

# Programme

# MHEWC-II

The Second Multi-Hazard Early Warning Conference  
13-14 May 2019, Geneva, Switzerland

Sunday  
12 May | 13:00-18:00 **Badge collection at WMO**  
NB: Those who did not register online for the GP2019 can register in person at The International Conference Center Geneva (CICG)

## Main Events (Salle Obasi, WMO)

## Side Events Daily 13:00-14:00

Monday  
13 May

**Opening Session**  
Welcome, objectives, conceptual background, system-based thinking for multi-hazard early warning systems (MHEWS), examples

11:00-11:30 *COFFEE BREAK*

**Session 1**  
The "Last Mile"

13:00-14:30 *LUNCH*

**Session 2**  
Enhancing the link between Early Warning and Early Action (EWEA) through Impact-Based Forecasts (IBF)

16:00-16:30 *COFFEE BREAK*

**Session 3**  
Science, technology and innovation

19:00-20:30 **Reception**

**Side Event 1**  
Climate Risk and Early Warning Systems (CREWS) Initiative - Country practices, people-centred early warning  
(Salle Obasi)

**Side Event 2**  
Bridging disciplines and building networks to future-proof MHEWS - young professional's perspective  
(Salle B)

Tuesday  
14 May

**Session 4**  
Making early warning systems (EWS) multi-hazard

11:00-11:30 *COFFEE BREAK*

**Session 5**  
Measuring the Effectiveness of MHEWS

13:00-14:30 *LUNCH*

**Session 6**  
Governance for MHEWS

16:00-17:00 **Closing session**  
Wrap-up, Progress and challenges, good practice highlights, input GP2019

**Side Event 3**  
Big data and Space applications  
(Salle Obasi)

**Side Event 4**  
The Common Alerting Protocol (CAP)  
(Salle B)

**Side Event 5**  
Health and biological hazards  
(Salle C1)

**Side Event 6**  
Multi-sector and multi-hazard risk monitoring systems for Agriculture, Food Security and Nutrition  
(Salle C2)

**Side Event 7**  
Strengthening local-level EWS to build resilience to climate extremes and disasters) (Press Room)

Friday  
17 May | 14:30 - 16:00 **2019 Global Platform for Disaster Risk Reduction (GP2019)**  
Working session on MHEWS  
CICG Room 4  
NB: This event is not at WMO

# Session Themes

## Opening Session:

Welcome to and objectives and expected outcomes of the Conference; Conceptual background on multi-hazard early warning systems; System-based thinking as prerequisite; Recent examples of advances in multi-hazard early warning systems; Rationale for and relevance of multi-hazard early warning systems and their promotion;

## Session 1

The “last mile”: (i) Trust between institutions and the general public; (ii) