



ASI – CEOS WGD International Workshop on “Earth Observation for Disaster Risk Management”



**Organised by Agenzia Spaziale Italiana / Italian Space Agency (ASI) &
the Working Group on Disasters (WGD) of the Committee on Earth Observation
Satellites (CEOS)**

ASI Headquarters in Via del Politecnico snc, Rome, Italy

16 September 2026

Scientific and Organising Committee

Deodato Tapete

Antonio Montuori

Simona Zoffoli

Francesco Longo

Ufficio “Osservazione della Terra” / “Earth Observation” Office,
Settore “Coordinamento Utenti, Data Policy e Downstreaming” / “User
Coordination, Data Policy and Downstreaming” Sector

Lóránt Czárán

United Nations Office for Outer Space Affairs (UNOOSA)

Andrew Eddy

Athena Global

Working Group on Disasters (WGD)
of the Committee on Earth Observation Satellites (CEOS)

SCIENTIFIC-TECHNICAL PROGRAMME

16 September 2026

Title	Speaker	CEST (UTC+2)	IST (UTC+5:30)	PST (UTC-7)
Participants registration		08:30 – 09:00	12:00 – 12:30	23:30 – 00:00
Welcome and Workshop objectives	Simona Zoffoli & Francesco Longo Italian Space Agency (ASI)	09:00 – 09:05	12:30 – 12:35	00:00 – 00:05
	Lóránt Czárán United Nations Office for Outer Space Affairs (UNOOSA)	09:05 – 09:10	12:35 – 12:40	00:05 – 00:10
Session #1 “CEOS WGD and DRM at space agencies” Chair: Antonio Montuori and Deodato Tapete ASI				
CEOS WGDISTASTERS: The Italian Space Agency contribution to disaster response	Antonio Montuori ASI	09:10 – 09:20	12:40 – 12:50	00:10 – 00:20
EO for Resilience: NASA's SIT Chair Term & Disasters Program	Eleanor Pierel CEOS-SIT, NASA	09:20 – 09:30	12:50 – 13:00	00:20 – 00:30
Innovation, Coordination and Capacity Building in the International Charter ‘Space and Major Disasters’	Zachary Foltz ACRI-ST for ESA	09:30 – 09:40	13:00 – 13:10	00:30 – 00:40
Hyperspectral Earth Observation for Disaster Response: First Operational Experiences with EnMAP in the International Charter: Space and Major Disasters	Samuel Stettner German Aerospace Center (DLR)	09:40 – 09:50	13:10 – 13:20	00:40 – 00:50
Copernicus LAC EO Service Development - developing open EO services for DRM	Andrew Eddy Athena Global	09:50 – 10:00	13:20 – 13:30	00:50 – 01:00
The Role of EO Small Satellites in Strengthening Disaster Risk Management: Catalonia's Strategy and Use Cases	Davoud Omarzadeh Institute of Space Studies of Catalonia (IEEC)	10:00 – 10:10	13:30 – 13:40	01:00 – 01:10
NADI-RISK: Natural Disaster Risk Assessment in Cyprus using Earth	Marios Tzouvaras	10:10 – 10:20	13:40 – 13:50	01:10 – 01:20

Observation and geospatial datasets	ERATOSTHENES Centre of Excellence & Cyprus University of Technology, Cyprus			
Regional Digital Public Infrastructure project on Human-Nature Security and Resilience in Africa	Remi Chandran Remote Sensing Technology Center of Japan (RESTEC)	10:20 – 10:30	13:50 – 14:00	01:20 – 01:30
Further Q&A & discussion		10:30 – 10:40	14:00 – 14:10	01:30 – 01:40

Coffee break	CEST (UTC+2)	IST (UTC+5:30)	PST (UTC-7)
	10:40 – 11:00	14:10 – 14:30	01:40 – 02:00

Session #2 “Wildfires & Forestry” Chairs: Antonio Montuori & Lóránt Czárán ASI and UNOOSA/CEOS WGD				
Title	Speaker	CEST (UTC+2)	IST (UTC+5:30)	PST (UTC-7)
Spatio-Temporal and Seasonal Characterization of Global Fire Regimes	Athira V. Mukundan Indian Institute of Remote Sensing (IIRS), ISRO	11:00 – 11:10	14:30 – 14:40	02:00 – 02:10
CEOS Wildfire Preparedness Pilot - Fuel Dryness	Marta Yebra The Australian National University	11:10 – 11:20	14:40 – 14:50	02:10 – 02:20
Presentation of the new CEOS LSI-VC Wildfire Group - Objectives and Activity Scope	Steffen Dransfeld European Space Agency (ESA)	11:20 – 11:30	14:50 – 15:00	02:20 – 02:30
How EO data are used by the National Fire Corps (CNVVF) of Italy to support urgent technical rescue during disaster response, fire prevention and surveillance	Gianmarco Valletta Italian National Fire Corps (CNVVF)	11:30 – 11:40	15:00 – 15:10	02:30 – 02:40
AI-Enabled Forest Structure Mapping from Multi-Channel SAR to Support Disaster Risk Management	Francesca Razzano University of Naples ‘Parthenope’	11:40 – 11:50	15:10 – 15:20	02:40 – 02:50

