

## Tue. Nov 12, 2019

## Room 1

Oral Sessions | Session

## [O3-1]

## Toward Restoration after Fukushima Daiichi Nuclear Accident

8:30 AM - 10:00 AM Room 1 (Main Hall)

## [O3-1-01] Toward Restoration after Fukushima Daiichi Nuclear Accident

\*Nobuyoshi Hara<sup>1</sup>, \*Akira HASEGAWA<sup>2</sup>, \*Masatoshi SUZUKI<sup>3</sup>, \*Masashi KONYO<sup>4</sup>, \*Yutaka WATANABE<sup>5</sup>

(1. Institute for Disaster Reconstruction and Regeneration Research, Tohoku University, 2. School of Engineering, Tohoku University, 3. International Research Institute of Disaster Science, Tohoku University, 4. Graduate School of Information Sciences, Tohoku University, 5. Center for Fundamental Research on Nuclear Decommissioning, Tohoku University)

8:30 AM - 10:00 AM

Oral Sessions | Session

## [O3-3]

## Value of advance information for earthquake damage reduction and its feasibility

1:30 PM - 3:00 PM Room 1 (Main Hall)

## [O3-3-01] Value of advance information for earthquake damage reduction and its feasibility

Toshihiro Mori<sup>1</sup>, \*Izumi Tobo<sup>2</sup>, \*Ken Umeno<sup>3</sup>, \*Yukio Fujinawa<sup>4</sup>, Atsushi Oono<sup>1</sup>, Takashi Mii<sup>1</sup>, Tadahiro Eguchi<sup>1</sup>, Morihiro Matsuda<sup>1</sup>, Michiaki Yokoyama<sup>1</sup> (1. OPTAGE Inc., 2. Mitsubishi Research Institute, Inc., 3. Kyoto University, 4. Organization for Development of Resilient Communities)

1:30 PM - 3:00 PM

Oral Sessions | Session

## [O3-4]

## Support to Disaster Risk Reduction by private sector

3:30 PM - 5:00 PM Room 1 (Main Hall)

## [O3-4-01] Support to Disaster Risk Reduction by private sector

\*Hisashi Hamada<sup>1</sup> (1. JAPAN TOBACCO INC.)

3:30 PM - 5:00 PM

## Room 2

Oral Sessions | Session

## [O3-5]

## Spiritual care and relevant faith-based activity in disaster relief and recovery

8:30 AM - 10:00 AM Room 2 (Tachibana)

## [O3-5-01] Spiritual care and relevant faith-based activity in disaster relief and recovery

Takaaki Ito<sup>3</sup>, Nobuhiko Katayama<sup>2</sup>, \*Emiko Kubo<sup>1</sup> (1. Soka Gakkai International, 2. World Vision Japan, 3. Sophia University)

8:30 AM - 10:00 AM

Oral Sessions | Session

## [O3-6]

## BOSAI DIVERSITY Diversity in disaster preparation

10:30 AM - 12:00 PM Room 2 (Tachibana)

## [O3-6-01] BOSAI DIVERSITY

Diversity in disaster preparation.

\*Shuichi Nishida<sup>1</sup>, Takahiro Koga<sup>1</sup> (1. Yahoo Japan Corporation)

10:30 AM - 12:00 PM

Oral Sessions | Session

## [O3-7]

## The Asia-Pacific Disaster Report 2019: Pathways for resilience, inclusion and empowerment

1:30 PM - 3:00 PM Room 2 (Tachibana)

## [O3-7-01] The Asia-Pacific Disaster Report 2019: Pathways for resilience, inclusion and empowerment

\*Laura Louise Hendy<sup>1</sup>, Maria Bernadet Karina Dewi<sup>1</sup> (1. United Nations ESCAP)

1:30 PM - 3:00 PM

Oral Sessions | Session

## [O3-8]

## "FUKUSHIMA" its disasters archives, current revitalization status and the future

3:30 PM - 5:00 PM Room 2 (Tachibana)

## [O3-8-01] "FUKUSHIMA" its disasters archives, current revitalization status and the future

\*Hideya KITAMURA<sup>1</sup>, \*Shubun ENDO<sup>2</sup>, \*looking for suitable person looking for suitable person<sup>3</sup> (1. Business Council for the Fukushima Innovation Coast Initiative (representative of Tokyo Electric Power

Company), 2. Futaba Inc, 3. Fukushima prefecture or  
University of Fukushima)  
3:30 PM - 5:00 PM

### Room 3

Oral Sessions | Session

[O3-10]

Interdisciplinary Strategies in General Education for  
Disaster Risk Reduction: The Six-Year Experience by  
DRMAPS at the University of the Philippines  
10:30 AM - 12:00 PM Room 3 (Hagi)

[O3-10-01] **Interdisciplinary Strategies in General  
Education for Disaster Risk Reduction:**  
The Six-Year Experience by DRMAPS at the  
University of the Philippines  
\*Benito M. Pacheco<sup>1</sup>, \*Flaudette May V. Datuin<sup>1</sup>,  
\*Aurora Odette C. Mendoza<sup>1</sup>, \*Elenita N. Que<sup>1</sup>,  
\*Leonardo C. Rosete<sup>1</sup>, \*Mark Albert H. Zarco<sup>1</sup> (1.  
University of the Philippines Diliman)  
10:30 AM - 12:00 PM

Oral Sessions | Session

[O3-11]

BOSAI POINT. A new disaster-preventing  
service, using your untouched points to raise  
donations  
1:30 PM - 3:00 PM Room 3 (Hagi)

[O3-11-01] **BOSAI POINT.**  
**A new disaster-preventing service,**  
**using your untouched points to raise**  
**donations.**  
\*JUNSHIRO KAMEYAMA<sup>1</sup> (1. BOSAI POINT  
PROJECT)  
1:30 PM - 3:00 PM

Oral Sessions | Session

[O3-12]

The future of wide area disaster response by drones  
and air mobilities  
3:30 PM - 5:00 PM Room 3 (Hagi)

[O3-12-01] The future of wide area disaster response by  
drones and air mobilities  
\*Shintaro Takahashi<sup>1</sup>, Kotara Chiba<sup>1</sup>, Kenichi  
Ohmae<sup>1</sup>, Yukihiro Maru<sup>2</sup> (1. Drone Fund, 2. Leave  
a Nest)

3:30 PM - 5:00 PM

### Room 4

Oral Sessions | Session

[O3-13]

Advances of International Collaboration on M9  
Disaster Science  
8:30 AM - 10:00 AM Room 4 (Shirakashi 1)

[O3-13-01] Advances of International Collaboration on  
M9 Disaster Science  
\*Kenjiro Terada<sup>1,4</sup>, \*Shunichi Koshimura<sup>1,4</sup>, \*Jorge  
Leon<sup>3,6</sup>, Randall J LeVeque<sup>2</sup>, Gabriel Gonzalez<sup>3,7</sup>,  
\*Patricio Catalan<sup>3,6</sup>, Elizabeth Maly<sup>1</sup>, \*Dan  
Abramson<sup>2</sup>, Carrie Garrison-Laney<sup>2</sup>, \*Michael  
Motley<sup>2</sup>, \*Naoko Kuriyama<sup>5</sup>, \*Lan Nguyen<sup>2</sup>, \*Adams  
Adams<sup>2</sup>, Anawat Suppasri<sup>1,4</sup>, Erick Mas<sup>1,4</sup>, Shuji  
Moriguchi<sup>1</sup> (1. IRIDeS, Tohoku University, 2.  
University of Washington, 3. CIGIDEN, Chile, 4. Core  
Research Cluster of Disaster Science, Tohoku  
University, 5. Kobe University, 6. Universidad  
Federico Santa Maria, 7. Universidad Católica del  
Norte)  
8:30 AM - 10:00 AM

Oral Sessions | Session

[O3-14]

Fuel stocking proposal to connect life at the time of  
disaster  
10:30 AM - 12:00 PM Room 4 (Shirakashi 1)

[O3-14-01] Fuel stocking proposal to connect life at the  
time of disaster  
mitsuaki kizaki<sup>1</sup>, \*Masataka Nakai<sup>1</sup>, \*Toru  
Matsunaga<sup>1</sup> (1. NIPON BCP INC)  
10:30 AM - 12:00 PM

Oral Sessions | Session

[O3-15]

Support for affected areas by "local residents" in the  
Great East Japan Earthquake "Connecting" town  
development by "collaboration"  
1:30 PM - 3:00 PM Room 4 (Shirakashi 1)

[O3-15-01] Support for affected areas by "local residents"  
in the Great East Japan Earthquake  
"Connecting" town development by  
"collaboration"

\*Hideaki Murai<sup>1</sup>, \*Chikako Adachi<sup>1</sup>, Hiroaki Enoki<sup>1</sup>,  
\*Fumihiko Sugawara<sup>1</sup> (1. All Japan Council  
Company)  
1:30 PM - 3:00 PM

10:30 AM - 12:00 PM

---

Oral Sessions | Session

[O3-16]

The Factors Regulate to Community Participation in  
Sustainable Disaster Recovery Program: An  
Experience of Cyclone Aila Disaster Affected Coastal  
People Bangladesh

3:30 PM - 5:00 PM Room 4 (Shirakashi 1)

---

[O3-16-01] **The Factors Regulate to Community  
Participation in Sustainable Disaster Recovery  
Program: An Experience of Cyclone Aila  
Disaster Affected Coastal People Bangladesh**  
\*Emadul Islam<sup>1</sup>, Haris Abd Wahab<sup>1</sup> (1. University of  
Malaya, Malaysia)  
3:30 PM - 5:00 PM

## Room 5

---

Oral Sessions | Session

[O3-17]

Redefining and be preparing for disasters: the  
lessons from the Moken sea nomads of Thailand

8:30 AM - 10:00 AM Room 5 (Shirakashi 2)

---

[O3-17-01] Redefining and be preparing for disasters: the  
lessons from the Moken sea nomads of  
Thailand  
\*Narumon Arunotai<sup>1</sup> (1. Research Unit on  
Indigenous Peoples and Alternative Development,  
Social Research Institute, Chulalongkorn University,  
)  
8:30 AM - 10:00 AM

---

Oral Sessions | Session

[O3-18]

