

**Infrastructure development in Maldives to cope with climate change
In-country migration to newly constructed island of Hulhumalé**

4 April 2023 (18:10 to 19:30)

University Media Center (Sugimoto Library), Osaka Metropolitan University, Osaka, Japan

Organized by [alphabetical order]:

**Global Infrastructure Fund Research Foundation Japan (GIF Japan)
International Research Institute of Disaster Science (IRIDeS), Tohoku University
Sasakawa Peace Foundation (SPF)**

It has been warned that up to 1.2 billion people worldwide could be displaced as climate migrants by 2050. These climate migrants should have the "right to stay", i.e. the right to remain in their home countries rather than move abroad. Infrastructure development should be considered as an effective measure to ensure their "right to stay". The Maldives, an atoll country in the Indian Ocean, has decided to build a new island, Hulhumalé, in an atoll just off the capital, Malé. The plan is to move about half of the country's population to Hulhumalé. This is a promising option for dealing with climate change in atoll countries. This session will present and discuss the reasons for the need to build Hulhumalé and how the people who have moved to Hulhumalé rate their living conditions, based on studies conducted in the field. The conclusions of this session will provide useful insights into the potential of building artificial islands as a climate change adaptation measure in other atoll countries, such as Kiribati, the Marshall Islands and Tuvalu, as well as for achieving the global goals outlined in the Sendai Framework for Disaster Risk Reduction 2015-2030. Researchers from the Maldives (belonging to the Housing Development Corporation) will participate as speakers and panelists in this session, along with scientists from Finland, Japan and the United States. The session is organized by the Global Infrastructure Fund Research Foundation Japan, the International Research Institute of Disaster Science (IRIDeS), Tohoku University, and the Sasakawa Peace Foundation (SPF).

Provisional Agenda

MC: Mikiyasu Nakayama [GIF Japan]

Presentations:

1. **Introductory remarks** (Mikiyasu Nakayama [GIF Japan])
2. **Hulhumalé development by Housing Development Corporation** (Aishath Laila [Housing Development Corporation, Maldives] and Mariyam Areesha Ahmed [Housing Development Corporation, Maldives])
3. **Livelihood of residences in Hulhumalé** (Daisuke Sasaki [IRIDeS, Tohoku University] and Akiko Sakamoto [GIF Japan])

Panel discussion:

Moderator: Miko Maekawa (Sasakawa Peace Foundation)

Panelists: Mariyam Areesha Ahmed [Housing Development Corporation, Maldives]
Carl Bruch [Environmental Law Institute]
Ryo Fujikura [Hosei University]
Aishath Laila [Housing Development Corporation, Maldives]
Juha Uitto [Independent Evaluation Office of the Global Environment Facility]

Closing remarks:

Daisuke Sasaki (IRIDeS, Tohoku University)

* Supported by JSPS KAKENHI Grant Number JP21H03711 and JP19KK0025.

Profile of Speakers, Panelists and Moderator

Mariyam Areesha Ahmed

Affiliation: Research Analyst, Strategic Business Unit, Housing Development Corporation (Maldives)

Brief Career:

2022- Research Analyst, Housing Development Corporation

2021- Business Relations Executive, Business Solutions and Smart Infrastructure

2019- Senior Officer Wholesale Business, Ooredoo Maldives

2016- Protocol Officer, Supreme Court of the Maldives

Carl Bruch

Affiliation: Senior Attorney and Director of International Programs , Environmental Law Institute

Brief Career:

2006- Senior Attorney and Director of International Programs, Environmental Law Institute

2018- Founding President, Environmental Peacebuilding Association

2017- Senior Adjunct Professor, American University School of International Service

2003-2005- Legal Officer, UN Environment Programme

1997-2003- Staff Attorney and Director of Africa Program, Environmental Law Institute

1996-1997- Law Fellow, Environmental Law Alliance Worldwide

Selected Publications:

- “Migration with Dignity: A Legal and Policy Framework,” J. of Disaster Research, Vol.17(3), 292-300, 2022.
- “Migration with Dignity: A Case Study on the Livelihood Transition of Marshallese to Springdale, Arkansas,” J. of Int. Migration and Integration, Vol.21, pp. 847-859, 2019.
- “Environmental Rule of Law: First Global Report,” UN Environment Programme, 2019.