Session #3 “Landslides”

Chairs: Deodato Tapete and Andrew Eddy

ASI and Athena Global/CEOS WGD

Title	Speaker	CEST (UTC+2)	IST (UTC+5:30)	PST (UTC-7)
An Earth Observation based approach in characterization of selected landslides and debris flows in parts of the Indian Western Himalaya: From Causes to Early Warning	Shovan Lal Chatteraj Indian Space Research Organisation (ISRO)	11:50 – 12:00	15:20 – 15:30	02:50 – 03:00
Remote sensing solutions for heavy rainfall induced landslides detection and identification of slow landslides impacting on infrastructure	Daniele Giordan Institute of Geosciences (CNR-GEO), National Research Council (CNR) of Italy	12:00 – 12:10	15:30 – 15:40	03:00 – 03:10
The UGLC Global Landslide Catalogue: Building a Harmonized Data Foundation for AI-Driven Landslide Susceptibility and Hazard Modeling at Multiple Scales	Saverio Mancino University of Bari Aldo Moro	12:10 – 12:20	15:40 – 15:50	03:10 – 03:20
Assessing the contribution of MT-DInSAR SAOCOM-1 L-band observations to the Italian landslide monitoring scenario	Manuela Bonano Institute for Electromagnetic Sensing of the Environment (IREA), National Research Council of Italy (CNR)	12:20 – 12:30	15:50 – 16:00	03:20 – 03:30
Sentinel-1 imagery for quantitative landslide vulnerability assessment of buildings at regional scale	Francesco Poggi University of Florence	12:30 – 12:40	16:00 – 16:10	03:30 – 03:40

Board number	Poster session Hall in front of ASI's canteen	CEST (UTC+2)	IST (UTC+5:30)	PST (UTC-7)
		12:40 – 13:30	16:10 – 17:00	03:40 – 04:30
1	ComeOnboard Project: How to empower PRISMA Second Generation Mission with AI-driven Onboard Edge Computing for Real-Time disasters detection			

	Dario Spiller et al. Sapienza University of Rome, Italy
2	Cross-Sensor Portability of On-Board Wildfire Detection: Towards Cooperative Satellite Constellations Alvise Ferrari, Lorenzo Manunza et al. GMATICS srl, Italy
3	Machine Learning for Super Resolution Burned Area Mapping Isabelle Adorisio et al. Serco Italia S.p.A., Italy
4	SFIDE and the EOSIAL Viewer: Multi-Source Near-Real-Time Fire Detection from MTG-FCI and other Satellite Platforms for Disaster Risk Management Valerio Pampanoni & Giovanni Laneve Sapienza University of Rome, Italy
5	P-Band TomoSAR and Machine Learning for Forest Disaster Risk Assessment Francesco Buonavolontà et al. University of Sannio, Italy
6	Automated detection of active mass movements in SAR wrapped interferograms using CNN Fabio Bovenga et al. CNR-IREA, Italy
7	From Landslide Detection to Multi-Source LLM-Based Reporting: A Complete Earth Observation Framework for Rapid Assessment of Post Disaster Scenarios Mohammed Alrugimi et al. University of Trento and University of Florence, Italy
8	From rapid screening to landslide evolution monitoring. Multispectral satellite Earth Observation workflows for landslide emergency response and post-event analysis Davide Notti et al. CNR-GEO, Italy
9	Long-term investigation of the Mendatica landslide through the integration of MT-InSAR measurements, building damage surveys, and ancillary data Davide Cardone et al. CNR-GEO, Italy; Faculty of Geo-Information Science and Earth Observation (ITC), the Netherlands
10	Integrating Multi-Sensor Satellite Observations to Reconstruct the Complete Evolution of the Niscemi Landslide Nicola Casagli et al. University of Florence, Italy

