on information, exhibits and resources. With a number of participating museums moving to digital archives, even more opportunities were identified for cooperation.

In her report of the World Tsunami Museum Conference to the second High School Students Island Summit, which was also held in Okinawa in observation of World Tsunami Awareness Day, Ms. Ratchaneekorn Thongthip, Director of the International Tsunami Museum in Thailand told 255 students from 26 countries, “We may have been strangers yesterday, but let us stand united with you as our Ambassadors in building community resilience from today onwards.”

The first World Tsunami Museum Conference was co-organized by the Ministry of Foreign Affairs (MOFA) of Japan, Japan International Cooperation Agency (JICA) and the UNISDR Office in Japan. Cooperation was provided by the International Research Institute of Disaster Science (IRIDeS), Tohoku University.

*Date:* 17 Nov 2017

*Sources:* United Nations Office for Disaster Risk Reduction - Regional Office for Asia and Pacific (UNISDR AP)

*Link:* <https://www.unisdr.org/archive/55976>



# List of Participating Organizations

National Office of Emergency of the Interior Ministry (ONEMI)	Chile
Aceh Tsunami Museum	Indonesia
Syiah Kuala University	Indonesia
Museum of Lisbon	Portugal
Community Tsunami Education Centre and Tsunami Museum	Sri Lanka
International Tsunami Museum	Thailand
Bursa Disaster Training Center	Turkey
Pacific Tsunami Museum	USA
Liberal Democratic Party of Japan	Japan
International Research Institute of Disaster Science (IRIDeS), Tohoku University	Japan
Inamura-no-Hi no Yakata	Japan
Disaster Reduction and Human Renovation Institute (DRI)	Japan
Hiroshima City Ebayama Museum of Meteorology	Japan
Cabinet Office	Japan
Ministry of Land, Infrastructure, Transport and Tourism	Japan
Ministry of Education, Culture, Sports, Science and Technology	Japan
Kochi Prefecture	Japan
Okinawa Prefecture	Japan
Ishigaki City, Okinawa Prefecture	Japan
Hirogawa Town, Wakayama Prefecture	Japan
NHK Media Technology, Inc.	Japan
Yaeyama Mainichi Shimbun	Japan
Nippon Koei Co., Ltd.	Japan
Ministry of Foreign Affairs	Japan
Japan International Cooperation Agency (JICA)	Japan
United Nations Office for Disaster Risk Reduction (UNISDR)	



*Group photo of the World Tsunami Museum Conference*

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