IFIP session on IT in Disaster Risk Reduction (ITDRR)  
10:30 AM - 12:00 PM Room 5 (Shirakashi 2)

---

[O3-18-01] IFIP session on IT in Disaster Risk Reduction  
(ITDRR)  
\*Yuko MURAYAMA<sup>1</sup>, \*Jun Sasaki<sup>2</sup>, \*Takashi Yoshino<sup>3</sup>  
(1. Tsuda University and IFIP(International  
Federation for Information Processing), 2. Iwate  
Prefectural University, 3. Wakayama University)

## Tue. Nov 12, 2019

### Flash Talk Presentation 1

Flash Talk Presentation

#### SERVICE LEARNING THROUGH NSTP CWTS/LTS:

The Community Based Disaster Risk Reduction

Program of University of Santo Tomas-National

Service Training Program (NSTP) CWTS/LTS

Mr. Adrian D. Romero; Ms. Sheila Ruth Masangkay, Ms. Jasmin Victoria

12:15 PM - 12:30 PM Flash Talk Presentation 1 (Meeting Room 6)

#### [MP3-01] SERVICE LEARNING THROUGH NSTP

CWTS/LTS: The Community Based Disaster Risk Reduction Program of University of Santo Tomas-National Service Training Program (NSTP) CWTS/LTS

Mr. Adrian D. Romero; Ms. Sheila Ruth Masangkay, Ms. Jasmin Victoria (University of Santo Tomas-National Service Training Program CWTS/LTS)

12:15 PM - 12:30 PM

Flash Talk Presentation

A social-ecological approach to disaster risk management applied to the case study of the Marche Region, Italy

Alessandra Colocci

12:35 PM - 12:50 PM Flash Talk Presentation 1 (Meeting Room 6)

#### [MP3-02] A social-ecological approach to disaster risk management applied to the case study of the Marche Region, Italy

Alessandra Colocci (Universita Politecnica delle Marche)

12:35 PM - 12:50 PM

Flash Talk Presentation

#### Mobilizing Local Knowledge in Local Disaster Risk Reduction Strategies

Dr Aaron Opdyke

12:55 PM - 1:10 PM Flash Talk Presentation 1 (Meeting Room 6)

#### [MP3-03] Mobilizing Local Knowledge in Local Disaster Risk Reduction Strategies

Dr Aaron Opdyke (The University of Sydney)

12:55 PM - 1:10 PM

Flash Talk Presentation

#### Water, Sanitation, and Hygiene (WASH) assessments

#### two years after Nepal 2015 earthquake

Sital Uprety

1:15 PM - 1:30 PM Flash Talk Presentation 1 (Meeting Room 6)

#### [MP3-04] Water, Sanitation, and Hygiene (WASH)

assessments two years after Nepal 2015 earthquake

Sital Uprety (Department of Civil and Environmental Engineering, University of Illinois and Department of Frontier Science for Advanced Environment, Tohoku University)

1:15 PM - 1:30 PM

Flash Talk Presentation

#### The state-of-the-art review of vulnerability indices: with a special focus on urban flood

Tanaya Sarmah

3:05 PM - 3:20 PM Flash Talk Presentation 1 (Meeting Room 6)

#### [MP3-05] The state-of-the-art review of vulnerability

indices: with a special focus on urban flood

Tanaya Sarmah (Indian Institute of Technology Kharagpur)

3:05 PM - 3:20 PM

Flash Talk Presentation

#### Damage Distribution of Typhoon No. 21 in 2018 on Osaka and Wakayama Prefecture based on Questionnaire Surveys

Haris Rahadiano

5:05 PM - 5:20 PM Flash Talk Presentation 1 (Meeting Room 6)

#### [MP3-06] Damage Distribution of Typhoon No. 21 in 2018 on Osaka and Wakayama Prefecture based on Questionnaire Surveys

Haris Rahadiano (Kyoto University)

5:05 PM - 5:20 PM

### Flash Talk Presentation 2

Flash Talk Presentation

#### Exploring the DRRM Landscape of the University of the Philippines Diliman: How prepared are university students in case of a disaster?

Danielle Marie Alcoriza Parreno

12:15 PM - 12:30 PM Flash Talk Presentation 2 (Meeting Room 7)

#### [MP3-07] Exploring the DRRM Landscape of the University of the Philippines Diliman: How prepared are

university students in case of a disaster?  
Danielle Marie Alcoriza Parreno, Yra Marie Limos  
Calamiong (University of the Philippines Diliman,  
University of the Philippines Diliman)  
12:15 PM - 12:30 PM

---

Flash Talk Presentation

**Fragility curves for economic losses in industrial  
sectors after strong wind disaster: A case  
of 2018 Typhoon Jebi**

Hasi  
12:35 PM - 12:50 PM Flash Talk Presentation 2 (Meeting Room  
7)

---

[MP3-08] Fragility curves for economic losses in industrial  
sectors after strong wind disaster: A case of  
2018 Typhoon Jebi

Hasi (Kyoto University)  
12:35 PM - 12:50 PM

---

Flash Talk Presentation

**Recent Activity for DRR in Turkey**

Mr. Ozmen Ozgu Tuna  
12:55 PM - 1:10 PM Flash Talk Presentation 2 (Meeting Room 7)

---

[MP3-09] Recent Activity for DRR in Turkey

Mr. Ozmen Ozgu Tuna (Disaster and Emergency  
Management Presidency (AFAD))  
12:55 PM - 1:10 PM

---

Flash Talk Presentation

**How to save people from  
earthquakes**

Kazuo Sasaki  
1:15 PM - 1:30 PM Flash Talk Presentation 2 (Meeting Room 7)

---

[MP3-10] How to save people from  
earthquakes

Kazuo Sasaki (Challenge Co.,Ltd)  
1:15 PM - 1:30 PM

---

Flash Talk Presentation

**Saglam KOBİ Project**

Ruya Kaya  
3:05 PM - 3:20 PM Flash Talk Presentation 2 (Meeting Room 7)

---

[MP3-11] Saglam KOBİ Project

Ruya Kaya (IDEMA)  
3:05 PM - 3:20 PM

---

Flash Talk Presentation

**Understanding child and youth resilience in the  
aftermath of disasters: The case of the 2016 Alberta  
wildfires in Canada**

Dr. Julie Drolet  
5:05 PM - 5:20 PM Flash Talk Presentation 2 (Meeting Room 7)

---

[MP3-12] Understanding child and youth resilience in the  
aftermath of disasters: The case of the 2016  
Alberta wildfires in Canada

Dr. Julie Drolet (Professor, University of Calgary)  
5:05 PM - 5:20 PM

Tue. Nov 12, 2019

Room 1

Keynote Speech

[K02]

Keynote Speech

Gretchen Kalonji, Denise Konan, Jihyeon Park

8:00 AM - 8:20 AM Room 1 (Main Hall)

[K02]

Gretchen Kalonji (Sichuan University)

[K02]

Denise Konan (University of Hawaii)

[K02]

Jihyeon Park (JHSUSTAIN)

Tue. Nov 12, 2019

Room 2

Closing

Closing

5:30 PM - 6:00 PM Room 2 (Tachibana)

[CL-01] Closing

5:30 PM - 6:00 PM

---

Oral Sessions | Session

[O3-1]

## Toward Restoration after Fukushima Daiichi Nuclear Accident

Tue. Nov 12, 2019 8:30 AM - 10:00 AM Room 1 (Main Hall)

Tohoku University

---

### [O3-1-01] Toward Restoration after Fukushima Daiichi Nuclear Accident

\*Nobuyoshi Hara<sup>1</sup>, \*Akira HASEGAWA<sup>2</sup>, \*Masatoshi SUZUKI<sup>3</sup>, \*Masashi KONYO<sup>4</sup>, \*Yutaka WATANABE<sup>5</sup> (1. Institute for Disaster Reconstruction and Regeneration Research, Tohoku University, 2. School of Engineering, Tohoku University, 3. International Research Institute of Disaster Science, Tohoku University, 4. Graduate School of Information Sciences, Tohoku University, 5. Center for Fundamental Research on Nuclear Decommissioning, Tohoku University)

8:30 AM - 10:00 AM



8:30 AM - 10:00 AM (Tue. Nov 12, 2019 8:30 AM - 10:00 AM Room 1)

## [O3-1-01] Toward Restoration after Fukushima Daiichi Nuclear Accident

\*Nobuyoshi Hara<sup>1</sup>, \*Akira HASEGAWA<sup>2</sup>, \*Masatoshi SUZUKI<sup>3</sup>, \*Masashi KONYO<sup>4</sup>, \*Yutaka WATANABE<sup>5</sup> (1.

Institute for Disaster Reconstruction and Regeneration Research, Tohoku University, 2. School of Engineering, Tohoku University, 3. International Research Institute of Disaster Science, Tohoku University, 4. Graduate School of Information Sciences, Tohoku University, 5. Center for Fundamental Research on Nuclear Decommissioning, Tohoku University)

Keywords: Fukushima Daiichi Nuclear Accident, Nuclear Decommissioning, Restoration of Living Environments, Disaster Response Robots, Human Resource Development

A few selected activities being set forward by Institute for Disaster Reconstruction and Regeneration Research, Tohoku University, for restoration after Fukushima Daiichi Nuclear Accident will be shared with the audience in this session.

The first topic is “technology development for the restoration of living environments contaminated by radioactive materials”. The project aspires to develop technology for the restoration of living environments contaminated with radioactive materials. That is, decontamination technology for soil, technology effectively utilizing collected radioactive materials, methods for the cultivation of non-radioactive crops, or non-destructive (whole) monitoring technology for gamma radiation. The outcomes are offered to residents living in the areas damaged by Great East Japan Earthquake for their recovering from the disaster.

The second topic is “comprehensive radiation assessment of disaster affected animals”. Biological effects by long-term exposure of low dose/ low dose-rate radiation have been drawing scientific and social attention since the accident of Fukushima Daiichi Nuclear Power Station occurred. The presentation will introduce the activities in which biological samples were collected from livestock and Japanese macaques living within the ex-evacuation zone of the accident and biological effects were analyzed.

