

## 特定研究集会 ( 課題番号 : 29C-03 )

集会名 : 第 8 回総合防災に関する国際会議

研究代表者 : 横松 宗太

開催日 : 平成 29 年 8 月 23 日 ~ 8 月 25 日

開催場所 : HARPA Concert Hall and Conference Centre, Austurbakki 2, 101 Reykjavik, Iceland

参加者数 : 217 名 (所外 202 名, 所内 15 名)

- ・大学院生の参加状況 : 6 名 (修士 1 名, 博士 5 名) (内数)
- ・大学院生の参加形態 [ 研究発表 ]

### 研究及び教育への波及効果について

本会議では「複雑な世界における、防災のさまざまな次元と社会のレジリエンス(Dimensions of Disaster Risk Reduction and Societal Resilience in a Complex World)」をテーマとし、今後、気候変動によってますます予測が困難で、被害が複合的となる災害への備えについて多角的に議論した。とりわけ開催地であるアイスランド社会の火山災害に対するリスク認知やモニタリング、避難対策が紹介され、その具体テーマの上で集中的な討議が行われた。世界の一線の研究者達が、概念的・理論的に、または現場の調査に基づいて、災害の複雑さにどのように向き合い、持続的成長をいかにして実現するのかを討議したり、情報交換や比較検討をしたりしたことは、総合防災の分野の発展にとって極めて有意義であったと考えられる。また、恒例の若手研究者セッションでは、博士課程学生たちが口頭発表とポスター発表を行い、シニアの研究者から熱心なコメントや指導を受けた。優秀な発表への表彰も行われ、学生達は今後の研究活動に向けてさらに意欲を高めていた。

### 研究集会報告

#### (1)目的

国際総合防災学会は岡田憲夫教授(当時の本所の教授、現在は名誉教授)を会長、多々納裕一教授を副会長として 2010 年に設立された。現在も防災研究所より、多々納裕一教授(副会長)、アナマリア・クルーズ教授(書記)、畑山満則教授、横松宗太准教授(会計)の 4 人の理事を輩出している。

学会は毎年国際会議を開催し、2017 年の今回は第 8 回の会議となる。毎回、約 20 カ国から 200 人ほどの研究者や実務者、博士課程学生らが集い、災害のリスクガバナンスの構築のための学際的・分野横断的な議論を行っている。世界に総合防災のネットワークを拡張することを目的として、開催地を毎回移して、現地から多くの新しい参加者を得ている。

今回は初めての北欧での開催となり、また火山が活発なアイスランドにおける開催となるため、火山対策にフォーカスした議論がひとつの中心となる。火山リスクが深刻な日本にとっても極めて重要なテーマである。

恒例の若手研究者セッションには、毎年、防災研から多くの大学院学生が参加して、国際的な研究者を目指す足がかりとして貴重な機会となっている。また同学会には国際応用システム研究所(IIASA)など、GADRI に参画している機関も多く、それらとの連携が強化されることも期待される。

#### (2)成果のまとめ

今回は「複雑な世界における、防災のさまざまな次元と社会のレジリエンス(Dimensions of Disaster Risk Reduction and Societal Resilience in a Complex World)」をテーマとし、今後、気候変動によってますます予測が困難で、被害が複合的となる災害への備えについて多角的に議論した。議論の視点は以下のように整理される。

##### 1. 自然災害リスクの理解とモニタリング(Understanding and monitoring natural hazard risk)

モデルと予測の役割、ハザードのモニタリングとスマート技術、気候変動と自然災害、地域や年代によって異なる人々の災害脆弱性、自然災害がもたらす肉体的・精神的インパクト

##### 2. リスクとレジリエンス(Risk and resilience)

リスクガバナンス、土地利用計画と災害、災害と経済、コミュニティのレジリエンスを高めるための保険の役割、インフ

ラストラクチャのレジリエンス, 子どものための防災プログラムと戦略, コミュニティの備えと危機対応, 災害復興, 復興における精神的サポート, 災害予測と被害が移住に与える影響, Natech 災害と重要インフラの防御

### 3. コミュニティの役割とコミュニケーション(Community engagement and communication)

リスクコミュニケーション, 社会の認識や反応へのメディアの影響, 成功事例を用いた戦略, 防災に従事してこなかった人との協働

会議では, 冒頭で 2010 年の Eyjafjallajökull 噴火のフィルムが上映され, 続いて John Richardson 博士による「3 リットル以上の水を(More than three liters of water- Helping people prepare for the true consequences of disasters)」, Magnús Tumi Guðmundsson 博士による「アイスランドの火山ハザード(Volcanic hazards in Iceland, past, present and prospects for the future)」と題した基調講演が行われた。それらを含めて 5 件の基調講演と, 29 の口頭発表セッション, 1 つの一般ポスターセッション, 博士課程学生を対象とした若手研究者セッションが行われた。

フィールド調査では, 南アイスランドの Hvolsvöllur において, 地域の警察の局長による火山噴火と洪水に対する危機対応に関する特別講演が行われ, 参加者たちは現場の経験や新しい挑戦について学んだ。

