

## **Asian Conference on Disaster Reduction 2019**

**25 - 27 November 2019  
Ankara, Republic of Turkey**

### **Session 1: Recent Challenges and Innovative Approaches for Disaster Risk Reduction (DRR)**

**Background and Objective:** The Sendai Framework for Disaster Risk Reduction (SFDRR) highlights the utilization of space-based information and technologies for DRR in Priority for Action 1. In the item of 25 (c) mentions as “To promote and enhance, through international cooperation, including technology transfer, access to and the sharing and use of non-sensitive data and information, as appropriate, communications and geospatial and space-based technologies and related services; maintain and strengthen in situ and remotely-sensed earth and climate observations; and strengthen the utilization of media, including social media, traditional media, big data and mobile phone networks, to support national measures for successful disaster risk communication, as appropriate and in accordance with national laws”.

This session puts emphasis on innovative approaches as well as innovative technologies (e.g., Space Technology, Unmanned aerial vehicle (UAV), GIS, DRR Mobile Apps, etc.) in disaster risk reduction. The sharing will highlight how these innovations are locally applied and in what way it improves disaster resilience following SFDRR. It is expected that findings related to innovative approaches for strengthen DRR will be confirmed in this session.

**Date and time:** 11:15 – 12:30, 25 November 2019

#### **Chairs:**

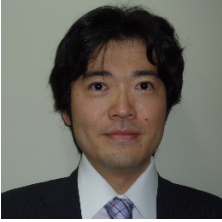
Dr. Manzul Kumar Hazarika, Director, Geoinformatics Center – Asian Institute of Technology

#### **Agenda:**

1. Sentinel Asia “Space-based collaboration disaster management platform in the Asia-Pacific region”  
Mr. Takanori Miyoshi, Japan Aerospace eXploration Agency (JAXA)
2. Introduction of METU -DMC Recent Projects of DMC and METU Academics-  
Assist. Prof. Dr. Meltem Senol Balaban, Department of City and Regional Planning, Middle East Technical University
3. Innovative Approaches in Turkey’s Urban Transformation Based on Disaster Risk Reduction  
Dr. Nagihan Gök, Urban Planner, Directorate General of Infrastructure and Urban Transformation, Ministry of Environment and Urbanization, Turkey
4. Red Relief Image Map and its Utilizing for Disaster Risk Reduction  
Dr. Hasi Bateer, General Manager, Global Business Development Division, Sales and Marketing Department, Asia Air Survey Co., Ltd.
5. Integrated Emergency Management System (Uttarakhand State, India)  
Dr. Manzul Kumar Hazarika, Director, Geoinformatics Center – Asian Institute of Technology

## Speakers of Session 1

### Mr. Takanori Miyoshi, the Japan Aerospace Exploration Agency (JAXA)



Mr. Takanori MIYOSHI works for the Japan Aerospace Exploration Agency (JAXA). He joined JAXA in 2008, and since 2017 he has been responsible for international cooperation for space-based disaster management activities at the Satellite Applications and Operation Centre (SAOC) of JAXA. He is appointed an Executive Secretariat member of Sentinel Asia. During his employment with JAXA, he was seconded to the Office for National Space Policy, Cabinet Office of Japan (from 2013 to 2014) as well, where he was responsible for international cooperation with governments, particularly from non-space-faring countries.

He was also seconded to the United Nations Office for Outer Space Affairs (UNOOSA) as an Expert for Human Space Technology Initiative (from 2014 to 2017), where he established a specific initiative “KiboCUBE”, together with the government of Japan and JAXA, which provides developing countries with the opportunity to utilize Japanese Experiment Module (Kibo) on-board the International Space Station for deploying cube satellites. He holds Bachelor of Laws from the University of Tokyo.

### Assist. Prof. Dr. Meltem ŞENOL BALABAN, Department of City and Regional Planning, Middle East Technical University



Assist. Prof. Dr. Meltem ŞENOL Balaban was graduated from the City and Regional Planning Department (CRP) at Middle East Technical University (METU) in 1998 with a Bachelor in City Planning and subsequently did a Master of Science in Urban Design. Dr. Balaban holds two PhD titles. In her City and Regional Planning PhD thesis she focused on flood disaster management in Turkish cities, targeting the associated risks for society and planning processes. In her second PhD in Urban Engineering she developed a GIS-based model for spatial distribution of potential urban spaces used as evacuation and temporary shelter sites and piloted this concept in a case study of a district in Istanbul. Her experience is

highly relevant when it comes to applying disaster risk prevention concepts in a very practical way on the municipal level.