The third topic is “disaster response robots and remote technologies”. Remote operation in confined spaces with many obstacles is a tough mission for the disaster response robots. The talk introduces a snake-like long flexible robot applied for the Fukushima Daiichi Accident and its recent advanced technologies.

The fourth topic is “activities of Center for Fundamental Research on Nuclear Decommissioning”, where our approaches of fundamental research and human resource development to contribute to decommissioning of Fukushima Daiichi NPS will be introduced.

---

Oral Sessions | Session

[O3-3]

## Value of advance information for earthquake damage reduction and its feasibility

Tue. Nov 12, 2019 1:30 PM - 3:00 PM Room 1 (Main Hall)

OPTAGE Inc.

---

### [O3-3-01] Value of advance information for earthquake damage reduction and its feasibility

Toshihiro Mori<sup>1</sup>, \*Izumi Tobo<sup>2</sup>, \*Ken Umeno<sup>3</sup>, \*Yukio Fujinawa<sup>4</sup>, Atsushi Oono<sup>1</sup>, Takashi Mii<sup>1</sup>, Tadahiro Eguchi<sup>1</sup>, Morihiro Matsuda<sup>1</sup>, Michiaki Yokoyama<sup>1</sup> (1. OPTAGE Inc., 2. Mitsubishi Research Institute, Inc., 3. Kyoto University, 4. Organization for Development of Resilient Communities)

1:30 PM - 3:00 PM

---

1:30 PM - 3:00 PM (Tue. Nov 12, 2019 1:30 PM - 3:00 PM Room 1)

## [O3-3-01] Value of advance information for earthquake damage reduction and its feasibility

Toshihiro Mori<sup>1</sup>, \*Izumi Tobo<sup>2</sup>, \*Ken Umeno<sup>3</sup>, \*Yukio Fujinawa<sup>4</sup>, Atsushi Oono<sup>1</sup>, Takashi Mii<sup>1</sup>, Tadahiro Eguchi<sup>1</sup>, Morihiro Matsuda<sup>1</sup>, Michiaki Yokoyama<sup>1</sup> (1. OPTAGE Inc., 2. Mitsubishi Research Institute, Inc., 3. Kyoto University, 4. Organization for Development of Resilient Communities)

Keywords: Value of advance information, Nankai Trough Earthquake, the state-of-the-art earthquake technology, feasibility, earthquake precursors

In this session, the value of advance information for earthquake damage reduction will be shared, and experts will introduce the state-of-the-art earthquake precursor detection technology in Japan.

The probability of a huge earthquake in the Nankai Trough is estimated to be 70-80% within the next 30 years.

In addition, the estimated number of fatalities is up to 320,000, of which 230,000 are caused by the tsunami.

In order to reduce such expected damage, the Meteorological Agency has announced that it will issue an order of emergency information if an abnormal phenomenon is observed along the Nankai Trough.

(Case of abnormal phenomenon)

- Half of Nankai Trough's epicenter is broken and the other half remains
- M7 class earthquake occurs near the epicenter area of Nankai Trough
- A significant change is observed by a strain gauge

By distributing such advance information, many people can take actions in advance, which leads to mitigation of earthquake damages.

We believe that we need to improve the accuracy of useful emergency information.

That is because people can understand the increased risk, but they do not know when an earthquake will occur.

Recently, a number of abnormal phenomena before an earthquake have been reported.

We believe that it will lead to further improvement in accuracy by using such information.

In this session, we introduce the latest research and discuss its feasibility.

---

Oral Sessions | Session

## [O3-4]

### Support to Disaster Risk Reduction by private sector

Tue. Nov 12, 2019 3:30 PM - 5:00 PM Room 1 (Main Hall)

JAPAN TOBACCO INC.

Simultaneous Interpretation is available. (同時通訳有り)

---

#### [O3-4-01] Support to Disaster Risk Reduction by private sector

\*Hisashi Hamada<sup>1</sup> (1. JAPAN TOBACCO INC.)

3:30 PM - 5:00 PM

3:30 PM - 5:00 PM (Tue. Nov 12, 2019 3:30 PM - 5:00 PM Room 1)

## [O3-4-01] Support to Disaster Risk Reduction by private sector

\*Hisashi Hamada<sup>1</sup> (1. JAPAN TOBACCO INC.)

Keywords: Disaster Risk Reduction, Tohoku earthquake reconstruction, word-of-mouth tradition

- Introduction of our support for Tohoku earthquake reconstruction
- Introduction of our support for Disaster Risk Reduction program
- Necessity of word-of-mouth tradition (Introduction of 311 memorial network)

---

Oral Sessions | Session

[O3-5]

## Spiritual care and relevant faith-based activity in disaster relief and recovery

Tue. Nov 12, 2019 8:30 AM - 10:00 AM Room 2 (Tachibana)

Soka Gakkai International

---

### [O3-5-01] Spiritual care and relevant faith-based activity in disaster relief and recovery

Takaaki Ito<sup>3</sup>, Nobuhiko Katayama<sup>2</sup>, \*Emiko Kubo<sup>1</sup> (1. Soka Gakkai International, 2. World Vision Japan, 3. Sophia University)

8:30 AM - 10:00 AM

8:30 AM - 10:00 AM (Tue. Nov 12, 2019 8:30 AM - 10:00 AM Room 2)

## [O3-5-01] Spiritual care and relevant faith-based activity in disaster relief and recovery

Takaaki Ito<sup>3</sup>, Nobuhiko Katayama<sup>2</sup>, \*Emiko Kubo<sup>1</sup> (1. Soka Gakkai International, 2. World Vision Japan, 3. Sophia University)

Keywords: spiritual care, grief and loss, faith, faith-based organizations

The spiritual or psychosocial care of each victim of disaster is vitally important for their recovery. This aspect, however, tends to be given little attention in debates on disaster relief and recovery by governments. On the other hand, some academics and faith-based organizations proactively promote such care in a unique way that is beginning to receive increased attention.

In this session, Prof. Ito will share an overview of spiritual care for disaster victims and how faith can make a difference in all aspects of recovery. Mr. Katayama will elaborate how World Vision Japan is involving local churches in disaster preparation. He will address both the physical and spiritual aspects of recovery. Ms. Kubo will focus on the Soka Gakkai Japan's concert initiative that utilizes the power of music to aid recovery in the aftermath of disaster.

---

Oral Sessions | Session

[O3-6]

## BOSAI DIVERSITY Diversity in disaster preparation

Tue. Nov 12, 2019 10:30 AM - 12:00 PM Room 2 (Tachibana)

Yahoo Japan co.

Simultaneous Interpretation is available. (同時通訳有り)

---

[O3-6-01] **BOSAI DIVERSITY**

Diversity in disaster preparation.

\*Shuichi Nishida<sup>1</sup>, Takahiro Koga<sup>1</sup> (1. Yahoo Japan Corporation)

10:30 AM - 12:00 PM



10:30 AM - 12:00 PM (Tue. Nov 12, 2019 10:30 AM - 12:00 PM Room 2)

## [O3-6-01] BOSAI DIVERSITY

### Diversity in disaster preparation.

\*Shuichi Nishida<sup>1</sup>, Takahiro Koga<sup>1</sup> (1. Yahoo Japan Corporation)

Keywords: diversity, preparation, emergency kit

Talk to anyone who's lived through a disaster, and they'll tell you the same thing:

There's no such thing as a universal emergency kit. Different people have specific needs that can only be met with specific items.

We saw that this led to low levels of disaster preparedness, and wanted to let everyone know the preparations required for each person in evacuation shelters.

Immediately after an earthquake or other disaster, media coverage and interest among the government, corporations and populace focuses on the afflicted area. But few take into consideration the diverse characteristics and living environments of people forced to evacuate. It is a little-known fact that many people in post-disaster shelters suffer from declining health, or even lose their lives. For this reason, we wanted to make it easier for people who have never experienced a disaster to immediately take action by clearly presenting the kinds of emergency kit items that people would need for themselves and their own living environments.

The launch of the project was timed to the week before the anniversary of the Great East Japan Earthquake and Tsunami, when reporting and awareness about disasters and disaster preparedness are highest in Japan. Our approach was to present a new concept that emergency kits are unique for diverse types of people. We communicated this through a website and hands-on events with illustrated cards that show how different kinds of people should prepare for disasters. These were covered in numerous online articles and TV reports, and participants posted positive comments about the project on social media, along with support from Japan's Cabinet Office, the United Nations Information Centre, UNICEF, and other government and international non-governmental organizations.

This widespread recognition contributed to greater awareness about disaster preparations. Celebrities, government agencies, international NGOs and others saluted our new concept and began promoting it on their own.

---

Oral Sessions | Session

[O3-7]

## The Asia-Pacific Disaster Report 2019: Pathways for resilience, inclusion and empowerment

Tue. Nov 12, 2019 1:30 PM - 3:00 PM Room 2 (Tachibana)

TBA

---

### [O3-7-01] The Asia-Pacific Disaster Report 2019: Pathways for resilience, inclusion and empowerment

\*Laura Louise Hendy<sup>1</sup>, Maria Bernadet Karina Dewi<sup>1</sup> (1. United Nations ESCAP)

1:30 PM - 3:00 PM

---

1:30 PM - 3:00 PM (Tue. Nov 12, 2019 1:30 PM - 3:00 PM Room 2)

## [O3-7-01] The Asia-Pacific Disaster Report 2019: Pathways for resilience, inclusion and empowerment

\*Laura Louise Hendy<sup>1</sup>, Maria Bernadet Karina Dewi<sup>1</sup> (1. United Nations ESCAP)

Keywords: The Asia-Pacific Disaster Report

The Asia-Pacific region faces a daunting spectrum of natural hazards. Many countries could be reaching a tipping point beyond which disaster risk, fueled by climate change, exceeds their capacity to respond. This session will explore the findings of The Asia-Pacific Disaster Report 2019, which captures the full complexity of disaster risk in the region for the first time and introduces policy actions for strengthening disaster resilience.

Representatives from ESCAP will present the regional ‘riskscape’ introduced by the Report. This reveals that annual economic losses are quadruple previous estimates, at US \$ 675 billion a year until 2030. The risks are distributed unevenly across the region, clustered around four transboundary disaster risk hotspots in which environmental fragility converges with critical socioeconomic vulnerabilities. Furthermore, the report demonstrates how disasters are widening inequalities in incomes and opportunities, thereby threatening hard won development gains.

