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[1], *Akira HASEGAWA[2], *Masatoshi SUZUKI[3], *Masashi KONYO[4], *Yutaka WATANABE[5] （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[1], *Izumi Tobo[2], *Ken Umeno[3], *Yukio Fujinawa[4], Atsushi Oono[1], Takashi Mii[1], Tadahiro Eguchi[1], Morihiro Matsuda[1], Michiaki Yokoyama[1] （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[1] （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[3], Nobuhiko Katayama[2], *Emiko Kubo[1] （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[1], Takahiro Koga[1] （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[1], Maria Bernadet Karina Dewi[1] （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[1], *Shubun ENDO[2], *looking for suitable person looking for suitable person[3] （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[1], *Flaudette May V. Datuin[1], *Aurora Odette C. Mendoza[1], *Elenita N. Que[1], *Leonardo C. Rosete[1], *Mark Albert H. Zarco[1] （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[1] （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[1], Kotara Chiba[1], Kenichi Ohmae[1], Yukihiro Maru[2] （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[1,4], *Shunichi Koshimura[1,4], *Jorge Leon[3,6], Randall J LeVeque[2], Gabriel Gonzalez[3,7], *Patricio Catalan[3,6], Elizabeth Maly[1], *Dan Abramson[2], Carrie Garrison-Laney[2], *Michael Motley[2], *Naoko Kuriyama[5], *Lan Nguyen[2], *Adams Adams[2], Anawat Suppasri[1,4], Erick Mas[1,4], Shuji Moriguchi[1] （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[1], *Masataka Nakai[1], *Toru Matsunaga[1] （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[1], *Chikako Adachi[1], Hiroaki Enoki[1], *Fumihiko Sugawara[1] （1. All Japan Council Company）

1:30 PM - 3:00 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[1], Haris Abd Wahab[1] （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[1] （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[1], *Jun Sasaki[2], *Takashi Yoshino[3] （1. Tsuda University and IFIP(International Federation for Information Processing), 2. Iwate Prefectural University, 3. Wakayama University）

10:30 AM - 12:00 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[1], *Akira HASEGAWA[2], *Masatoshi SUZUKI[3], *Masashi KONYO[4], *Yutaka WATANABE[5] （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[1], *Akira HASEGAWA[2], *Masatoshi SUZUKI[3], *Masashi KONYO[4], *Yutaka WATANABE[5] (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[1], *Izumi Tobo[2], *Ken Umeno[3], *Yukio Fujinawa[4], Atsushi Oono[1], Takashi Mii[1], Tadahiro Eguchi[1], Morihiro Matsuda[1], Michiaki Yokoyama[1] (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[1], *Izumi Tobo[2], *Ken Umeno[3], *Yukio Fujinawa[4], Atsushi Oono[1], Takashi Mii[1], Tadahiro Eguchi[1], Morihiro Matsuda[1], Michiaki Yokoyama[1] （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[1] （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[1] (1. JAPAN TOBACCO INC.)

Keywords: Disastar Risk Reduction, Tohoku earthquake reconstraction, word-of-mouth tradition

-Introduction of our support for Tohoku earthquake reconstraction
-Introduction of our support for Disastar 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[3], Nobuhiko Katayama[2], *Emiko Kubo[1] （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[3], Nobuhiko Katayama[2], *Emiko Kubo[1] (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[1], Takahiro Koga[1] （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[1], Takahiro Koga[1] (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[1], Maria Bernadet Karina Dewi[1] （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[1], Maria Bernadet Karina Dewi[1] (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[1], *Shubun ENDO[2], *looking for suitable person looking for suitable person[3]

（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[1], *Shubun ENDO[2], *looking for suitable person looking for suitable person[3] (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 follwing nuclear powe plants accident in Fukushima. We will briefly provide feedback about the disasters, and explain the curent revitalization efforts such as decontamination acitivities 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[1], *Flaudette May V. Datuin[1], *Aurora Odette C. Mendoza[1], *Elenita N. Que[1], *Leonardo C. Rosete[1], *Mark Albert H. Zarco[1] （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[1], *Flaudette May V. Datuin[1], *Aurora Odette C. Mendoza[1], *Elenita N. Que[1], *Leonardo C. Rosete[1], *Mark Albert H. Zarco[1] (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[1] （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[1] （1. BOSAI POINT PROJECT）

Keywords: non

OSAI 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[1], Kotara Chiba[1], Kenichi Ohmae[1], Yukihiro Maru[2] （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[1], Kotara Chiba[1], Kenichi Ohmae[1], Yukihiro Maru[2] (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. eVOTL 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 thies approach with various stakeholders including public and private sectors.

Oral Sessions | Session

[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[1,4], *Shunichi Koshimura[1,4], *Jorge Leon[3,6], Randall J LeVeque[2], Gabriel Gonzalez[3,7], *Patricio Catalan[3,6], Elizabeth Maly[1], *Dan Abramson[2], Carrie Garrison-Laney[2], *Michael Motley[2], *Naoko Kuriyama[5], *Lan Nguyen[2], *Adams Adams[2], Anawat Suppasri[1,4], Erick Mas[1,4], Shuji Moriguchi[1] （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）

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

*Kenjiro Terada[1,4], *Shunichi Koshimura[1,4], *Jorge Leon[3,6], Randall J LeVeque[2], Gabriel Gonzalez[3,7], *Patricio Catalan[3,6], Elizabeth Maly[1], *Dan Abramson[2], Carrie Garrison-Laney[2], *Michael Motley[2], *Naoko Kuriyama[5], *Lan Nguyen[2], *Adams Adams[2], Anawat Suppasri[1,4], Erick Mas[1,4], Shuji Moriguchi[1] (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, Planing, 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[1], *Masataka Nakai[1], *Toru Matsunaga[1] （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[1], *Masataka Nakai[1], *Toru Matsunaga[1] （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[1], *Chikako Adachi[1], Hiroaki Enoki[1], *Fumihiko Sugawara[1] （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[1], *Chikako Adachi[1], Hiroaki Enoki[1], *Fumihiko Sugawara[1] （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[1], Haris Abd Wahab[1] （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[1], Haris Abd Wahab[1] (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 7th 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[1] （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[1] (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[1], *Jun Sasaki[2], *Takashi Yoshino[3] （1. Tsuda University and IFIP(International Federation for Information Processing), 2. Iwate Prefectural University, 3. Wakayama University）

10:30 AM - 12:00 PM

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

*Yuko MURAYAMA[1], *Jun Sasaki[2], *Takashi Yoshino[3] (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.