11	Dynamic Assessment of Landslide Activity along Road Corridors Using Multi-Mission SAR Interferometry Cristiano Lanni & Deodato Tapete Anas SpA – Gruppo FS and ASI, Italy
12	Beyond Classical Change Detection: A COSMO-SkyMed and Machine Learning Framework for Multiscale Post-Disaster Landslide Mapping and Environmental Recovery Gabriele Punzo et al. University of Sannio, Italy
13	High altitude slope instabilities: detection, monitoring and challenges Chiara Crippa et al. Eurac Research, Institute of Earth Observation, Italy
14	Spatio-Temporal Hazard Monitoring for Disaster Risk Management of Transport Infrastructures through Multi-Source Remote Sensing and Intelligent Data Analytics Mattia Reale et al. University of Sannio, Italy
15	Rheticus® Safeland: New Frontiers in Hydro - Geomorphological Risk Management Anna Sblano et al. Planetek Italia, Italy
16	DeepHail: Hail Monitoring and Nowcasting Using AI applied to geostationary satellite observations in combination with auxiliary data Emanuela Vessichelli et al. University of Sannio, Italy
17	Large-scale delineation of flood prone areas and risk estimation: Results from the RESCUE_SAT project Elena Volpi et al. Roma Tre University, Italy
18	On-board flood segmentation under edge constraints: automated architecture search and quantization Alessandro Togni et al. AizoOn Technology Consulting, Italy
19	From Orbit to Action: AquaCubeAI for Onboard Coastal Water-Quality Alerts and Disaster Risk Management Francesca Razzano et al. University of Naples ‘Parthenope’, Italy
20	TALOS: An End-to-End AI Framework for Operational SAR Oil Spill Monitoring Vito Moliterni et al. Starion Group Italia S.p.A., Italy

21	Earth Observation for Disaster Risk Management: Monitoring Coastal Erosion on Ko Phi Phi Don, Thailand, Using Multi-Temporal Satellite Imagery Sara Aharon Alexandru Ioan Cuza University of Iași, Romania
22	A novel approach for estimating water level changes through SAR amplitude data Lorenza Ranaldi et al. Sapienza University of Rome
23	Harvesting Heat: Agricultural Cycles as Hidden Drivers of Heat Risk Davoud Omarzadeh et al. Institute of Space Studies of Catalonia (IEEC), Spain
24	From Multimodal Building Damage Assessment to Preliminary Recovery Monitoring after the 2025 Myanmar Earthquake Using CSG SAR, Pléiades Imagery and Building Footprints Luigi Russo et al. University of Pavia, Italy
25	Monitoring Urban Change and Post-Earthquake Recovery Using Deep Learning and Sentinel-2 Time Series: The Osmaniye Case Study Pietro Di Stasio et al. University of Sannio, Italy
26	Inflation Dynamics and Magma Recharge within the Svartsengi Volcanic System (SW Iceland) Inferred from GNSS and InSAR Data Chiara Lanzi et al. Icelandic Meteorological Office (IMO), Iceland
27	Tracking volcanic unrest episodes at Campi Flegrei and Fentale calderas using long (≥ 25 years) time series of thermal infrared data from ASTER and Landsat satellites Federico Galetto et al. INGV, Italy
28	A novel risk assessment workflow for differential land subsidence based on satellite InSAR and urban settlement data: present-day risk scenario in the metropolitan cities of Italy Francesca Cigna et al. CNR-ISAC, Italy
29	Multi-Hazard Risk Mapping for Power Grid Resilience Sara Ciaccia, Vincenzo Massimi et al. Planetek Italia, Italy
30	Leveraging Observation Networks for Space Weather Disaster Risk Management: The INGV Operational Experience Claudio Cesaroni et al.

	INGV, Italy
31	CALHYPSO: High resolution DSMs from single RGB images Riccardo Contu & Andrea Nascetti CALHYPSO
32	Digitalizing Community Disaster Risk Management Plans to Strengthen Early Warning and Community Resilience in Armenia Lilit Minasyan Climate Change and Disaster Risk Management Specialist, Armenia; University of Lisbon, Portugal
33	ORSS: Integrating Copernicus EGMS and Open Data for Preliminary Screening and Prioritization of School Sites Nicholas Rasetta Ministero dell'Istruzione (MUR), Osservatorio sul Rischio Strutturale Scolastico (ORSS), Italy
34	From Earth Observation to Actionable Geohazard Digital Twins: the GEO-DREAM and GET-it Initiatives Elisa Trasatti et al. INGV, Italy
35	Digital Twin Earth Hydrology Next: advanced EO integration for high-resolution operational water cycle monitoring and civil protection Jaime Gaona et al. CNR-GEO, Italy
36	A validation procedure to assess the precision and accuracy of satellite-derived land surface temperature Anastasiia Khimchenko et al. Sapienza University of Rome, Italy
37	Matera Space Center Lab Deborah Katia Pallotti et al. ASI, Italy

Lunch	CEST (UTC+2)	IST (UTC+5:30)	PST (UTC-7)
	13:30 – 14:30	17:00 – 18:00	04:30 – 05:30

Session #4 “Floods & Drought”