In a second presentation, representatives from ESCAP will then outline the policy actions introduced by the Report, to break the links between disasters, poverty and inequality. It will demonstrate that governments can outpace disaster risk through a comprehensive portfolio of risk-informed social sector investments and innovative pro-poor disaster risk reduction measures. Similarly, it will showcase how emerging technologies such as big data and digital identities are being applied to ensure that the poorest and most vulnerable groups are included in these policy interventions. Finally, it will outline the potential for strengthened regional cooperation to reinforce national efforts.

The session will then proceed with a series of presentations in which organizations and researchers will provide feedback on the findings from their perspectives. This will inform a subsequent open discussion, wherein participants will consider how the policy actions introduced by the report can be used to strengthen the resilience across the riskscape.

---

Oral Sessions | Session

[O3-8]

## "FUKUSHIMA" its disasters archives, current revitalization status and the future

Tue. Nov 12, 2019 3:30 PM - 5:00 PM Room 2 (Tachibana)

Business Council for the Fukushima Innovation Coast Initiative (representative of Tokyo Electric Power Company)

Simultaneous Interpretation is available. (同時通訳有り)

---

### [O3-8-01] "FUKUSHIMA" its disasters archives, current revitalization status and the future

\*Hideya KITAMURA<sup>1</sup>, \*Shubun ENDO<sup>2</sup>, \*looking for suitable person looking for suitable person<sup>3</sup>

(1. Business Council for the Fukushima Innovation Coast Initiative (representative of Tokyo Electric Power Company), 2. Futaba Inc, 3. Fukushima prefecture or University of Fukushima)

3:30 PM - 5:00 PM

3:30 PM - 5:00 PM (Tue. Nov 12, 2019 3:30 PM - 5:00 PM Room 2)

## [O3-8-01] "FUKUSHIMA" its disasters archives, current revitalization status and the future

\*Hideya KITAMURA<sup>1</sup>, \*Shubun ENDO<sup>2</sup>, \*looking for suitable person looking for suitable person<sup>3</sup> (1. Business Council for the Fukushima Innovation Coast Initiative (representative of Tokyo Electric Power Company), 2. Futaba Inc, 3. Fukushima prefecture or University of Fukushima)

Keywords: Great East Japan Earthquake, Fukushima Innovation Coast Initiative, Accident of Fukushima Daiichi Nuclear Power Plant, Revitalization, Resilience

Over 8 years has passed from Great East Japan Earthquake and following nuclear power plants accident in Fukushima. We will briefly provide feedback about the disasters, and explain the current revitalization efforts such as decontamination activities of environment, Innovation Coast Program (national industrial development program) in detail. We also run a panel discussion about the current regional problems and possible efforts to create the future.

---

Oral Sessions | Session

[O3-10]

## Interdisciplinary Strategies in General Education for Disaster Risk Reduction: The Six-Year Experience by DRMAPS at the University of the Philippines

Tue. Nov 12, 2019 10:30 AM - 12:00 PM Room 3 (Hagi)

University of the Philippines Diliman

---

### [O3-10-01] **Interdisciplinary Strategies in General Education for Disaster Risk Reduction:**

**The Six-Year Experience by DRMAPS at the University of the Philippines**

\*Benito M. Pacheco<sup>1</sup>, \*Flaudette May V. Datuin<sup>1</sup>, \*Aurora Odette C. Mendoza<sup>1</sup>, \*Elenita N. Que<sup>1</sup>, \*Leonardo C. Rosete<sup>1</sup>, \*Mark Albert H. Zarco<sup>1</sup> (1. University of the Philippines Diliman)

10:30 AM - 12:00 PM

10:30 AM - 12:00 PM (Tue. Nov 12, 2019 10:30 AM - 12:00 PM Room 3)

## [O3-10-01] Interdisciplinary Strategies in General Education for Disaster Risk Reduction:

### The Six-Year Experience by DRMAPS at the University of the Philippines

\*Benito M. Pacheco<sup>1</sup>, \*Flaudette May V. Datuin<sup>1</sup>, \*Aurora Odette C. Mendoza<sup>1</sup>, \*Elenita N. Que<sup>1</sup>, \*Leonardo C. Rosete<sup>1</sup>, \*Mark Albert H. Zarco<sup>1</sup> (1. University of the Philippines Diliman)

Keywords: General education, Interdisciplinary, Strategies

In panel discussion, professors from different colleges of the University of the Philippines Diliman share their experience co-pioneering the course DRMAPS (formerly DMAPS) or Disaster Risk Mitigation, Adaptation, and Preparedness Strategies, for general education of undergraduates. In open forum, ideas are solicited how DRR education may be improved.

The professors come from departments of art studies, civil engineering, educational technology, psychology, and visual communication. Students of the class also come from different disciplines.

Over six years, the course has been offered in ten semesters and taken by more than 1,000 students; with recent curricular revisions in the university, more students are expected.

Among the themes of this session are:

- (a) Disaster risk reduction, rather than disaster management, is the preferred focus of general education; preemptive strategy is preferred over reactive.
- (b) Interdisciplinary is the preferred character of general education, intersecting arts and humanities, social sciences and philosophy, and mathematics, science and technology.
- (c) Interdisciplinary or transdisciplinary is the preferred character of disaster risk reduction strategies.
- (d) Collaboration is encouraged not only among the teachers but also among the students.
- (e) Risk perception and risk communication are as important as risk assessment.
- (f) Understanding risk is facilitated by distinguishing such risk factors as hazard, exposure, and vulnerability; considered are multiple hazards, various exposed elements including human, and the unique vulnerabilities of each element as exposed to each particular hazard.
- (g) In framing questions about risk and risk factors, equally useful are such frameworks as ecocritical, psychosocial, and sociopolitical.
- (h) ICT in education must capture the imagination of today's students, to hasten the assimilation of disaster risk reduction ideas into the households and communities.

The session panelists introduce some outcomes of their researches and creative works, while they preview the conduct of DRMAPS class and share practical lessons in teaching the class.

---

Oral Sessions | Session

[O3-11]

**BOSAI POINT.**A new disaster-preventing service,using your untouched points to raise donations

Tue. Nov 12, 2019 1:30 PM - 3:00 PM Room 3 (Hagi)

BOSAI POINT PROJECT

Simultaneous Interpretation is available. (同時通訳有り)

---

[O3-11-01] **BOSAI POINT.**

**A new disaster-preventing service,  
using your untouched points to raise donations.**

\*JUNSHIRO KAMEYAMA<sup>1</sup> (1. BOSAI POINT PROJECT)

1:30 PM - 3:00 PM



---

1:30 PM - 3:00 PM (Tue. Nov 12, 2019 1:30 PM - 3:00 PM Room 3)

## [O3-11-01] BOSAI POINT.

### **A new disaster-preventing service, using your untouched points to raise donations.**

\*JUNSHIRO KAMEYAMA<sup>1</sup> (1. BOSAI POINT PROJECT)

Keywords: non

#### **BOSAI POINT.**

**A new disaster-preventing service,  
using your untouched points to raise donations.**

There was a huge earthquake in Hokkaido, on the night of September 6th, 2018. Sapporo, one of the biggest cities in Japan, experienced a severe blackout, and the earthquake touched off enormous landslides. It was broadcasted across the country, and shocked people all over Japan.

Since there could be more natural disasters in the near future,  
can't we invent a new way to prepare for them?

From that standpoint, we started a whole new disaster-preventing service,  
using an untouched asset to raise donations; the points.

In September, the service has been launched in Hokkaido,  
and is planned to be available across the country next year.

---

Oral Sessions | Session

[O3-12]

## The future of wide area disaster response by drones and air mobilities

Tue. Nov 12, 2019 3:30 PM - 5:00 PM Room 3 (Hagi)

Drone Fund

---

[O3-12-01] The future of wide area disaster response by drones and air mobilities

\*Shintaro Takahashi<sup>1</sup>, Kotara Chiba<sup>1</sup>, Kenichi Ohmae<sup>1</sup>, Yukihiro Maru<sup>2</sup> (1. Drone Fund, 2. Leave a Nest)

3:30 PM - 5:00 PM

---

3:30 PM - 5:00 PM (Tue. Nov 12, 2019 3:30 PM - 5:00 PM Room 3)

## [O3-12-01] The future of wide area disaster response by drones and air mobilities

\*Shintaro Takahashi<sup>1</sup>, Kotara Chiba<sup>1</sup>, Kenichi Ohmae<sup>1</sup>, Yukihiro Maru<sup>2</sup> (1. Drone Fund, 2. Leave a Nest)

Keywords: Drone, Air Mobility

This session aims to discuss the future of wide area disaster response by drones and air mobilities. Japan is facing problems of population decline so it is necessary to consider the social implementation of new technologies in order to cope with large-scale disasters. When disasters occur, Unmanned Aircraft Systems are expected to be active in areas such as wide-area disaster surveys and emergency transportations. Many first responders have already started using small multicopters for research purposes. In the 2020s, commercialization of large cargo drones and air mobilities are expected. In this session, we will mainly discuss three themes. Firstly, we will consider the future image of drone and air mobility based society. The Japanese government has made cabinet decisions on commercialization of drone at level 4 in 2022 and air mobility in 2023 as important policy goals. Secondly, we will analyze how to use new technologies including Unmanned Aircraft Systems and eVTOL. eVTOL has the potential to contribute to the potential of emergency supplies, medical staff and patients. Thirdly, we will discuss technical and legal issues.

In order to proceed with the implementation of drones for disaster response, it is necessary to work on the improvement of safety. We also need to share significance of this approach with various stakeholders including public and private sectors.