本会議の議論の成果を素に IDRiM Journal に特集号を企画している。2010 年の学会創設以来, 毎年開催してきた本国際会議は今回で 8 回目となる。これまでの取り組みによって, 総合防災(Integrated Disaster Risk Management, IDRiM)のコンセプトや重要性への認知や理解は着実に向上している。今回は初めての北欧での開催となり, ネットワークの拡大においても意義がある会議となった。

### (3)プログラム

詳細は後述する。

### (4)研究成果の公表

<http://idrimjournal.com/>

<http://idrim.org/>

<https://www.idrim2017.com/>

**Day 1** Wednesday 23 August 2017

Room	1 - SILFURBERG B	2 - BJÖRTULOFT	3 - RÍMA A	4 - RÍMA B
Time				
09:00-09:45	<b>SILFURBERG B</b> <b>Opening Ceremony</b> Guðrún Pétursdóttir, Chair, Local Organizing Committee Adam Rose, IDRiM Society President Ólafur Eggertsson farmer and entrepreneur presents his film on the Eyjafjallajökull eruption in 2010			
09:50-11:20	<b>Invited Plenary Lectures</b> Chair: <i>Guðrún Gísladóttir</i>  <b>Keynote 1</b> John Richardson: More than three liters of water- Helping people prepare for the true consequences of disasters  <b>Keynote 2</b> Magnús Tumi Guðmundsson: Volcanic hazards in Iceland, past, present and prospects for the future			
11:20-11:40	<b>Break and refreshments</b>			
11:40-13:10	<b>SILFURBERG B</b>	<b>BJÖRTULOFT</b>	<b>RÍMA A</b>	<b>RÍMA B</b>
Parallel Sessions 1	<b>P1</b> Chair: <i>Peter van der Keur</i>  <b>Earthquake preparedness</b>  1. <u>Michele M. Wood</u> : Community engagement for global coordinated earthquake drill  2. <u>Naoki Matsumura</u> : What is "Safety" against earthquake? A case study on people`s "risk" perception and uncertain "safety"  3. <u>Tadashi Ise</u> : Generation from Information to Knowledge in Disaster Response - Based on information support of 2016 Kumamoto earthquake, Japan -	<b>P2</b> Chair: <i>Guðmundur Freyr Úlfarsson</i>  <b>Volcanic Hazards</b>  1. <u>Bergrún Arna Óladóttir</u> : Catalogue of Icelandic volcanoes (CIV)  2. <u>Guðrún Gísladóttir</u> : Coping with and recovering from disasters: the 2010 Eyjafjallajökull experience  3. <u>Xochilt Hernandez</u> : Unseen but not unfelt: resilience to persistent volcanic emissions (UNRESP). Case study from Masaya volcano, Nicaragua	<b>P3</b> Chair: <i>Guðrún Jóhannesdóttir and Mohsen Ashtiany</i> <b>Risk assessment and risk analysis</b>  1. <u>Sigrún Karlsdóttir</u> : Risk assessment of natural hazards in Iceland – an overview  2. <u>Asjad Naqvi/Junko Mochizuki</u> presents: Risk-Adjusted Human Development Index  3. <u>Bjorn Karlsson</u> : The development of a methodology for risk and capability assessments within the Baltic Sea Region	<b>P4</b> Chair: <i>Deanne Bird</i>  <b>Mental and physical health related impacts of natural disasters</b>  1. <u>Arna Hauksdóttir</u> : Mental health effects following the eruption in Eyjafjallajökull volcano in Iceland  2. <u>Edda Björk Þórðardóttir</u> : Psychosocial Support After Natural Disasters in Iceland- Implementation and Utilization  3. <u>Heiðrún Hlöðversdóttir</u> : Long-term health effects of the Eyjafjallajökull volcanic eruption: A prospective cohort study in 2010 and 2013

