UN-SPIDER International Workshop

Space-based Technologies for Disaster Risk Reduction - Assessing the Unseen Risks

7 - 9 December 2022

Bangkok, UN-ESCAP Conference Centre

(updated as of 8th December noon Bangkok time)

Co-organized by UNOOSA/UN-SPIDER and UNESCAP, in collaboration with the Ministry of Emergency Management of the People's Republic of China, the Asia Pacific Space Cooperation Organization (APSCO), the Asian Institute of Technology (AIT) and the Geo-Informatics and Space Technology Development Agency of Thailand (GISTDA)

Wednesday 7th December

Time	Session title Presentations titles	Moderator Speakers
08:00-08:45	Registration	
09:15-09:45	**Opening Session** - GISTDA Thailand - Ministry of Emergency Management (MEM) China - APSCO - AIT - ESCAP - UNOOSA **Group Photo**	**Moderator: Mr. Lorant Czaran, UNOOSA/UN-SPIDER** - Mr. Pakorn Apaphant, Executive Director GISTDA - Ms. Gao Kun, Director of International Department, MEM **(online)** - Mr. Mohammad Ebrahimi Seyedabadi, Director-General Education and Training Department, APSCO - Mr. Manzul Hazarika, Director Geoinformatics Center AIT - Ms. Tiziana Bonapace, Director, Information and Communications Technology and Disaster Risk Reduction Division (IDD) ESCAP - Mr. Niklas Hedman, Acting Director UNOOSA
09:45-10:00	Keynote Presentation UN-SPIDER	Mr. Lorant Czaran, Chief Vienna Branch UN-SPIDER, UNOOSA
10:00-10:15	Keynote Presentation ESCAP	Mr. Keran Wang, Chief, Space Applications Section, IDD, ESCAP
10:15-10:25	Keynote Presentation APSCO	Mr. Mohammad Ebrahimi Seyedabadi, Director-General Education and Training Department, APSCO
10:25-10:45	Keynote Presentation NDRCC China **(online)**	Ms. Li Suju, NDRCC China
10:45-11:10	**Coffee Break**	

	Session 1: Understanding and assessing unseen risks	**Moderator: Ms. Komali Kantamaneni, UCLan, U.K.**
11:10-11:30	Geospatial and Space Based Solutions on Environmental Issues. The Extreme Weather Events and Climate Change	Kanjana Koedkurang, Geo-Informatics Product Innovation Office GISTDA
11:30-11:50	RiskChanges - An Open-source Platform for Multi-hazard Risk Assessment	Manzul Kumar Hazarika, AIT
11:50-12:10	ESCAP's Risk and Resilience Portal for bridging science and policy gaps **(online)**	Madhurima Sarkar-Swaisgood, IDD, ESCAP
12:10-12:30	Promoting disaster preparedness and resilience by co-developing stakeholder support tools for managing the systemic risk of compounding disasters- the EU PARATUS project	Cees van Westen, University of Twente – ITC, Netherlands
12:30-12:50	Innovations in EO products and services applied to Disaster Resilience supported by ESA Global Development Assistance Program	Miguel A. Belenguer-Plomer, INDRA, Spain
12:50-14:10	**Lunch**	
14:10-14:30	The DHARMA Project: Philippine Space Agency's (PhilSA) contribution on the use of Earth Observation (EO) data for Disaster Risk Reduction and Management (DRRM) in the Philippines	Roel de la Cruz, Philippine Space Agency, Philippines
14:30-14:50	Drought Risk Evaluation in Iran using Geospatial Technology	Abdolreza Ansari Amoli, Iranian Space Agency, Iran
14:50-15:10	Evaluation of spaced based technology in Disaster Management in Sri Lanka	Amarasingha Arachchillage Anoja Kumudu Kumari Seneviratne, Disaster Management Centre, Sri Lanka
15:10-15:30	Conclusions Session 1, Discussion	All
15:30-15:50	**Coffee Break**	
	Session 2: Multi-hazard early warning	**Moderator: Mr. Manzul Hazarika, AIT Thailand**
15:50-16:10	Leveraging Commercial capabilities for Climate Action - Monitoring GHG emissions from space **(online)**	Harsha Vardhan Madiraju, World Geospatial Industry Council
16:10-16:30	North Coast of Java Land subsidence, changing and the Future conditions	Muhammad Rokhis Khomarudin, National Research and Innovation Agency, Indonesia
16:30-16:50	Radar Earth Observation (SAR) & Digital Elevation Model Solutions for Disaster Management **(online)**	Simone Valeska Sasse, Account Manager United Nations, Airbus, Germany
16:50-17:00	Conclusions Session 2, Discussion	All