Ryo Fujikura

Affiliation: Professor, Faculty of Sustainability Studies, Hosei University

Brief Career:

1984-1995 Officer, Environment Agency, Government of Japan

1995-1999 Associate Professor, Institute of Environmental Systems, Kyushu University

1999-2003 Professor, Faculty of Economics, Ritsumeikan University

Selected Publications:

- “Resettlement Policy in Large Development Projects,” Routledge, 2015.
- “Climate Change Mitigation and Development Cooperation,” Earthscan, 2012.
- “Climate Change Adaptation and International Development,” Earthscan, 2010.

Aishath Laila

Affiliation: General Manager, Research & Development, Strategic Business Unit, Housing Development Corporation (Maldives)

Brief Career:

2021- General Manager, Research & Development, Housing Development Corporation

2016- Statistician (Deputy Director General), National Bureau of Statistics

2014- Assistant Director, National Bureau of Statistics

Selected Publications:

- Shareef, A., Mohamed, M., Waheed, A., Khaleel, Z., Ali, A., Laila, A., ... & Asif, M. (2015). Baseline analysis of adaptation capacity and climate change vulnerability impacts in the tourism sector: Increasing climate change resilience of Maldives through adaptation in the tourism sector.

Miko Maekawa

Affiliation: Senior Research Fellow, Sasakawa Peace Foundation (SPF)

Brief Career:

2000-2007 The United Nations Development Programme (UNDP)

2012 Assistant Professor, “Wisdom of Water” (Suntory) Corporate Sponsored Research Program, The University of Tokyo

2013 Lecturer, Graduate School of Human Sciences, Osaka University

2014- SPF

Selected Publications:

- M. Maekawa et al., “Highly Skilled Migrant Workers as a Vulnerability of Small Island Developing States During the COVID-19 Pandemic: Cases of Three Countries in Micronesia,” *J. Disaster Res.*, Vol.17, No.3, pp. 380-387, 2022.
- M. Maekawa et al., “Livelihood Re-Establishment of Emigrants from Kiribati in Fiji,” *J. Disaster Res.*, Vol.14, No.9, pp. 1277-1286, 2019.
- M. Maekawa and I. Fujii, “Toward Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction: Analysis and Prospects for Negotiation Process at the United Nations with a Focus on Capacity Building and the Transfer of Marine Technology,” *J. of Japan Society of Ocean Policy*, No.11, pp. 55-69, 2021.
- M. Fujii, M. Maekawa, and E. Higuchi, “Comparative Analysis on International Trends and Implementations of Three Major Countries Towards the Sustainable Development Goal 14: Japan, France and U.S.A.,” *J. of Japan Society of Ocean Policy*, No.8, pp. 49-70, 2018

Mikiyasu Nakayama

Affiliation: Managing Director, Global Infrastructure Fund Research Foundation Japan

Brief Career:

1989- Associate Professor, Faculty of Agriculture, Utsunomiya University

1999- Professor, United Graduate School of Agricultural Science, Tokyo University of Agriculture and Technology

2004- Professor, Graduate School of Frontier Sciences, The University of Tokyo

2020- Managing Director, Global Infrastructure Fund Research Foundation Japan

Selected Publications:

- M. Nakayama et al., “Alternatives for the Marshall Islands to Cope with the Anticipated Sea Level Rise by Climate Change,” *J. Disaster Res.*, Vol.17, No.3, pp. 315-326, 2022.
- M. Nakayama, J. Toyoshima, and N. Shiiba, “Pivotal Factors in the Acculturation of the Second-Generation Marshallese Immigrants to the United States,” *J. Disaster Res.*, Vol.17, No.3, pp. 346-355, 2022.
- S. N. McClain, C. Bruch, M. Nakayama, and M. Laelan, “Migration with dignity: a case study on the livelihood transition of Marshallese to Springdale, Arkansas,” *J. of Int. Migration and Integration*, Vol.21, No.3, pp. 847-859, 2020.
- M. Nakayama, I. Taafaki, T. Uakeia, J. Seru, Y. McKay, and H. Lajar, “Influence of Religion, Culture and Education on Perception of Climate Change, and its Implications,” *J. Disaster Res.*, Vol.14, No.9, pp. 1297-1302, 2019.

Akiko Sakamoto

Affiliation: Secretary General, Global Infrastructure Fund Research Foundation Japan

Brief Career:

1991- Bachelor of Psychology, Faculty of Arts, Keio University

1991- Joined Mitsubishi Research Institute Inc.