	<p>4. <u>Kiyomine Terumoto</u>: Issues of wide-area earthquake disaster management; a case study on the Nankai Trough earthquake in Japan</p> <p>5. <u>Mahmoud Hosseini</u>: Opportunities and Challenges for Compulsory Earthquake Insurance in Seismic Developing Countries – Case Study of Iran</p>	<p>4. <u>Ásthildur Bernharðsdóttir and Jónas Elíasson</u>: Volcanic threat challenges in Iceland compared to Japan</p> <p>5. <u>Masamitsu Onishi</u>: A methodology for normative decision makings on evacuation order from volcanic disasters with the consideration of unforeseen risks</p>	<p>4. <u>Clotilde Saint-Martin</u>: A bottom-up approach for flood exposure assessment to provide a further insight into flood-related damage in South of France</p>	<p>4. <u>Karoliina Pilli-Sihvola</u>: Challenges in estimating health and economic impacts of disasters</p> <p>5. <u>Shoko Miyagawa</u>: Introduction and evaluation of an IT-based health assessment system for disaster relief organization</p> <p>6. <u>Sina Pfister</u>: Making disaster studies personal - re-considering resilience as a mental constitution</p>
<b>13:10-14:10</b>	<b>Lunch</b>			
14:10-15:40	<b>SILFURBERG B</b>	<b>BJÖRTULOFT</b>	<b>RÍMA A</b>	<b>RÍMA B</b>
Parallel Sessions 2	<p><b>P5</b> Chairs: <i>John Richardson and Hideyuki Shiroshita</i> <b>Children and disasters</b></p> <p>1. <u>Arna Hauksdóttir</u>: Health effects of the Eyjafjallajökull volcanic eruption among children: A prospective cohort study in 2010 and 2013</p> <p>2. <u>Edda Björk Þórðardóttir</u>: Sleep disturbances in adulthood among childhood avalanche survivors: Risk and resilience factors</p> <p>3. <u>Tóra Petersen</u>: School based intervention following disasters</p>	<p><b>P6</b> Chairs: <i>Lisa Van Well and Michinori Hatayama</i> <b>Early warning and risk communication</b></p> <p>1. <u>Reija Ruuhela</u>: Experiences on weather warnings related to direct health impacts</p> <p>2. <u>Michele M. Wood</u>: Optimizing imminent threat mobile alerts to motivate protective action</p> <p>3. <u>Gunhild Setten</u>: Of men and materialities. A gendered reading of news media coverage of a wildfire in Norway in 2014.</p>	<p><b>P7</b> Chair: <i>Junko Mochizuki</i> <b>Resilience of humanitarian sector in a complex world</b></p> <p>1. <u>Junko Mochizuki</u>: Will humanitarian games affect people's information seeking behavior?</p> <p>2. <u>Hideyuki Ito</u>: Logistics of relief supplies for the Nankay Megatrast earthquake</p> <p>3. <u>Miho Satoh</u>: Information sharing tasks in Disaster relief assistance.</p>	<p><b>P8</b> Chairs: <i>Ana Maria Cruz and Elisabeth Krausmann</i> <b>Natech risk management: Dealing with changeability and uncertainty</b></p> <p>1. <u>Elisabeth Krausmann</u>: NaTech risk management in Europe -lessons learned.</p> <p>2. <u>Irasema Alcantara Ayala</u>: The Fukushima DAI-ICHI Nuclear power plant Na Tech accident</p> <p>3. <u>Eric Piatyszek</u>: Flood Induced NaTech events</p>

	<p>4. <u>Atle Dyregrov</u>: Mental health interventions for children after disasters</p> <p>5. <u>Atle Dyregrov and Kari Dyregrov</u>: Family gatherings for bereaved after disasters</p>	<p>4. <u>Mayumi Sakamoto</u>: Establishing Risk Communication System among Disaster Researchers, Mass Media and Government</p> <p>5. <u>Silje Aurora Andressen</u>: You need to be where the fire happens´: the construction of the 'local' in Norwegian newspapers after the fire in Lærdal, Norway</p> <p>6. <u>Hans Jørgen Henriksen</u>: Building trust in water governance through intelligent water infrastructure</p>	<p>4. <u>Rasmus Dahlberg</u>: The turn towards resilience in Danish emergency management</p> <p>5. <u>Repaul Kanji</u>: Creating disaster resilience through CSR: an ISM approach</p> <p>6. <u>Andrew Mc Lean</u>: The impact of leadership on community engagement, and the role of behavioral health during disaster-a community review</p>	<p>4. <u>Ana Maria Cruz</u>: Natech Risk Assessment to inform Community Evacuation Planning</p> <p>5. <u>Akiko Murakami</u>: An actualization of operational risks using text analytics approach in Fukushima power plant disaster</p>
<b>15:40-16:00</b>	<b>Break with refreshments</b>			
16:00-16:45	<b>SILFURBERG B</b> <b>Plenary Interview</b> <b>How can we prepare ourselves for disasters?</b> <i>Ms Þóra Arnórsdóttir interviews</i> Atle Dyregrov, John Richardson, Gunhild Setten			
<b>16:45-17:00</b>	<b>Break</b>			
17:00-18:00	<b>SILFURBERG B</b>	<b>BJÖRTULOFT</b>	<b>RÍMA A</b>	<b>RÍMA B</b>
Parallel Sessions 3	<p><b>P9</b> Chairs: <i>Guðrún Gísladóttir</i> and <i>Yasamin Izadkhah</i> <b>Tourism and disaster preparedness: a forgotten group</b></p> <p>1. <u>Thalia Balkaran</u>: Assessing the Vulnerability of Tourism-related Livelihoods to Tropical Cyclones in Small Island Developing States: a comparison of Tobago and Jamaica</p> <p>2. <u>Deanne Bird</u>: Tourism survival? The balance of money and risk</p>	<p><b>P10</b> Chair: <i>Adam Rose</i> <b>Terrorism and integrated disaster risk management</b></p> <p>1. <u>Kurt Petersen</u>: Terrorism and Crisis Management Approaches in the Swedish Crisis Management System</p> <p>2. <u>Martin Sjoen</u>: Responding to threats of home-grown terrorism: findings from public sector prevention efforts on issues of radicalization and violent extremism</p>	<p><b>P11</b> Chairs: <i>Katsuya Yamori</i> and <i>Björn Karlsson</i> <b>Action research of community based disaster management</b></p> <p>1. <u>Katsuya Yamori</u>: Action research towards effective disaster risk communication</p> <p>2. <u>James Goltz</u>: Community-Based Participation for Effective Earthquake and Tsunami Warning in Japan and the United States</p>	<p><b>P12</b> Chairs: <i>Ingibjörg Lilja Ómarsdóttir</i> and <i>Andrew Collins</i> <b>Social welfare</b></p> <p>1. <u>Ragnheiður Hergeirsdóttir</u>: Árborg 2008: Local social services responding to earthquake and financial crisis.</p> <p>2. <u>Shigeru Kakumoto</u>: Happiness and Disaster for Human by the Comparison of Regions with Different Culture of Disaster</p>