## [O3-13]

### Advances of International Collaboration on M9 Disaster Science

Tue. Nov 12, 2019 8:30 AM - 10:00 AM Room 4 (Shirakashi 1)

Tohoku University- IRIDeS

---

#### [O3-13-01] Advances of International Collaboration on M9 Disaster Science

\*Kenjiro Terada<sup>1,4</sup>, \*Shunichi Koshimura<sup>1,4</sup>, \*Jorge Leon<sup>3,6</sup>, Randall J LeVeque<sup>2</sup>, Gabriel Gonzalez<sup>3,7</sup>, \*Patricio Catalan<sup>3,6</sup>, Elizabeth Maly<sup>1</sup>, \*Dan Abramson<sup>2</sup>, Carrie Garrison-Laney<sup>2</sup>, \*Michael Motley<sup>2</sup>, \*Naoko Kuriyama<sup>5</sup>, \*Lan Nguyen<sup>2</sup>, \*Adams Adams<sup>2</sup>, Anawat Suppasri<sup>1,4</sup>, Erick Mas<sup>1,4</sup>, Shuji Moriguchi<sup>1</sup> (1. IRIDeS, Tohoku University, 2. University of Washington, 3. CIGIDEN, Chile, 4. Core Research Cluster of Disaster Science, Tohoku University, 5. Kobe University, 6. Universidad Federico Santa Maria, 7. Universidad Católica del Norte)  
8:30 AM - 10:00 AM

---

8:30 AM - 10:00 AM (Tue. Nov 12, 2019 8:30 AM - 10:00 AM Room 4)

## [O3-13-01] Advances of International Collaboration on M9 Disaster Science

\*Kenjiro Terada<sup>1,4</sup>, \*Shunichi Koshimura<sup>1,4</sup>, \*Jorge Leon<sup>3,6</sup>, Randall J LeVeque<sup>2</sup>, Gabriel Gonzalez<sup>3,7</sup>, \*Patricio Catalan<sup>3,6</sup>, Elizabeth Maly<sup>1</sup>, \*Dan Abramson<sup>2</sup>, Carrie Garrison-Laney<sup>2</sup>, \*Michael Motley<sup>2</sup>, \*Naoko Kuriyama<sup>5</sup>, \*Lan Nguyen<sup>2</sup>, \*Adams Adams<sup>2</sup>, Anawat Suppasri<sup>1,4</sup>, Erick Mas<sup>1,4</sup>, Shuji Moriguchi<sup>1</sup> (1. IRIDeS, Tohoku University, 2. University of Washington, 3. CIGIDEN, Chile, 4. Core Research Cluster of Disaster Science, Tohoku University, 5. Kobe University, 6. Universidad Federico Santa Maria, 7. Universidad Católica del Norte)

Keywords: Magnitude Nine (M9), Disaster simulation, Modeling, Planning, Sensing

Megathrust earthquakes along the subduction zones have caused significant impacts on our society and will be causes of future enormous risks and crisis. Many challenges and issues in reducing risks and enhancing disaster resilience have been addressed by on-going and previous research efforts. Now it is time to share the issues and produce innovative outcomes.

This session is a sequel of the International Workshop on Magnitude Nine (M9) Disaster Science that aims to initiate and accelerate the collaborations among the participants from the countries that have experienced megathrust earthquakes with M9, e.g. 1700 Cascadia, 1960 Chile, 1964 Alaska, and 2011 Japan.

---

Oral Sessions | Session

[O3-14]

## Fuel stocking proposal to connect life at the time of disaster

Tue. Nov 12, 2019 10:30 AM - 12:00 PM Room 4 (Shirakashi 1)

NIOPN BCP INC

---

[O3-14-01] Fuel stocking proposal to connect life at the time of disaster

mitsuaki kizaki<sup>1</sup>, \*Masataka Nakai<sup>1</sup>, \*Toru Matsunaga<sup>1</sup> (1. NIPON BCP INC)

10:30 AM - 12:00 PM

10:30 AM - 12:00 PM (Tue. Nov 12, 2019 10:30 AM - 12:00 PM Room 4)

## [O3-14-01] Fuel stocking proposal to connect life at the time of disaster

mitsuaki kizaki<sup>1</sup>, \*Masataka Nakai<sup>1</sup>, \*Toru Matsunaga<sup>1</sup> (1. NIPON BCP INC)

Keywords: · About "Japan BCP" approach, · Service contents, · Past activity results, · Future prospects,  
· Finally

· About "Japan BCP" approach

Explanation of company profile, activity content

Situation analysis of the oil shortage in the Great East Japan Earthquake

Given the risk of disasters, the fact that large oil tanks are often found in coastal areas is dangerous and it is desirable to store them in inland areas.

Purpose of Emergency Fuel Stocking Proposal

In Japan, the Ministry of Internal Affairs and Communications must require fuel stocks to be able to operate emergency generators for 72 hours for companies with important public infrastructure such as communications and broadcasting, etc., and promote voluntary stockpiling from the Ministry of Economy, Trade and Industry There is a notification to be promoted, and each company is considering fuel storage.

· Service contents

Exclusive storage contract for oil, exclusive delivery contract for emergency

Taking into consideration the emergency, we have stockpiled petroleum fuel from normal times, and we have also operated and maintained the vehicle date and time, and have established a system that can be delivered 24 hours a day, 365 days a year.

· Past activity results

Activity results for each disaster, such as the Great East Japan Earthquake and heavy rainfall in West Japan

Osaka Prefecture, disaster prevention agreement of Osaka City

Joint research with Kansai University

- Future prospects

There is a big difference in thinking between a company that proactively measures BCP in management after the earthquake and cases that are not. The problem is how to improve awareness.



---

Oral Sessions | Session

[O3-15]

## Support for affected areas by "local residents" in the Great East Japan Earthquake "Connecting" town development by "collaboration"

Tue. Nov 12, 2019 1:30 PM - 3:00 PM Room 4 (Shirakashi 1)

All Japan Council Company

---

[O3-15-01] Support for affected areas by "local residents" in the Great East Japan Earthquake "Connecting" town development by "collaboration"

\*Hideaki Murai<sup>1</sup>, \*Chikako Adachi<sup>1</sup>, Hiroaki Enoki<sup>1</sup>, \*Fumihiko Sugawara<sup>1</sup> (1. All Japan Council Company)

1:30 PM - 3:00 PM

1:30 PM - 3:00 PM (Tue. Nov 12, 2019 1:30 PM - 3:00 PM Room 4)

## [O3-15-01] Support for affected areas by "local residents" in the Great East Japan Earthquake "Connecting" town development by "collaboration"

\*Hideaki Murai<sup>1</sup>, \*Chikako Adachi<sup>1</sup>, Hiroaki Enoki<sup>1</sup>, \*Fumihiko Sugawara<sup>1</sup> (1. All Japan Council Company)

Keywords: Support for affected areas by "local residents" in the Great East Japan Earthquake "Connecting" town development by "collaboration"

We worked on business warehouse "container Oami" which was not used for making of local bustling before earthquake disaster, but warehouse suffered from Great East Japan Earthquake before completion. The facility was unfinished but staff were employed, so the staff started a cell phone charging service.

Problems such as lost chargers and problems waiting in turn have been resolved each time. Other support activities include:

- Learning support

Investigate the city of Tome with the University of Tokyo for three years, make a community, and confirm the importance of the living base.

- Minami Kata temporary housing association activity support
- Tome establishment of woman support center
- Support for supplies

• The RQ Civil Disaster Relief Center starts supporting activities based on the former Masbuchi elementary school gymnasium in Towa Town, Tome City. So we decided to make an original design "Eco Brush". In order to look for areas that can be tackled by the community members, we will hold knitting classes around 40 temporary housing units and community associations so that we can become a team that can work together toward reconstruction rather than just internal jobs.

Develops and sells "Eco-Brush" as a community business.

We visited the town development friends of the whole country, held lectures and knitting parties, and found fans, etc., and developed a sales destination while building a visible relationship

In Hokkaido, we participate in events around March 11 every year and report the situation in Tohoku.

In Kyushu, he has continued to interact with Kumamoto (Mashiki, Minamiaso), Isahaya, Fukuoka and

Kitakyushu.

In Kansai, we are building a network with Osaka, Kobe, Ashiya and Mita.

- We worked on business warehouse "container Oami" which was not used for making of local bustling before earthquake disaster, but warehouse suffered from Great East Japan Earthquake before completion. The facility was unfinished but staff were employed, so the staff started a cell phone charging service.

Problems such as lost chargers and problems waiting in turn have been resolved each time. Other support activities include

We will continue our reconstruction support activities from the perspective of the victims.

---

Oral Sessions | Session

[O3-16]

The Factors Regulate to Community Participation in Sustainable Disaster Recovery Program: An Experience of Cyclone Aila Disaster Affected Coastal People Bangladesh

Tue. Nov 12, 2019 3:30 PM - 5:00 PM Room 4 (Shirakashi 1)

University of Malaya, Malaysia

---

[O3-16-01] **The Factors Regulate to Community Participation in Sustainable Disaster Recovery Program: An Experience of Cyclone Aila Disaster Affected Coastal People Bangladesh**

\*Emadul Islam<sup>1</sup>, Haris Abd Wahab<sup>1</sup> (1. University of Malaya, Malaysia)

3:30 PM - 5:00 PM

3:30 PM - 5:00 PM (Tue. Nov 12, 2019 3:30 PM - 5:00 PM Room 4)

## **[O3-16-01] The Factors Regulate to Community Participation in Sustainable Disaster Recovery Program: An Experience of Cyclone Aila Disaster Affected Coastal People Bangladesh**

\*Emadul Islam<sup>1</sup>, Haris Abd Wahab<sup>1</sup> (1. University of Malaya, Malaysia)

Keywords: Community participation, Factors, Sustainable disaster recovery, Bangladesh

Community participation is crucial for sustainable disaster recovery. The philosophy of Build Back Better in sustainable disaster recovery has emerged in the early 90s and progressed by the United Nations office of the Disaster Risk Reduction (UNISDR) Sendai Framework of Action (2015-2030). Bangladesh ranked 7<sup>th</sup> top disaster-affected country in the world in recent climate risk index (2019). However, Bangladesh has shown remarkable progress in disaster preparedness, response policy, and planning, but the disaster recovery phase is still remaining weak and ignore in national policy and planning.

This study aim was to identify the factors regulate to community participation in disaster recovery GO and NGO,s program and provide a model to strengthen the local and national strategies to promote bottom-up participation in a disaster recovery program for sustainability.