Thursday 8th December

Time	Session title Presentations titles	Moderator Speakers
	Session 3: Assessing threats to ecosystems and nature-based solutions for building disaster resilience	**Moderator: Mr. Godstime James, NASRDA, Nigeria**
09:00-09:15	Mapping floods and green infrastructures from space for improving nature-based solutions	Miguel A. Belenguer-Plomer, INDRA, Spain
09:15-09:30	Development of Forest Biomass Estimation Model to monitor Carbon Stock change in Thailand	Kampanat Deeudomchan, Chief of Division, Geo-Informatics Management and Solutions Office, GISTDA
09:30-09:45	An assessment of Climate Change and coastal inundation through Satellite-Derived Datasets	Komali Kantamaneni, University of Central Lancashire, UK
09:45-10:05	Coastal sea level rise in the Philippines	Rosalie Reyes, University of the Philippines Diliman, Philippines
10:05-10:25	Digital Twinning applications for improved comprehension of Earth Resources, Disaster Risks, and Sustainability with systemic integration of risk reduction outreach programs	Venu Madhav Maroju, Continuum Planning and Development Trust, India
10:25-10:50	**Coffee Break**	
10:50 11:10	Pre-disaster monitoring of hotspots to achieve Sustainable Development Goals	Hamid Mehmood, Economic Affairs Officer, IDD, ESCAP
11:10-11:30	Disaster management law: Lessons on cooperation for Astro Environmentalism	Upasana Dasgupta, Jindal Global Law School, India
11:30-11:50	Forecasting disaster impacts to support anticipatory actions	Soomi Hong, DRR Section, IDD ESCAP
11:50-12:10	Geospatial technologies for environmental planning and forest studies in view of Climate Change	Vijayalakshmi Thatiparthi, Centre for Environment, JNTU Hyderabad, India
12:10-12:30	Eart observation data for disaster risk reduction in Sudan – a case study	xxxxxxx, National Remote Sensing and Seismic Authority, Sudan
12:30-12:45	Conclusions Session 3 and Discussion	All
12:45-14:15	**Lunch**	
	Session 4: Advances in Earth observation and allied technologies to cater needs of the end-users	**Moderator: Mr. Cees van Westen, University of Twente - ITC, Netherlands**
14:15-14:35	On-line access of EO data and information for monitoring hazards and disaster preparedness	Foltz Zachary, ARGANS Ltd., France
14:35-14:55	Predicting potential earthquakes and their Locations using Remote Sensing Technologies	Shunji Murai, AIT

14:55-15:15	Effective usage of open-source disaster information services for quick response in Disaster Situations - A case Study	Ganapathy Pattukandan, Vellore Institute of Technology (VIT), India
15:15-15:40	**Coffee Break**	**Moderator after Break: Ms. Komali Kantamaneni, UCLan, U.K**
15:40-16:00	Application of space base technology for disaster risk management in Asia and Africa	Niranga Alahacoon, IWMI, Sri Lanka
16:00-16:20	Simulation of the 7th February 2021 rock-ice avalanche event in the Rishiganga river valley of Uttarakhand Himalayas, India	Gagandeep Singh, Indian Institute of Technology Roorkee, India
16:20-16:40	Use of space-based technologies in humanitarian contexts	Angelina Savchuk, Netherlands Red Cross, Netherlands
16:40-17:00	Conclusions Session 4 and Discussion	All

Friday 9th December

Time	Session title Presentations titles	Moderator Speakers
09:00-10:30	***Special Joint Session: UN-Space – UN-SPIDER Bangkok Workshop Panel*** on Space-based Technologies for Disaster Risk Reduction organized by the UN-space Secretariat Presenters: Mr. Niklas Hedman, United Nations Office for Outer Space Affairs (UNOOSA) Ms. Kareff May Rafisura, Disaster Risk Reduction Section, Information and Communications Technology and Disaster Risk Reduction Division, (UNESCAP) Mr. Hwa Saup Lee, Safety and Security Information Management Section, Office of Information and Communications Technology (UNOICT) Ms. Dziana Pranichnikava, Office of Legal Affairs Ms. Aline Roldan, United Nations Satellite Centre (UNOSAT) Mr. Ken Holmund, Space Systems and Utilization Division, World Meteorological Organization Mr. Lorant Czaran, UNOOSA/UN-SPIDER	**Moderator: Mr. Lorant Czaran, UNOOSA/UN-SPIDER**

10:30-10:50	**Coffee Break**	
	Session 5: Effective Emergency Response	**Moderator: Mr. Manzul Hazarika, AIT Thailand**
10:50-11:20	Disaster Response mapping using the International Charter Space & Major Disasters (Roberto Biasutti ESA, Jolanda Patruno ESA PLES Team, Zac Foltz Argans Ltd.)	Roberto Biasutti, ESA
11:20-11:50	Network analysis of the activations of the selected satellite-based emergency mapping (SEM) mechanisms	Anastasia Kvasha, Central European University, Hungary
11:50-12:10	Application of international Earth Observation support mechanisms for optimum flood disaster response in Nigeria	Godstime James, National Space Research and Development Agency, Nigeria
12:10-12:30	Experience in the use of space technologies in monitoring emergencies and natural resources of Kazakhstan	Gulnara Bissenalina, Aerospace Committee of the Ministry of Development, Innovation and Aerospace Industry, Kazakhstan
12:30-12:45	The role of satellite communications in disaster management **(online)**	Ivan Suarez Castellano, Access Partnership, Spain
12:45-14:00	**Lunch**	
14.00-15:15	**Demonstration of the cloud processing environment of the International Charter Space & Major Disasters** (ESA Charter Mapper interactive demo of cloud platform)	Roberto Biasutti, ESA
15:15-15:35	**Coffee Break**	
15:35-16:10	**Demonstration of the cloud processing environment of the International Charter Space & Major Disasters** (continued) Q&A	Roberto Biasutti, ESA
16:10-16:30	Examples of new EO based products for exposure mapping (INDRA and DLR)	Miguel A. Belenguer-Plomer, INDRA, Spain
16:30-16:45	Session 5 Questions, Discussion	All
16:45-17:00	Workshop Closing Remarks	**UN-SPIDER**