## Report of IGU Hazard and Risk Commission 2019

## A. Membership

The following 10 people are the current members of the steering committee (SC).

Takashi OGUCHI (Chair) Center for Spatial Information Science, The University of Tokyo, Japan oguchi@csis.u-tokyo.ac.jp http://researchmap.jp/read0007832/?lang=english

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There are other 103 corresponding members who regularly receive information via e-mail. The members are from the following countries (number of people in parentheses): Bangladesh (1), Brazil (1), Cameroon (1), Chile (1), China (32), China (HK) (1), Fiji (1), France (3), India (10), Iran (1), Israel (1), Italy (2), Japan (12), Kuwait (1), Mexico (1), Myanmar (1), Nepal (1), Poland (1), Romania (4), Russia (1), Singapore (1), Slovenia (1), Spain (1), Taiwan (5), Turkey (1), UK (2), USA (7), and Vietnam (1)

B. Meetings

1) Joint Seminar of National Taiwan University, The University of Tokyo, and the IGU Hazard and Risk Commission in Taipei, Taiwan, on March 8, 2019

The seminar included some 15 scientific presentations mainly on three topics: 1) smart city & social

sciences, 2) natural disasters, and 3) remote sensing applications. The majority of participants were from the Department of Geography, National Taiwan University, and the Center for Spatial Information Science, The University of Tokyo. Two SC members of our commission, Jr-Chuan Huang and Takashi Oguchi, are working for the above affiliations respectively, and collaborated to organize the seminar.

2) Co-organizing the ICEO & SI Conference in Tainan, Taiwan, on June 23-25, 2019.

The ICEO & SI (International Conference on Earth Observations and Societal Impacts) is an annual conference organized mainly by the TGEO (Taiwan Group on Earth Observations). Our commission became a co-organizer of its 2019 conference, and had a special session entitled "Risk of Natural Hazards and Land Degradation in the Changing World". The session had six presentations, and was chaired by two SC members of our commission, Jr-Chuan Huang and Takashi Oguchi. At the closing ceremony of the conference, Takashi Oguchi received an award "International Fellowship Award of Excellence" from the TGEO for his supports to the TGEO including the development of connection with our IGU commission.



Four young presenters from Taiwan and Japan and two chairs of the session "Risk of Natural Hazards and Land Degradation in the Changing World" at the ICEO & SI Conference in Tainan, Taiwan.

3) Co-organizing a session at the Regional Conference on Geomorphology, IAG (International Association of Geomorphologists), in Athens, Greece, on September 19–21, 2019.

The conference had a session entitled "Geomorphological Hazards and Risks", and was co-organized by the IAG working group "Geomorphological Hazards" (IAGGEOMHAZ) and our commission. This is an example of activities related to the official MoU between the IGU and the IAG signed in 2016. The session had 32 oral presentations and 16 poster presentations, and it was the biggest session of the conference. The session was chaired by four researchers: Bianca Carvalho Vieira (Brazil, Co-chair of IAGGEOMHAZ), Helene (Petschko) Goetz (Germany, Co-chair of IAGGEOMHAZ), Mihai Micu (Romania, Secretary General of IAG), and Takashi Oguchi (Japan, Chair of our commission). Two SC members of our commission, Alessandro Mondini and Takashi Oguchi, gave talks in the session. The four session chairs have also become guest editors for a special issue of the journal *Geomorphology* (Elsevier), entitled "Geomorphological Hazards and Risks in Diverse Regional Environments", which will include some 12 original papers which the contents were presented in the session. The deadline of paper submission for the issue is March 2020, and the issue is expected to be published in 2021 after review process.



Photo of an oral presentation in the session "Geomorphological Hazards and Risks" at the Regional Conference on Geomorphology, IAG, in Athens, Greece.



Helene (Petschko) Goetz and Takashi Oguchi chairing the session "Geomorphological Hazards and Risks" at the Regional Conference on Geomorphology, IAG, in Athens, Greece.