2008- Joined Global Infrastructure Fund Research Foundation Japan

2020- Secretary General, Global Infrastructure Fund Research Foundation Japan

Selected Publications:

- A. Sakamoto et al., “Mitigating Impacts of Climate Change Induced Sea Level Rise by Infrastructure Development: Case of the Maldives,” *J. Disaster Res.*, Vol.17, No.3, pp. 327-334, 2022.

Daisuke Sasaki

Affiliation: Associate Professor, International Research Institute of Disaster Science (IRIDeS), Tohoku University

Brief Academic Career:

2015- Ph.D. in International Studies, The University of Tokyo
2016- Affiliate Researcher, The University of Tokyo
2017- Assistant Professor, Tohoku University
2022- Associate Professor, Tohoku University

Selected Recent Publications:

- Sasaki, D., Suppasri, A., Tsukuda, H., Nguyen, D. N., Onoda, Y., & Imamura, F. (2022). People's perception of well-being during the COVID-19 pandemic: A case study in Japan. *International Journal of Environmental Research and Public Health*, 19(19), 12146. <https://doi.org/10.3390/ijerph191912146>
- Sasaki, D., Jibiki, Y., & Ohkura, T. (2022). Tourists' behavior for volcanic disaster risk reduction: A case study of Mount Aso in Japan. *International Journal of Disaster Risk Reduction*, 78, 103142. <https://doi.org/10.1016/j.ijdr.2022.103142>
- Nakayama, M., McClain, S. N., Fujikura, R., & Sasaki, D. (2022). Migration, dignity, fragility, and pandemics: Overview of the special issue. *Journal of Disaster Research*, 17(3), 285–291. <https://doi.org/10.20965/jdr.2022.p0285>
- Sasaki, D., Sofyan, H., Sasmita, N. R., Affan, M., & Nizamuddin, N. (2021). Assessing the intermediate function of local academic institutions during the rehabilitation and reconstruction of Aceh, Indonesia. *Journal of Disaster Research*, 16(8), 1265–1273. <https://doi.org/10.20965/jdr.2021.p1265>
- Ishiwatari, M., & Sasaki, D. (2021). Investing in flood protection in Asia: An empirical study focusing on the relationship between investment and damage. *Progress in Disaster Science*, 12, 100197. <https://doi.org/10.1016/j.pdisas.2021.100197>

Juha Uitto

Affiliation: Director, Independent Evaluation Office, Global Environment Facility (GEF)

Brief Career:

2014- Director, Independent Evaluation Office, GEF
2009-2014 Deputy Director, Independent Evaluation Office, United Nations Development Programme (UNDP)
2006-2009 Evaluation Adviser, UNDP
1999-2005 Senior Monitoring and Evaluation Coordinator/Specialist, GEF/UNDP
1990-1999 Academic Programme Officer/Senior Academic Programme Officer, UN University (UNU)

Selected Publications:

- Uitto, J.I. (2021). Confronting storms, fires, and pestilence: Meaningful evaluation for a hazardous world. *Evaluation Matters*, 7: 96-126.
- Uitto, J.I. (2021). Surviving the Anthropocene: How evaluation can contribute to knowledge and better policymaking. *Evaluation*, 27(4): 436-452.
- Uitto, J.I. (2019). Sustainable development evaluation: Understanding the nexus of natural and human systems. *New Directions for Evaluation*, 162: 49-67.
- Lech, M., J.I. Uitto, S. Harten, G. Batra and A. Anand (2018). Improving international development evaluation through geospatial data and analysis. *International Journal of Geospatial and Environmental Research*, 5(2): Art. 3.
- Uitto, J.I., J. Kohlitz and D. Todd (2017). Evaluating sustainable development in SIDS: Lessons from the Pacific and the Caribbean. In: *Evaluation for the 2030 Agenda: Providing Evidence on Progress and Sustainability*, International Development Evaluation Association, pp. 119-133.
- Miyaguchi, T. and J.I. Uitto (2017). What do evaluations tell us about climate change adaptation? Meta-analysis with a realist approach. In: *Evaluating Climate Change Action for Sustainable Development*. Springer, pp. 235-254.
- Uitto, J.I. (2016). The environment-poverty nexus in evaluation: Implications for the Sustainable Development Goals. *Global Policy*, 7(3): 441-447.
- Chen, S. and J. I. Uitto (2015). Accountability delegation: Empowering local communities for environmental protection in China. *Development*, 58(2-3): 354-365.