Chairs: Antonio Montuori and Marcelo Uriburu Quirno

ASI and CONAE/CEOS WGD

Title	Speaker	CEST (UTC+2)	IST (UTC+5:30)	PST (UTC-7)
Unsupervised Continuous Flood Mapping from Multi-temporal, Multi-view, and Multi-sensor SAR Sequences	Shafi Ullah Miakhil University of Pavia	14:30 – 14:40	18:00 – 18:10	05:30 – 05:40
Surface Water Monitoring for Hydrological Risk Forecasting: a Multisensor Earth Observation and Deep Learning Framework	Alessia Iannaccone University of Sannio	14:40 – 14:50	18:10 – 18:20	05:40 – 05:50
Reducing latency in flood monitoring: A Sentinel-2 Level 0 pipeline for on-board generation of water/land masks	Debhora Bonfiglio aizoOn Technology & Consulting, and University of Turin	14:50 – 15:00	18:20 – 18:30	05:50 – 06:00
The National Drought Monitoring Board (MNMS) of Argentina: an interinstitutional model for multi-index drought assessment and its integration with early warning systems	Luciana D'Acunto Instituto de Clima y Agua, CIRN, INTA, Argentina	15:00 – 15:10	18:30 – 18:40	06:00 – 06:10
A hierarchical robust combined index for agricultural drought detection and monitoring using EO big data	Filippo Bocchino Sapienza University of Rome	15:10 – 15:20	18:40 – 18:50	06:10 – 06:20
Modeling Alpine Glaciers Melting using GEDI and ICESat-2 Altimetry data	Sofia Pelosi Sapienza University of Rome	15:20 – 15:30	18:50 – 19:00	06:20 – 06:30

Coffee break	CEST (UTC+2)	IST (UTC+5:30)	PST (UTC-7)
	15:30 – 15:45	19:00 – 19:15	06:30 – 06:45

Session #5 “Earthquakes and building damage assessment”

Chairs: Deodato Tapete and Zachary Foltz

ASI and ESA/CEOS WGD

Title	Speaker	CEST (UTC+2)	IST (UTC+5:30)	PST (UTC-7)
The use of high-resolution satellite-derived elevation data in earthquake hazard identification and mitigation	Richard Walker University of Oxford	15:45 – 15:55	19:15 – 19:25	06:45 – 06:55
From Building Damage Assessment to Post-Disaster Recovery Monitoring: An Integrated Very High-Resolution SAR and Geospatial Workflow for the 2023 Türkiye–Syria Earthquake	Luigi Russo University of Pavia	15:55 – 16:05	19:25 – 19:35	06:55 – 07:05
Earthquake damage mapping by means of SAR and Super-resolution Optical images	Christian Bignami National Institute of Geophysics and Volcanology (INGV)	16:05 – 16:15	19:35 – 19:45	07:05 – 07:15
Extending VHR Optical/SAR Building Damage Assessment Benchmarks with Multi-Resolution TerraSAR-X Data: Impact of Sensor Variety on Model Robustness	Christian Hümmer German Remote Sensing Data Center (DFD), German Aerospace Center (DLR)	16:15 – 16:25	19:45 – 19:55	07:15 – 07:25

Session #6 “Processing and application platforms”

Chairs: Simona Zoffoli and Deodato Tapete

ASI

Title	Speaker	CEST (UTC+2)	IST (UTC+5:30)	PST (UTC-7)
From Earth Observation to Institutional Decisions: Rheticus® Services for Disaster Resilience in Developing Countries	Vincenzo Massimi Planetek Italia	16:25 – 16:35	19:55 – 20:05	07:25 – 07:35
Empowering Disaster Risk Management through Earth Observation: The Role of	Alessia Cattozzo	16:35 – 16:45	20:05 – 20:15	07:35 – 07:45

GDA Analytics and Processing Platform	Meteorological and Environmental Earth Observation (MEE0)			
Debris-Flow prediction using Digital Twins: the IRIDE Cyber Italy Framework	Stefano Scancella Serco Italia S.p.A. & Francesco Zaffanella Autorità di Bacino Distrettuale delle Alpi Orientali/Eastern Alps District Basin Authority	16:45 – 16:55	20:15 – 20:25	07:45 – 07:55
From Earth Observation Data to Operational Decisions: Platform-as-a-Service Solutions for Geohazard and Infrastructure Risk Management	Alessandro Brunetti NHAZCA	16:55 – 17:05	20:25 – 20:35	07:55 – 08:05
Climate Hazard Data to Decision Support: A Settlement-Level Interactive Climate Hazard Atlas for Armenia	Lilit Minasyan Climate Change and Disaster Risk Management Specialist, Armenia; University of Lisbon, Portugal	17:05 – 17:15	20:35 – 20:45	08:05 – 08:15

Conclusive discussion & closing remarks	CEST (UTC+2)	IST (UTC+5:30)	PST (UTC-7)
	17:15 – 17:25	20:35 – 20:45	08:05 – 08:15