The study employed a convergent parallel mixed method design where the pragmatic paradigm and concurrent strategies applied in data collection, analysis, and interface. The study interviewed 230 Aila affected people, who participated in the government and non-government recovery program. In addition, a total 20 in-depth interview, 10 key informant interviews, and 2 focus group discussion were conducted for qualitative data. The study had developed a semi-structured questionnaire for quantitative and 3 different checklists for an in-depth interview, KII, and FGD, which was submitted to the University of Malaya Research Ethics Committee (UMREC) for getting ethical approval of the study.

Findings reveal that community participation in GO and NGO,s recovery program can be defined as passive participation. Because of project participant has no or limited access to project related decision making, while they have participated mostly in the project related information and consultation. The study identified eight dominant factors namely, disaster experience and vulnerability, resources, coordination, implementation strategies, ignorance, social capital, commitment and expectation of the community regulate to community participation in the disaster recovery program. In addition, leadership capacity, stakeholder power, political wishes, and power structure influence are also predictor to community participation in the recovery program. The study findings argue that to promote bottom-up participation, collaboration, and integration between GO and NGOs recovery program needed to improve for updating the existing policy or adopting a new policy. The proposition of the study developed from the expert level consultation that in the developing country context the “time paradox” in the disaster management administration has created the new challenge for adopting new policy and planning in the sustainable disaster recovery.

---

Oral Sessions | Session

[O3-17]

## Redefining and be preparing for disasters: the lessons from the Moken sea nomads of Thailand

Tue. Nov 12, 2019 8:30 AM - 10:00 AM Room 5 (Shirakashi 2)

Chulalongkorn University

---

[O3-17-01] Redefining and be preparing for disasters: the lessons from the Moken sea nomads of Thailand

\*Narumon Arunotai<sup>1</sup> (1. Research Unit on Indigenous Peoples and Alternative Development, Social Research Institute, Chulalongkorn University, )

8:30 AM - 10:00 AM

---

8:30 AM - 10:00 AM (Tue. Nov 12, 2019 8:30 AM - 10:00 AM Room 5)

## [O3-17-01] Redefining and be preparing for disasters: the lessons from the Moken sea nomads of Thailand

\*Narumon Arunotai<sup>1</sup> (1. Research Unit on Indigenous Peoples and Alternative Development, Social Research Institute, Chulalongkorn University, )

Keywords: Moken, Seas nomads, Surin Islands, disaster, relief

Prior to the Indian Ocean tsunami “disaster” of 2004, the Moken sea nomads of Thailand were practically invisible to the Thai public as well as the world. Yet the fact that one village on the Surin Islands in Phang-nga Province survived the incident despite their village being totally destroyed made them visible almost overnight. Recovery was also quick, as they did not have many material possessions and the huts were rebuilt within 3 weeks. In 2019, another “disaster” struck again, this time in the form of village fire, and again, 61 out of 80 huts were destroyed while all villagers escaped safely. Rebuilding huts was quickly done with the help and donation from outside the community. This presentation will trace the Moken’ s definition and interpretation of “disasters” and make the analysis of the lessons to be learned from the two incidents and possible ways of thinking about “disasters.” In addition, the presentation will problematize how the “relief” and “recovery” is perceived by the Moken and those outsiders who meant well and who tried to help facilitating the relief and recovery.

---

Oral Sessions | Session

[O3-18]

## IFIP session on IT in Disaster Risk Reduction (ITDRR)

Tue. Nov 12, 2019 10:30 AM - 12:00 PM Room 5 (Shirakashi 2)

Tsuda University

---

### [O3-18-01] IFIP session on IT in Disaster Risk Reduction (ITDRR)

\*Yuko MURAYAMA<sup>1</sup>, \*Jun Sasaki<sup>2</sup>, \*Takashi Yoshino<sup>3</sup> (1. Tsuda University and  
IFIP(International Federation for Information Processing), 2. Iwate Prefectural University, 3.  
Wakayama University)

10:30 AM - 12:00 PM



10:30 AM - 12:00 PM (Tue. Nov 12, 2019 10:30 AM - 12:00 PM Room 5)

## [O3-18-01] IFIP session on IT in Disaster Risk Reduction (ITDRR)

\*Yuko MURAYAMA<sup>1</sup>, \*Jun Sasaki<sup>2</sup>, \*Takashi Yoshino<sup>3</sup> (1. Tsuda University and IFIP(International Federation for Information Processing), 2. Iwate Prefectural University, 3. Wakayama University)

Keywords: Information Processing and Sharing for Disaster, Disaster Communications, Use of IT for Disaster Risk Reduction, Tools and Systems for Situation Awareness, Trust Issues at Disaster Management

This IFIP session on IT in Disaster Risk Reduction (ITDRR) is organized to promote a novel area within the IT community, disaster risk reduction (DRR). We have founded an IFIP domain committee on ITDRR and organized annual conferences since 2016. We also organized a workshop related to disaster and diversity at WSIS organized by ITU and UNESCO for three years. We introduce such activities as well as those in Japan: IPSJ as an IFIP Japanese representative, has organized the Disaster Communication Symposium since 2011. We introduce our work as well as introducing this area of research in this session.

---

Flash Talk Presentation

## SERVICE LEARNING THROUGH NSTP CWTS/LTS: The Community Based Disaster Risk Reduction Program of University of Santo Tomas-National Service Training Program (NSTP) CWTS/LTS

Mr. Adrian D. Romero; Ms. Sheila Ruth Masangkay, Ms. Jasmin Victoria

Tue. Nov 12, 2019 12:15 PM - 12:30 PM Flash Talk Presentation 1 (Meeting Room 6)

University of Santo Tomas-National Service Training Program CWTS/LTS

---

### [MP3-01] SERVICE LEARNING THROUGH NSTP CWTS/LTS: The Community Based Disaster Risk Reduction Program of University of Santo Tomas-National Service Training Program (NSTP) CWTS/LTS

Mr. Adrian D. Romero; Ms. Sheila Ruth Masangkay, Ms. Jasmin Victoria (University of Santo Tomas-National Service Training Program CWTS/LTS)

12:15 PM - 12:30 PM

---

12:15 PM - 12:30 PM (Tue. Nov 12, 2019 12:15 PM - 12:30 PM Flash Talk Presentation 1)

## [MP3-01] SERVICE LEARNING THROUGH NSTP CWTS/LTS: The Community Based Disaster Risk Reduction Program of University of Santo Tomas-National Service Training Program (NSTP) CWTS/LTS

Mr. Adrian D. Romero; Ms. Sheila Ruth Masangkay, Ms. Jasmin Victoria (University of Santo Tomas-National Service Training Program CWTS/LTS)

As a response to Sendai Framework for Disaster Risk Reduction and Sustainable Development Goals, this presentation illustrates the process, narratives and experiences of UST National Service Training Program (UST NSTP) in the implementation of Disaster Risk Reduction and Management (DRRM) to their curriculum. NSTP was instituted by the Philippine government by virtue of Republic Act 9163 that aims to enhance civic consciousness and defense preparedness in the Filipino youth by developing the ethics of service and patriotism while undergoing community development activity to the marginalized community. As major part of the curriculum, the UST NSTP college students taught the concepts, theories and skills of community based disaster risk reduction management and emergency preparedness and equip them to practice and apply this to in their fieldwork activity in various partner communities and institutions suffered from marginalization and voicelessness during disaster management. In the process during community work, UST NSTP facilitators and students utilized Participatory Capacities and Vulnerabilities Assessment (PCVA), a participatory research methodology developed by different community development workers that holistically collects, analyzes and synthesizes communities' resources and vulnerabilities in dealing with disasters. As a service learning tool for students and partner communities, PCVA is useful in understanding disaster risks and exposure to different natural and anthropogenic hazards through their collective and individual experience. The process let the NSTP students worked with various at-risk sectors such as children, women, urban poor, farmers and indigenous peoples so that they can formulate their inclusive disaster risk assessment. Starting on the communities' local knowledge, NSTP students build on the capacity of the community by weaving their local experience, practices and skills in facing disaster risk. With this, the presentation seeks to contribute and respond to the call for a participatory, inclusive pro-poor, gender sensitive and empowering service-learning in disaster risk reduction and management.

Flash Talk Presentation

## A social-ecological approach to disaster risk management applied to the case study of the Marche Region, Italy

Alessandra Colocci

Tue. Nov 12, 2019 12:35 PM - 12:50 PM Flash Talk Presentation 1 (Meeting Room 6)

Universita Politecnica delle Marche

---

### [MP3-02] A social-ecological approach to disaster risk management applied to the case study of the Marche Region, Italy

Alessandra Colocci (Universita Politecnica delle Marche)

12:35 PM - 12:50 PM

---

12:35 PM - 12:50 PM (Tue. Nov 12, 2019 12:35 PM - 12:50 PM Flash Talk Presentation 1)

## [MP3-02] A social-ecological approach to disaster risk management applied to the case study of the Marche Region, Italy

Alessandra Colocci (Universita Politecnica delle Marche)

Nowadays, disasters claim more and more severe tolls from human communities: even though they are decreasing in number, their impacts are worsening, also due to the current climatic changes. The core of this crisis are the unsustainable interactions occurring between humans and nature: it is a complex and extensive problem that requires flexible tools to be comprehended. One of such tools may be the panarchy theory: it allows to consider the mutual influences and paired evolution of the components of a multifaceted complex system. This is made possible by describing the unceasing transformations of every component through adaptive cycles and then arranging them in an interconnected nested hierarchy. As human activities are deeply interlaced with natural processes, they form a multi-scale, complex social-ecological system. Hence, a social-ecological approach based on Gunderson and Holling's panarchy theory was developed and adapted to the questions posed by risks and their consequences. The aim is to shed some more light on how humans and nature interact and how such interactions can bring to disastrous effects, for both sides. Further, an attempt was made to include a quantitative dimension into the descriptive theory, in order to more easily recognise the possible critical issues within a social-ecological system. Hence, an application to an Italian case study was carried on, involving the 229 Municipalities of the Marche Region and focusing on flood risk; nevertheless, further implementations are also envisioned. The delivered results can serve as a basis to assess the efficacy of existing plans and to assist in a continuous monitoring of the outcomes. However, they may as well inform a more thorough endeavour that humans are called to undertake, devoted to designing and enhancing further effective strategies to address disaster risk mitigation and environmental challenges.