	<p>3. <u>Yasamin Izadkhah</u>: Towards Identifying the Roles of Local Supermarket Managers in Disaster Preparedness and Response</p>	<p>3. <u>Adam Rose</u>: The economic consequences analysis tool (E-CAT)</p> <p>4. <u>Manas Chatterji</u>: Role of Peace Science in Disaster Management.</p>	<p>3. <u>Kaori Kitagawa</u>: Linking community-based preparedness engagement with social ecosystem thinking: a case from Japan</p> <p>4. <u>Nadejda Komendantova</u>: Participatory governance and community engagement into decision-making processes on infrastructure deployment</p>	<p>3. <u>Guðný Björk Eydal</u>: Local Social Services in Nordic Countries in Times of Disaster</p> <p>4. <u>Sigurjón Baldur Hafsteinsson</u>: Trauma and Welfare: Volcanic eruptions and community transformation</p>
<b>18:00-18:15</b>	<b>Break</b>			
18:15-19:15	<p><b>SILFURBERG B</b></p> <p><b>Plenary Panel Discussion</b>  <b>Cascading Impacts of Natural Hazards</b>  Chair: <i>Norio Okada</i>  Ana Maria Cruz, Jónas Elíasson, Magnús Tumi Guðmundsson,  Ortwin Renn, Guðmundur Freyr Úlfarsson</p>			
19:15 – 20:30	IDRiM Society General Assembly IDRiM Research, Service and Implementation Awards			

**Day 2** Thursday 24 August 2017

Room Time	1 - SILFURBERG B	2 - BJÖRTULOFT	3 - RÍMA A	4 - RÍMA B
08:30-09:15	<b>SILFURBERG B</b>  <b>Invited Plenary Lecture</b> Chair: <i>Hirokazu Tatano</i>  <b>Keynote 3:</b> Ortwin Renn: Coping with complex risk: New challenges for risk governance			
09:15-09:25	<b>Break</b>			
09:25-10:55  Parallel Sessions 4	<b>SILFURBERG B</b>  <b>P13</b> Chairs: <i>Haakon Lein</i> and <i>Subho Samaddar</i> <b>Risk and communication</b>  1. <u>Paivi Lujala</u> : Norwegian perceptions of climate change: the role of extreme events and personal experiences  2. <u>Mamoru Yoshida</u> : The relationship between evacuation preparedness and evacuation intention  3. <u>Subhajyoti Samaddar</u> : “We- Feeling” in Community Based Disaster Risk Management: Can we integrate Mind, Self and Community?  4. <u>Brenda Murphy</u> : Knowledge mobilization: Influencing climate change knowledge, attitudes and behaviors  5. <u>Uta Reichardt</u> : Ash clouds over Europe: Volcanic ash scenarios and potential impacts on air traffic	<b>BJÖRTULOFT</b>  <b>P14</b> Chairs: <i>Mika Shimizu</i> and <i>Allen Clark</i>  <b>Risk and communication</b>  1. <u>Mika Shimizu</u> : Culture, Organization and Public Policy: How to Communicate Uncertainties and Risk Information  2. <u>James Goltz</u> : Operational Earthquake Forecasting: A Risk Communication Challenge  3. <u>Ana Maria Cruz</u> : Challenges in risk information disclosure in the context of Natech hazards  4. <u>Ásthildur Elva Bernharðsdóttir</u> : Dealing with uncertainty and risk communication: the influence of culture  5. <u>Andrew McLean</u> : Intraorganizational risk communication -a survey of small island developing states	<b>RÍMA A</b>  <b>P15</b> Chairs: <i>Muneta Yokomatsu</i> and <i>Sóley Kaldal</i> <b>Economic analyses of risk reduction, recovery policies and growth</b>  1. <u>Muneta Yokomatsu</u> : Numerical dynamic programming in firm’s activities in consideration of varies disaster scenarios  2. <u>Stefan Hochrainer-Stigler</u> : Optimal design of insurance contracts under model ambiguity  3. <u>Yasuhiro Akakura</u> : Economic Loss Assessment of port logistics stagnation due to disasters  4. <u>Per Danielsson</u> : Coastal vulnerability index for erosion	<b>RÍMA B</b>  <b>P16</b> Chairs: <i>Norio Okada</i> and <i>Rasmus Dahlberg</i> <b>Disaster and risk management</b>  1. <u>Nuno Moreira</u> : New challenges for National Meteorological Services in issuance of warnings and risk communication  2. <u>Suzanne Lacasse</u> : Hazard and risk management for natural threats – An engineer’s viewpoint  3. <u>Mohsen Ashtiany</u> : The fire induced collapse of Plasco building; lessons for future  4. <u>Allen Clark</u> : Culture, Uncertainty and Risk: Why we are unprepared for Disasters
10:55-11:15	<b>Break and refreshments</b>			