4) Co-organizing a session at the IGU Thematic Conference "Transformation of Traditional Cultural Landscapes" in Koper, Slovenia, on September 24–26, 2019

Although the conference as a whole was organized by five commissions of the IGU other than our commission, one of the five commissions, Land Degradation and Desertification (COMLAND), has close relations with our commission in recent years. Consequently, one of the sessions at the conference, "Past and Present Land Degradation in the Mediterranean and Other Environments", was organized by both the COMLAND and our commission. It had four oral presentations and two posters.

5) Co-organizing the ICEO & NH Conference in Hanoi, Vietnam, on November, 18–22, 2019.

The ICEO & NH (International Conference on Earth Observations and Natural Hazards) is a conference organized chiefly by two bodies: the TGEO and the Institute of Geography, Vietnam Academy of Science and Technology. It is held almost every two years, and in 2019 our commission became another co-organizer of the conference, along with the Graduate University of Science and Technology, Vietnam Academy of Science and Technology. There were eight technical sessions at the conference. Two of them, "Geospatial Technologies for Natural Hazards: Fire, Flood, Drought, Landslide" and "Geospatial Technologies for Natural Hazards: Air and Water Pollution, Coastal and Ocean Pollution" are especially relevant to our commission. These sessions consisted of eight oral presentations and several posters.

The following events are currently planned:

1) Co-organizing the IGU Thematic Conference at Bardhaman University, Bardhaman, India, on March 6–8, 2020

This thematic conference are organized by the five IGU Commissions: Biogeography and Biodiversity, Climatology, Geo-heritage/Geo-parks, Land use and Land Cover Changes, and our Hazard and Risk commission. There are two planned sessions strongly related to hazard and risk issues: "Disaster Risk Reduction and Resilience" and "Implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030: South Asian Perspectives".

2) Co-organizing the ICEO & SI Conference at National Central University, Taoyauan, Taiwan, on June 21–24, 2020.

As written, our commission was a co-organizer of the ICEO & SI 2019, and will also be a co-organizer of the ICEO & SI 2020. Details have not been fixed yet, but negotiations were already made with Professor Yuei-An Liou, Honorary President of the TGEO.

Official partner/sponsor of the Geomorphometry 2020 Conference in Perugia, Italy, on June 22–26, 2020 (http://www.geomorphometry2020.org/)

The Geomorphometry Conference, focusing on quantitative land surface analysis, is held every one or two years. The 2020 conference is hosted by the Research Institute for Geo-Hydrological Protection of the Italian National Research Council (CNR IRPI) and the Department of Physics and Geology of the University of Perugia. Our commission is an official partner of the conference. Alessandro Mondini, an SC member of our commission, is working for the CNR-IRPI, and has been negotiating with the conference organizing committee as a representative of our commission, and proposed the following theme "Modeling Extreme Processes and Natural Hazards on the Earth Surface".

4) Session at the 34th International Geographical Congress in Istanbul, Turkey, on August 17–21, 2020.

For the IGU Congress in Turkey, our commission has proposed a session "Contribution of Geography to Understanding Natural Disasters: Research, Education, and Society". The session will be chaired by two SC members of our commission: Takashi Oguchi and Marie-Jeanne Royer.

## C. Networking

- As noted above, our commission often communicates with another IGU commission, Land Degradation and Desertification, for mutual support and joint activities. The current SC members of the two commissions well understand the importance of such collaborations.

- Collaborations with the IAG have been realized as mentioned above, and will be strengthened based on the MoU signed? between the IGU and the IAG. The chair of our commission, Takashi Oguchi, has been an executive committee member of the IAG for the 2017–2021 period, which has been facilitating such collaborations.

- Our commission also collaborates with other societies, and notable cases are joint activities with the TGEO in Taiwan. The majority of TGEO members are specialists of remote sensing, and our connection facilitates applications of geospatial technology to geographical research and introduction of geographical ways of thinking to remote sensing researchers.

## **D.** Publications

URL of the website of commission:

http://oguchaylab.csis.u-tokyo.ac.jp/IGU\_Hazard/index.html