Flash Talk Presentation

## Mobilizing Local Knowledge in Local Disaster Risk Reduction Strategies

Dr Aaron Opdyke

Tue. Nov 12, 2019 12:55 PM - 1:10 PM Flash Talk Presentation 1 (Meeting Room 6)

The University of Sydney

---

### [MP3-03] Mobilizing Local Knowledge in Local Disaster Risk Reduction Strategies

Dr Aaron Opdyke (The University of Sydney)

12:55 PM - 1:10 PM

---

12:55 PM - 1:10 PM (Tue. Nov 12, 2019 12:55 PM - 1:10 PM Flash Talk Presentation 1)

## [MP3-03] Mobilizing Local Knowledge in Local Disaster Risk Reduction Strategies

Dr Aaron Opdyke (The University of Sydney)

The Sendai Framework has targeted increasing the adoption of national and local disaster risk reduction strategies by 2020. There is evidence to suggest that significant progress has been made toward this goal, but are we doing enough to turn these strategies into action? Furthermore, who are is being left behind? This talk will explore challenges and advancements in the creation of national and local DRR strategies, drawing on experiences from the Philippines. Using the Municipality of Carigara (located in the province of Leyte) as a case study, the session will share lessons that can help guide the creation and activation of effective local strategies. Specifically, the talk will showcase how local DRM offices can lead in creating a common vision but also enable resilience as a cross-cutting theme in local governments. The talk will discuss how Carigara's hazard mapping project, a Sasakawa Award nominee, was central in organizing a participative process to engage communities in creating a shared vision and priorities. The session will conclude with a discussion of how the local knowledge embedded in DRR strategies can be mobilized for achieve other Sendai Framework targets in the decade ahead.

Flash Talk Presentation

## Water, Sanitation, and Hygiene (WASH) assessments two years after Nepal 2015 earthquake

Sital Uprety

Tue. Nov 12, 2019 1:15 PM - 1:30 PM Flash Talk Presentation 1 (Meeting Room 6)

Department of Civil and Environmental Engineering, Univesity of Illinois and Department of Frontier Science for Advanced Environment, Tohoku University

---

### [MP3-04] Water, Sanitation, and Hygiene (WASH) assessments two years after Nepal 2015 earthquake

Sital Uprety (Department of Civil and Environmental Engineering, Univesity of Illinois and Department of Frontier Science for Advanced Environment, Tohoku University)

1:15 PM - 1:30 PM



---

1:15 PM - 1:30 PM (Tue. Nov 12, 2019 1:15 PM - 1:30 PM Flash Talk Presentation 1)

## [MP3-04] Water, Sanitation, and Hygiene (WASH) assessments two years after Nepal 2015 earthquake

Sital Uprety (Department of Civil and Environmental Engineering, University of Illinois and Department of Frontier Science for Advanced Environment, Tohoku University)

Waterborne diseases pose a major threat to human health all over the world causing millions of deaths every year. Low-income countries like Nepal face several problems in water, sanitation, and hygiene (WASH). Extreme Natural Events (ENEs) like earthquakes are known to alter human behavior which can lead to an increase in diarrheal diseases. To reduce the risk of diarrheal diseases, it is essential to understand the impact of ENEs on water microbiome and human behavior along with the interaction between water microbiome and human exposure to pathogens. For this purpose, we selected two communities (V1 and V2) completely destroyed during 2015 Nepal Earthquake but one village (V1) was fully recovered by 2017 with people living in permanent houses whereas the other village (V2) was recovering with people living in temporary settlements. A total of 360 water and sanitation samples were collected which were tested for 24 pathogens causing diarrheal diseases. In addition, 50 out of 360 samples were randomly selected and were sequenced for 16S rRNA gene using MiSeq platform. The results indicated a compromised WASH scenario in both villages with *Enterococcus* spp. being detected in 78% of the samples, *Legionella pneumophila* in 63%, general *E. coli* in 58% and *Salmonella typhimurium* in 34% of the samples. In addition, genes of Shiga toxin-producing *E. coli*, *Giardia lamblia*, Enteropathogenic *E. coli*, *Campylobacter jejuni*, were also found in 39%, 13%, 7%, and 3% samples respectively. There was no significant difference ( $p$ -value = 0.82) in pathogen concentration between V1 and V2. However, investigating individual pathogens for different sample types indicated deteriorated sanitation practices in V2 compared to V1. Bray-Curtis analysis showed very different bacterial diversity between water samples, handwash samples and sanitation samples collected in V1 and V2. This study provides a foundation for WASH study in sites affected by ENEs and would help effective WASH intervention activities following any ENEs.

Flash Talk Presentation

## The state-of-the-art review of vulnerability indices: with a special focus on urban flood

Tanaya Sarmah

Tue. Nov 12, 2019 3:05 PM - 3:20 PM Flash Talk Presentation 1 (Meeting Room 6)

Indian Institute of Technology Kharagpur

---

### [MP3-05] The state-of-the-art review of vulnerability indices: with a special focus on urban flood

Tanaya Sarmah (Indian Institute of Technology Kharagpur)

3:05 PM - 3:20 PM

---

3:05 PM - 3:20 PM (Tue. Nov 12, 2019 3:05 PM - 3:20 PM Flash Talk Presentation 1)

## [MP3-05] The state-of-the-art review of vulnerability indices: with a special focus on urban flood

Tanaya Sarmah (Indian Institute of Technology Kharagpur)

With the adoption of the Hyogo Framework for Action (HFA) 2005-2015, building resilient communities which can withstand the effects of disasters, has gained wider importance and popularity among researchers and practitioners. Vulnerability indices aim to provide a means of quantifying numerically the damage to humans and buildings sustained under various disaster types. However, vulnerability index does not have a single definition but it is concerned as multi-faceted by various researchers in various contexts. This paper gives a review of vulnerability indices, with particular reference to their use in assessing human and building vulnerability. A total of 64 journal papers published from 1998 to December 2018 were systematically analysed. A wide range of vulnerability indicators has come up in recent years to help evaluate the resilience of the people and the buildings. These indicators help to assess the vulnerability of multiple fields (social, physical, economic, cultural, environmental, etc.) to specific hazards (floods, earthquakes, landslides, etc.) at the regional or local scale. The methodology in this paper has been applied to Guwahati city in the north-east Indian state of Assam which faces urban flood multiple numbers of times, annually. The results show that disaster resilience varies widely depending on the spatial variations and type of disaster the area is prone to. The indices selected for the city will address the following: (a) identification of vulnerable people and buildings; (b) raising awareness; (c) allocation of funds; (d) stating and implementation of policies; and (e) conducting research. This could help to increase the quality of decisions in choosing the parameters specific to the disaster type and the location.

Flash Talk Presentation

## Damage Distribution of Typhoon No. 21 in 2018 on Osaka and Wakayama Prefecture based on Questionnaire Surveys

Haris Rahadiano

Tue. Nov 12, 2019 5:05 PM - 5:20 PM Flash Talk Presentation 1 (Meeting Room 6)

Kyoto University

---

### [MP3-06] Damage Distribution of Typhoon No. 21 in 2018 on Osaka and Wakayama Prefecture based on Questionnaire Surveys

Haris Rahadiano (Kyoto University)

5:05 PM - 5:20 PM

5:05 PM - 5:20 PM (Tue. Nov 12, 2019 5:05 PM - 5:20 PM Flash Talk Presentation 1)

## [MP3-06] Damage Distribution of Typhoon No. 21 in 2018 on Osaka and Wakayama Prefecture based on Questionnaire Surveys

Haris Rahadiano (Kyoto University)

This article summarizes a series of damage distribution of the industry caused by the Typhoon Jebi based on conducted questionnaire surveys in February 2019. Typhoon Jebi causes extreme wind speed in the wider areas in not only Kinki areas but also other parts of Japan. Strong wind caused power shutdown in wide areas and its effect spreads in Kinki and other areas. The typhoon also brought about storm surge and caused inundation, although most of areas were outside of the seawalls. We are focusing on the damages Osaka and Wakayama area in which got direct and the biggest impact from the typhoon. More ten thousand firms listed as a candidate for the survey based on the survey of the distribution of strong winds and storm surge inundation. Recognizing the distribution pattern is the first step to capture economic impact to the industry caused by strong wind disaster.

Flash Talk Presentation

## Exploring the DRRM Landscape of the University of the Philippines Diliman: How prepared are university students in case of a disaster?

Danielle Marie Alcoriza Parreno

Tue. Nov 12, 2019 12:15 PM - 12:30 PM Flash Talk Presentation 2 (Meeting Room 7)

University of the Philippines Diliman

---

### [MP3-07] Exploring the DRRM Landscape of the University of the Philippines Diliman: How prepared are university students in case of a disaster?

Danielle Marie Alcoriza Parreno, Yra Marie Limos Calamiong (University of the Philippines  
Diliman, University of the Philippines Diliman)

12:15 PM - 12:30 PM

---

12:15 PM - 12:30 PM (Tue. Nov 12, 2019 12:15 PM - 12:30 PM Flash Talk Presentation 2)

## [MP3-07] Exploring the DRRM Landscape of the University of the Philippines Diliman: How prepared are university students in case of a disaster?

Danielle Marie Alcoriza Parreno, Yra Marie Limos Calamiong (University of the Philippines Diliman, University of the Philippines Diliman)

The Philippines is considered to be a disaster-prone country due to its geographical location. Therefore, all Filipinos (including university students) should be prepared in the face of any disaster regardless of where they are located. This study aims to explore the disaster-related knowledge, disaster preparedness and readiness behaviors, disaster adaptation, disaster awareness, and disaster risk perception of the University of the Philippines (UP) Diliman undergraduate students. This study used a mixed-method approach, wherein the students (n=145) were asked to answer a 20-item questionnaire adapted from Tuladhar, et al. (2015). A Focus Group Discussion (FGD) on select UP students (n=6) and a key informant interview were likewise done to triangulate the data. Quantitative analysis such as histogram analysis and distribution analysis and qualitative analysis using thematic analysis revealed significant themes such as the current deficiencies and limitations in the process of DRRM knowledge dissemination to the UP Diliman students, lack of sufficient training, as well as limited opportunities to constantly reinforce DRRM practices in the campus. It is recommended that the DRRM training in UP Diliman should be examined for effectivity and to explore other means of training students on DRRM based on evidence-based strategies such as involving the stakeholders (including the students) through needs assessment when planning the DRRM training as well as exploring a simulation-based model of training.