<p>11:15-12:45</p> <p>Parallel Sessions 5</p>	<p><b>SILFURBERG B</b></p> <p><b>P17</b> Chairs: <i>Þorsteinn Sæmundsson</i> and <i>Irasema Alcantara Ayala</i></p> <p><b>Understanding landslides and avalanches</b></p> <p>1. <u>Cesare Alippi</u>: Landslide and rock-fall monitoring systems. What we have learned and why we need intelligent functionalities.</p> <p>2. <u>Unni Eidsvig</u>: Temporal evolution of landslide risk for the municipality of Nocera Inferiore, Italy under the effect of climate changes.</p> <p>3. <u>Christian Jaedicke</u>: Snow avalanche events in Longyearbyen and what lessons they hold for avalanche risk management</p> <p>4. <u>Þorsteinn Sæmundsson</u>: Possible consequences of mass movements on outlet glaciers and into proglacial lakes in Iceland</p>	<p><b>BJÖRTULOFT</b></p> <p><b>P18</b> Chairs: <i>Per Danielsson</i> and <i>Jónas Elíasson</i></p> <p><b>Integrated flood risk management</b></p> <p>1. <u>Emmanuel Pagneux</u>: 100 years of flooding events in five Icelandic catchments: causes, seasonality and impacts</p> <p>2. <u>Emeline Comby</u>: What kinds of adaptation happen after an internal or external flood event?</p> <p>3. <u>Aleksi Rasanen</u>: The role of networks and levels in community flood resilience</p> <p>4. <u>Douwe De Voogt/ Stefania Munaretto</u> presents: Participatory flood risk mitigation: implementing community social capacity building in Borgharen and Itteren, Netherlands</p> <p>5. <u>Irene Pluchinotta</u>: Organizational cultures and the creation of a temporary multi-organization for environmental emergency management: some hints from a flash-food emergency in Lorca, Spain.</p> <p>6. <u>Alba Ballester</u>: Public participation for flood risk mitigation in the Arga and Aragon Rivers.</p>	<p><b>RÍMA A</b></p> <p><b>P19</b> Chair: <i>Hirokazu Tatano</i></p> <p><b>Climate change adaptation</b></p> <p>1. <u>Jose A. Marengo</u>: An Integrated Framework to Analyze Local Decision Making and Adaptation to Sea Level Rise in Coastal Regions in Selsey (UK), Broward County (USA), and Santos (Brazil)</p> <p>2. <u>Sonam Sahu</u>: Contriving Development or Controlling Urbanization- Priorities for a developing a Metro city in the changing climate?</p> <p>3. <u>Atte Harjanne</u>: A country without disasters? Managing disaster and climate risks in a Nordic welfare state</p> <p>4. <u>Antonio Carlos Oscar Jr.</u>: Governance of climate change risk at the regional level: The cases of Santos and Rio de Janeiro Metropolis (Brazil)</p> <p>5. <u>Masoud Yazdanpanah</u>: Knowledge of wheat grower's regarding climate change in western Iran: in structural equation modeling</p>	<p><b>RÍMA B</b></p> <p><b>P20</b> Chairs: <i>Sigrún Karlsdóttir</i> and <i>Stefan Hochrainer</i></p> <p><b>Natural hazards and risk assessment</b></p> <p>1. <u>Yuan Gao</u>: Global drought risk assessment based on the irrigation scenarios: a case study of winter wheat</p> <p>2. <u>Mohammad Baradaranshoraka/ Jean-Paul Pinelli</u> presents: Hurricane wind versus storm surge damage in the context of risk prediction model</p> <p>3. <u>Susan Lacasse</u>: Multi-hazard assessment - a Bayesian network perspective</p> <p>4. <u>Matt Dorfstaetter</u>: Disaster risk assessment as tool to establish sustainable transdisciplinary multi-stakeholder disaster management governance structures</p>
<p><b>12:50-13:50</b></p>	<p><b>Lunch</b></p>			
<p>14:00-23:00</p>	<p>Field trip passing sites of natural hazard in Southern Iceland</p>			