After her Bachelor degree Dr. Balaban continued to work in CRP at METU. From 1999-2005 she was employed as Research and Teaching Assistant. During that period she was seconded as researcher to the German GeoForschungZentrum (GFZ) in Potsdam, where she dedicated herself to urban flood management in mega cities. Since 2005, with some breaks in between, she is working as part-time instructor and (since 2013) as Assistant Professor in CRP at METU. Main focus of her work is on integrating GIS in planning processes, risk management and mitigation planning, urban flood risk management, GIS-based modelling in mitigation planning. She is very familiar with all relevant national and international DRM methodologies and concepts. She authored a wealth of publications in relevant fields, e.g. the definition of barriers in the Turkish local context as regards climate change adaptation or lessons learnt for resilience in urban planning derived from an assessment of flood risk factors in riverine cities of Turkey, thus providing her with state-of-the-art knowledge and research experience.

Since August 2018 she holds the position of Director of METU Disaster Management Implementation and Research Center. For more information please visit her website;

<http://crp.metu.edu.tr/staff/meltem-senol-balaban>

**Dr. Nagihan Gök, Urban Planner, Directorate General of Infrastructure and Urban Transformation, Ministry of Environment and Urbanization, Turkey**



Attendee is an Urban and Regional Planner with the expertise of GIS in the Directorate General for Infrastructure and Urban Transformation Services at T.R. Ministry of Environment and Urbanisation since 2013 and a consultant in the TUBITAK 1001 Research Project entitled “The Impact of the Ottoman Public Debt Administration on Ottoman Fiscalism and on the Formation of the Committee of Union and Progress in Anatolia”.

She holds a Bachelors Degree from the City and Regional Planning Department (CRP) at Mimar Sinan Fine Arts University (2007), and a Masters Degree in Computer Aided Art and Design (ACAD) Masters Program (Pursuing Thesis) from Mimar Sinan Fine Arts University.

Her current work in Directorate General for Infrastructure and Urban Transformation Services focuses on urban transformation of risky areas to execute the processes and procedures for determining the transformation, renovation, and transfer areas in order to mitigate and reduce disaster risks and promote sustainability.

Also she as a GIS engineer involved in disaster mitigation aimed projects such as Seismic Hazard and Risk Assessment which resulted in developing a state-of-the-art system that assesses, monitors, and mitigates the seismic hazard and risk of the Emirate of Abu Dhabi that has been consulted by the Bogazici University Kandilli Observatory and Research Institute, also Earthquake project of Istanbul Microzonation and Updating of Probable Earthquake Losses for Istanbul which aimed determination of geological, geotechnical, geophysical features and areas with different hazard potentials in terms of earthquake effect and local ground conditions, creation of the solution suggestions by analysing the detected problems, then preparing the required map productions in the light of the obtained datas and finally by these products, preparation of “Land Suitability Maps” as a result.

**Dr. Hasi Bateer, Asia Air Survey, Co., Ltd**



Dr. Hasi Bateer worked for the Engineer of earthquake observation in Seismological Bureau of Inner Mongolia in China from August 1985 to May 1997. And he engaged for the Snow Avalanche and Landslide Research Center, Public Works Research Institute in Japan from December 2007 to May 2011. Also he studied earthquake-induced landslide in central and eastern Japan. At present, he belongs for the Global Business Development Division, Asia Air Survey, Co., Ltd, since April 2011. And he is working for global business development and global cooperation for Asia Air Survey as General Manger. His main field is professional Engineer (Construction, Applied Geology), mostly focusing on disaster risk reduction project,

such as deep-seated landslide risk evaluation.

**Dr. Manzul Kumar Hazarika, Director of the Geoinformatics Center, Asian Institute of Technology (AIT), Thailand**



Over the past 16 years, he has extensively worked in disaster management issues in more than 20 countries from the Asia-Pacific as well as the Caribbean regions. His work includes multi-hazard risk assessment, emergency mapping and damage assessment, community-based disaster management, and capacity building. He has been actively involved in developing a cloud-based disaster risk assessment platform in collaborations with ITC (Netherlands). While working, he interacted and worked closely with stakeholders at various levels including high-level government officials and donor agencies and he has developed a rich network of professionals and institutions through partnerships and inter-agency liaisons. He has also published several research articles on applications of

Remote Sensing and GIS in disaster management and related topics. He holds a Ph.D. degree in Civil Engineering from the University of Tokyo, Japan, an M. Eng. Degree in Remote Sensing and GIS from the Asian Institute of Technology (AIT) and an M.Tech. Degree in Soil and Water Conservation Engineering from IIT, Kharagpur.