Flash Talk Presentation

## Fragility curves for economic losses in industrial sectors after strong wind disaster: A case of 2018 Typhoon Jebi

Hasi

Tue. Nov 12, 2019 12:35 PM - 12:50 PM Flash Talk Presentation 2 (Meeting Room 7)

Kyoto University

---

[MP3-08] Fragility curves for economic losses in industrial sectors after strong wind disaster: A case of 2018 Typhoon Jebi

Hasi (Kyoto University)

12:35 PM - 12:50 PM



---

12:35 PM - 12:50 PM (Tue. Nov 12, 2019 12:35 PM - 12:50 PM Flash Talk Presentation 2)

## [MP3-08] Fragility curves for economic losses in industrial sectors after strong wind disaster: A case of 2018 Typhoon Jebi

Hasi (Kyoto University)

This study proposes strong wind disaster fragility curves for economic losses of industrial sectors, which represent conditional probabilities of reduction of economic losses given a strong wind. This is an extension of the method of fragility curves for structural vulnerability. The present paper conducts a questionnaire survey regarding economic impacts on business activities of firms after the 2018 Typhoon Jebi and estimates the functional fragility curves by using the data. The estimation is conducted for different industrial sectors and the result implies that functional fragility curves are different between sectors. The information of functional fragility curves in this paper are helpful for conducting quick estimation of economic impacts on business sectors in case of large scale strong wind disaster. In addition, the functional fragility curves can be used by individual firms for understanding the potential impacts of future disaster on their businesses and preparing countermeasures for the risk such as business continuity plan (BCP).

Flash Talk Presentation

## Recent Activity for DRR in Turkey

Mr. Ozmen Ozgu Tuna

Tue. Nov 12, 2019 12:55 PM - 1:10 PM Flash Talk Presentation 2 (Meeting Room 7)

Disaster and Emergency Management Presidency (AFAD)

---

### [MP3-09] Recent Activity for DRR in Turkey

Mr. Ozmen Ozgu Tuna (Disaster and Emergency Management Presidency (AFAD))

12:55 PM - 1:10 PM

12:55 PM - 1:10 PM (Tue. Nov 12, 2019 12:55 PM - 1:10 PM Flash Talk Presentation 2)

## [MP3-09] Recent Activity for DRR in Turkey

Mr. Ozmen Ozgu Tuna (Disaster and Emergency Management Presidency (AFAD))

Turkey is prone country for earthquakes in history. As one of tragic disaster, the 1999 zmit earthquake hit on 17 August and had a moment magnitude of 7.6. According to this earthquake, around 17,000 people were killed and left approximately half a million people homeless. Government of Turkey has been conducting multi DRR projects such as constructed museum, capacity building, education program, etc.

In this presentation, Mr. Ozmen would like to share an information about recent activity for DRR as standpoint of national disaster management agency in Pakistan.

Flash Talk Presentation

## How to save people from earthquakes

Kazuo Sasaki

Tue. Nov 12, 2019 1:15 PM - 1:30 PM Flash Talk Presentation 2 (Meeting Room 7)

Challenge Co.,Ltd

---

### [MP3-10] How to save people from earthquakes

Kazuo Sasaki (Challenge Co.,Ltd)

1:15 PM - 1:30 PM

---

1:15 PM - 1:30 PM (Tue. Nov 12, 2019 1:15 PM - 1:30 PM Flash Talk Presentation 2)

## [MP3-10] How to save people from earthquakes

Kazuo Sasaki (Challenge Co.,Ltd)

Many countries are constructing nationwide observation networks replete with sensors, but these require much money and time to complete. It is therefore not easy to realize such observation networks. In order to save people from earthquakes by issuing alarms in advance, we propose an easier yet more effective system called Earthquake Guard III (hereafter EQG-III) which is an earthquake alarm system using embedded sensors. This system can be applied to realize a regional earthquake alarm network quickly at low cost. Additionally, the system can be used for evacuation drills, effective upon enhancing disaster management capability.

We have constructed earthquake sensor alarm systems overseas and conducted evacuation drills in several countries. We introduce the case of Romania.

Flash Talk Presentation

## Saglam KOBİ Project

Ruya Kaya

Tue. Nov 12, 2019 3:05 PM - 3:20 PM Flash Talk Presentation 2 (Meeting Room 7)

IDEMA

---

### [MP3-11] Saglam KOBİ Project

Ruya Kaya (IDEMA)

3:05 PM - 3:20 PM

---

3:05 PM - 3:20 PM (Tue. Nov 12, 2019 3:05 PM - 3:20 PM Flash Talk Presentation 2)

## [MP3-11] Saglam KOBİ Project

Ruya Kaya (IDEMA)

After the devastating 2011 Van Earthquake in Turkey, a disaster preparedness initiative entitled “ Business Disaster Resiliency Program for Turkey” (or “ Saglam KOBİ” in Turkish) was developed by the World Economic Forum, the U.S. Chamber of Commerce Foundation, the UPS Foundation, IDEMA International Development Management Agency and UPS Turkey. The project aims to engage the private and public sector and civil society organizations to work together to identify best practices to enhance the resiliency of small and medium sized enterprises (SMEs) in Turkey. The project which has been operating since 2013 is being managed by IDEMA.

Through this collective effort, Saglam KOBİ aspires to provide SMEs with a suite of resources designed to assist businesses of all sizes. Businesses that only have a few minutes can access simple tips to prepare themselves and their staff for disasters, through reading the unique content on [www.saglamkobi.com](http://www.saglamkobi.com) website, disaster preparedness checklist, 20 tips for preparedness, workbook 101, Saglam KOBİ also offers a toolkit available for free for businesses to create their own emergency action plans.

Saglam KOBİ was publicly launched on September 17, 2013. In the first year, 12 training sessions were conducted with 246 businesses trained and more than 5,000 unique visitors to the website. Saglam KOBİ has 19 partners who form the Advisory Board to advise the program and support where appropriate. Now in its sixth year, Saglam KOBİ has scaled its impact through not only continuing the direct trainings for SMEs but now also offers Train the Trainer sessions to educate more trainers to help SMEs prepare an emergency action plan. To date, more than 3000 SMEs have gone through the training program and 25 trainings and train the trainer sessions have been conducted in 65 cities.

Flash Talk Presentation

## Understanding child and youth resilience in the aftermath of disasters: The case of the 2016 Alberta wildfires in Canada

Dr. Julie Drolet

Tue. Nov 12, 2019 5:05 PM - 5:20 PM Flash Talk Presentation 2 (Meeting Room 7)

Professor, University of Calgary

---

### [MP3-12] Understanding child and youth resilience in the aftermath of disasters: The case of the 2016 Alberta wildfires in Canada

Dr. Julie Drolet (Professor, University of Calgary)

5:05 PM - 5:20 PM



---

5:05 PM - 5:20 PM (Tue. Nov 12, 2019 5:05 PM - 5:20 PM Flash Talk Presentation 2)

## [MP3-12] Understanding child and youth resilience in the aftermath of disasters: The case of the 2016 Alberta wildfires in Canada

Dr. Julie Drolet (Professor, University of Calgary)

The 2016 Alberta wildfires resulted in devastating human, economic and environmental impacts. Children and youth are particularly affected by disasters because of their dependence on adults, and psychological and social factors related to their developmental stage, life cycle, and structural vulnerabilities. However, children and youth also demonstrate resilience when faced with disasters, and can act as powerful catalysts for change in their families and communities in the post-disaster environment. Resilience is defined as both an individual capacity to identify and access resources (e.g., psychological, social, cultural, and physical) and the individual and collective ability to ensure the equitable and culturally relevant provision and access to these resources. Findings from the study ‘Health Effects of the Alberta Wildfires: Pediatric Resilience’ will be presented on the physical, psychological, emotional, and health effects of the 2016 wildfires on children and youth (5-18 years) in order to better understand the social, economic, cultural, personal, and health factors that contribute to positive mental health and resiliency. A mixed methods research design was used to investigate the experiences of children and youth at the population level and at the individual and community level. Using qualitative data collected through face-to-face interviews with 130 participants (100 children and 30 community service providers), we discuss the unique challenges that children face as a result of experiencing the wildfire, the factors, mechanisms, and conditions that influence and support children’s resilience, and the specific ways that community influencers can best support the mental health, well-being, and overall recovery post-disaster. We discuss the implications of these findings for contributing to a better understanding of child and youth resilience, and for informing program and service interventions that will foster disaster recovery and community resilience. The study is funded by Alberta Innovates, Canadian Red Cross, and Canadian Institute of Health Research (CIHR).

Keynote Speech

[K02]

## Keynote Speech

Gretchen Kalonji, Denise Konan, Jihyeon Park

Tue. Nov 12, 2019 8:00 AM - 8:20 AM Room 1 (Main Hall)

Sichuan University, University of Hawaii, JHSUSTAIN

---

[K02]

Gretchen Kalonji (Sichuan University)

[K02]

Denise Konan (University of Hawaii)

[K02]

Jihyeon Park (JHSUSTAIN)

(Tue. Nov 12, 2019 8:00 AM - 8:20 AM Room 1)

[K02]

Gretchen Kalonji (Sichuan University)

---

(Tue. Nov 12, 2019 8:00 AM - 8:20 AM Room 1)

[K02]

Denise Konan (University of Hawaii)

---

(Tue. Nov 12, 2019 8:00 AM - 8:20 AM Room 1)

[K02]

Jihyeon Park (JHSUSTAIN)

Closing

## Closing

Tue. Nov 12, 2019 5:30 PM - 6:00 PM Room 2 (Tachibana)

Simultaneous Interpretation is available. (同時通訳有り)

---

### [CL-01] Closing

5:30 PM - 6:00 PM

5:30 PM - 6:00 PM (Tue. Nov 12, 2019 5:30 PM - 6:00 PM Room 2)

## [CL-01] Closing