**Day 3** Friday 25 August 2017

Room Time	1 - SILFURBERG B	2 - BJÖRTULOFT	3 - RÍMA A	4 - RÍMA B
08:30-09:30	<b>SILFURBERG B</b> <b>Invited Plenary Lectures</b> Chair: <i>Ana Maria Cruz</i>  <b>Keynote 4</b> Denis Mileti: Reducing delays in public warnings  <b>Keynote 5</b> Mahesh Prakash: Integrated modelling and analytics of natural hazards: A bushfire perspective			
09:30-09:40	<b>Break</b>			
09:40-10:40	<b>SILFURBERG B</b>	<b>BJÖRTULOFT</b>	<b>RÍMA A</b>	<b>RÍMA B</b>
Parallel Sessions 6	<b>P 21</b> Chair: <i>Guðný Björk Eydal</i> <b>Vulnerability</b>  1. <u>Eva Streberova</u> : Implementing tools for assessing vulnerability of urban population to climate change risks – example of the co-creation process in Bratislava City (Slovak Republic)  2. <u>Anyu Zhang</u> : Study on population exposure change of natural disaster under extreme environment in Tibet  3. <u>Cristina Vasilescu/Alba Ballester</u> presents: Participatory processes for building social capacities for flood risk mitigation: Lessons learnt from five case studies.	<b>YSS<sub>01</sub></b> Chair: <i>Yoko Matsuda</i>  1. <u>Takashi Sugiyama</u> : How to improve ownership in disaster risk reduction for elderly and people with special needs: Observation from indoor Tsunami evacuation drills in Japan  2. <u>Silje Aurora Andresen</u> : In the heat of the moment: a local narrative of the responses to a fire in Lærdal, Norway  3. <u>Fuko Nakai</u> : How vulnerable is the mutual cooperation on their evacuation rule? -assessment of impacts made by evacuees' defections  4. <u>Daimon Hiroaki</u> : Does 'pay it forward' extend the support chain? : Simulating voluntarism on the post-disaster community in Japan.	<b>YSS<sub>02</sub></b> Chair: <i>Wei Xu</i>  1. <u>Yaojie Yue</u> : Assessing wild fire risk in Unites States using social media  2. <u>Sun Shao</u> : How to recognize high risk region of climate change?  3. <u>Maria Camila Suarez</u> : Natech RateME: Preliminary stages of a new comprehensive Natech performance rating system  4. <u>Giuseppe Aliperti</u> : Mid-long term impact of Natech disaster on tourism-related activities: A case study from Japan	<b>YSS<sub>03</sub></b> Chair: <i>Muneta Yokomatsu</i>  1. <u>Genta Nakano</u> : Long term effect of disaster education observed through 2015 Nepal earthquake  2. <u>Marina Hamidzada</u> : Vulnerability of Afghan Women in Disasters: Facts, Challenges and the way forward  3. <u>Christine Prokopf</u> : Against all odds? The development and spread of national level disaster risk analysis in Germany  4. <u>Ryohei Miyamae</u> : Shrinking community remembrance and commemoration: a case of forget-ness of forgetting

	<p>5. <u>Martina Calovi</u>: A high resolution extreme heat forecasting product based on an analog ensemble of atmospheric model and volunteered geographic information</p> <p>6. <u>Marina Tamara Mendoza</u>: Challenges and opportunities of disaster damage data modeling supporting multipurpose analysis</p> <p>7. <u>Mona Zaryoun</u>: Application of flexible architecture and innovative structural systems in creating multi-purpose neighborhoods' self-help centers for post-earthquake emergencies</p> <p>8. <u>Jessica Barnes</u>: Landscape architecture and disaster risk management</p>	<p>5. <u>Pujun Liang</u>: The population in the areas with rising trend of storm rainfall in China has increased by 120 million.</p> <p>6. <u>Þórhildur Heimisdóttir</u>: The attraction of active volcanoes in tourism.</p> <p>7. <u>Benyamin Adibzadeh</u>: Opportunities and Challenges for Compulsory Earthquake Insurance in Seismic Developing Countries – Case Study of Iran</p> <p>8. <u>Flora Guillier</u>: PAPI: how effective is this public policy instrument for building integrated coping capacities with regards to flood risk?</p>	<p>5. <u>Clément Judek</u>: Crisis simulation scenario building methodology that considers the concept of cascading effects for pedagogical and research interest</p> <p>6. <u>Nimesh Dhungana</u>: Between monitoring and mobilizing of community voice: a case of community-based accountability in post-earthquake Nepal</p> <p>7. <u>Bonjun Koo</u>: Development of Collaborative Action Plan for Community Disaster Risk Reduction: Focusing on Air Pollution in Ger Areas of Mongolia</p> <p>8. <u>Charlotte Heinzlef</u>: An observatory for decision-making: measuring and advising on urban resilience</p>
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10:40-12:00

**POSTER AREA - FLÓI**

**Refreshments and Posters (YSS and regular posters)**

**YSS posters see sessions YSS<sub>1</sub>, YSS<sub>2</sub> and YSS<sub>3</sub> above**

**Regular posters:**

1. Silje Aurora Andresen: **The political ecology of disasters – a case study of the fire in Lærdal, Norway**
2. Beatriz B. O. Santos: **Correlation between rainfall episodes and mass movements in Santos, Brazil**
3. Amandine Berger-Sabbatel: **Preparedness as a powerful management tool for daily city management**
4. Douwe De Voogt/Stefania Munaretto presents: **Diverging flood risk subcultures in public institutions and local communities and implications for flood risk management: The case of Itteren and Borgharen, The Netherlands**
5. Katarína Harmadyová: **Monitoring of rockfall hazards at the Devin Castle National Monument (Bratislava City, Slovak Republic) - Preserving cultural heritage and monitoring climate change impacts**
6. Kirby Johnson/Michele M. Wood presents: **Experience mapping: A case study in earthquake early warning**
7. Ning Li: **Climate instability analysis by joint mode with temperature trend and variability in mainland China**

8. Jose A Marengo.: **Climatic characteristics and socioeconomic impacts of the 2010-2016 drought in the semiarid Northeast Brazil region**
9. Angeli Medina: **Promoting a culture of healthcare continuity and resilience**
10. Hannah Montgomery/Michele M. Wood presents: **Effects of communitywide great shakeout earthquake drills on individuals and households**
11. Maria Giovanna Pagnotta: **The role of volunteers in flood risk perception and social responsibility**
12. Uta Reichardt: **Risk management of volcanic ash in Europe: Cooperation between science and aviation sector service providers**
13. Silvia Serrao-Neumann: **Political agency for disaster resilience in practice: Insights from Australian coastal communities**
14. Akiyoshi Takagi: **Application 'Disaster Reduction Class' for facilitating self-help and mutual help for disaster prevention and reduction**
15. Edda Björk Þórðardóttir: **Sleep disorders and sleep medication use among Swedish survivors of the 2004 Southeast Asia tsunami**
16. Tetsuya Torayashiki: **The decrease in tourism and tourism promotion after increased recent volcanic activity in Japan**
17. Victoria VanTwist/Michele M. Wood presents: **Effects of community wide great shakeout earthquake drills on organizations**
18. Hironori Yamaguchi: **Communication-design for disaster risks through shopping at a large-scale shopping center: Transition from disaster prevention to disaster mitigation**
19. Masoud Yazdanpanah: **Intention of agricultural extension educators to take action toward climate change in Iran**
20. Masoud Yazdanpanah: **Human factors in deployment of biofuel energy production in Iran: studying attitudes of Iranian agricultural professionals towards biofuel production**
21. Masoud Yazdanpanah: **Understanding farmers risk perception through cultural theory lens: A qualitative study**
22. Jiansong Zhang **Review on progress in climate change risk study**
23. Ernest Tambo: **Building disaster risk surveillance data sharing and governance in sub Sahara Africa: Opportunities and challenges**
24. Xu Ying Jun: **Assessment and analysis of typhoon disaster in Hebei province, China**

12:15-13:00	<b>SILFURBERG B</b> <b>Plenary Interview 2</b> <b>Science for Resilience</b> <i>Ms Þóra Arnórsdóttir interviews</i> Adam Rose, Hirokazu Tatano and Andrew Collins			
<b>13:10-14:20</b>	<b>Lunch</b>			
14:20-15:50	<b>SILFURBERG B</b>	<b>BJÖRTULOFT</b>	<b>RÍMA A</b>	<b>RÍMA B</b>
Parallel Sessions 7	<b>P22</b> Chair: <i>James Goltz</i>  <b>Best practices in engagement strategies</b>  1. <u>Miriam Zetterlund</u> : End-user engagement in modeling of small-scale precipitation extremes	<b>P23</b> Chair: <i>Norio Okada and Stephanie Chan</i> <b>Transportation and supply chain</b>  1. <u>Stephanie Chang</u> : Modeling impacts of transport system disruptions on regional supply chains	<b>P24</b> Chair: <i>Roland Nussbaum</i> <b>Disaster risk reduction and recovery initiatives</b>  1. <u>Emmanuel Raju</u> : CCA and DRR: Integration or Divergence? Findings from Denmark	<b>P25</b> Chair: <i>Adam Rose</i>  <b>Migration in anticipation and following disasters</b>  1. <u>Adam Rose</u> : What influences the destination of disaster migrants? Evidence from Hurricane Katrina

	<p>2. <u>Chris Hagar</u> and <u>Karen Brown</u>: Strengthening community engagement and resilience efforts in climate change</p> <p>3. <u>Pan Hu</u>: Community-based calculation of flood traveling time.</p> <p>4. <u>Ouejdane Mejri</u>: Disaster risk reduction collective knowledge production: multi hazard and multi scale challenge</p> <p>5. <u>Hildur Ingvarsdóttir</u>: Municipal utility resilience - Veitur</p>	<p>2. <u>Alexandru Ozunu</u>: Assessing hazards and risks from Seveso establishments and hazmat transportation in Romania</p> <p>3. <u>Mahmoud Hosseini</u>: On the seismic resilience upgrading strategy for the railway transportation system through evaluation and retrofit of stone bridges – Case study of Iran</p> <p>4. <u>Nazli Yonca Aydin</u>: The role of transportation network resilience on tourism sector</p> <p>5. <u>Banafsheh Alsadat Hashemi</u>: Lines of action for upgrading the seismic resilience of subway transportation systems</p> <p>6. <u>Uta Reichardt</u>: Enhancing Resilience of Air Traffic due to Extreme Volcanic Ash Scenarios: Policy Recommendations for Aviation</p>	<p>2. <u>Yoko Matsuda</u>: Local construction industries and disaster volunteers - a perspective of CSR enhancement in Japan</p> <p>3. <u>Silvia Serrao-Neuman</u>: Post-disaster social recovery: lessons learnt from Tropical Cyclone Yasi</p> <p>4. <u>Hideyuki Shiroshita</u>: A workshop for digging out the embedded customs for DRR</p> <p>5. <u>Rasmus Dahlberg</u>: Making sense of signals</p>	<p>2. <u>Shingo Nagamatsu</u>: Building back a better Tohoku from the March 2011 Tsunami - A contradicting evidence</p> <p>3. <u>Makoto Okumura</u>: Statistical analysis of post disaster effects in inter-regional migration</p> <p>4. <u>Tomohiro Ichinose</u>: Land use changes in 100 years and economic damage in Kesennuma City by the 2011 Tohoku earthquake and tsunami</p>
<b>15:50-16:15</b>	<b>Break and refreshments</b>			
16:15-17:45	<b>SILFURBERG B</b>	<b>BJÖRTULOFT</b>	<b>RÍMA A</b>	<b>RÍMA B</b>
Parallel Sessions 8	<p><b>P26</b> Chair: <i>Arna Hauksdóttir</i></p> <p><b>Governance and resilience</b></p> <p>1. <u>John Richardson</u>: Translating research into policy and practice: A case study from Australia's Black Saturday Bushfires</p>	<p><b>P27</b> Chair: <i>Christian Jaedicke</i> and <i>Makoto Okumura</i></p> <p><b>Infrastructure management</b></p> <p>1. <u>Halldór Halldórsson</u>: The Icelandic Electric Power System resilience</p>	<p><b>P28</b> Chair: <i>Emmanuel Pagneux</i></p> <p><b>Natural hazards modeling and forecasting</b></p> <p>1. <u>Jie Zhang</u>: Numerical simulation and diagnostic analysis on a rainstorm in Beijing 7·21 rainfall case.</p>	<p><b>P29</b> Chair: <i>Ragnheiður Hergeirsdóttir</i> and <i>Li Ning</i></p> <p><b>Emergency planning and response</b></p> <p>1. <u>Lisbeth Hall</u>: European Multiple Environmental Threats Emergency Network (EMETNET)</p>

16:15-17:45 Parallel Sessions 8	2. <u>Asahi Chisato</u> : A multi-dimensional structure of time in peoples sense of livelihood recovery from the Great East Japan Earthquake	2. <u>Tomoko Okayama</u> : Disaster Toilet Management at the Kumamoto Earthquake in Japan	2. <u>Jean Odry</u> : Implementation of a regionalized French flood quantiles database	2. <u>Michinori Hatayama</u> : A Study on an identification method of shelters and its application for disaster response activities - Case study in Kumamoto Earthquake
	3. <u>Morteza Bastami</u> : A quantitative index for earthquake community resilience	3. <u>Yolanda A. Hernandez</u> : Restoration of the water distribution networks in Japan after recent earthquakes	3. <u>Mingwei Zhao/ Jean-Paul Pinelli</u> presents: Evaluation of mitigation measures for hurricane storm surge damage using an engineering-based method	3. <u>Eizo Hideshima</u> : Evaluation of wide-area evacuation plan for storm surge based on disaster scenarios
	4. <u>Amy Oen/Unni Eidsvig</u> presents: Nature-based solutions: ecological, social and economic resilience for society	4. <u>David Bristow</u> : Municipality-wide multi-infrastructure earthquake recovery modeling	4. <u>Abdolreza S. Moghadam</u> : Resilient seismic systems; necessities and challenges.	4. <u>Þóra Kristín Ásgeirsdóttir</u> : The Reykjavík Municipal Area Community Emergency Management
	5. <u>Ganesh Gorti</u> : Understanding the role of multicriteria decision analysis in transformative disaster risk governance	5. <u>Satoshi Tsuchiya</u> : An economic impact analysis due to local block of a major highway network	5. <u>Sóley Kaldal</u> : Preparing for zero frequency events	
<b>17:45-18:00</b>	<b>Break</b>			
18:00-18:30	<b>SILFURBERG B</b>			
	<b>Plenary Session</b> Chair: <i>Ana Maria Cruz</i>			
18:30-18:40	Student Awards Ceremony			
18:40-19:20	Introduction of IDRiM 2018			
19:20-19:30	Wrap-up Panel Adam Rose, Mahesh Prakash, Denis Mileti, John Richardson			
	Closing: Guðrún Pétursdóttir, Chair, IDRiM2017 Organizing Committee Adam Rose, IDRiM Society President			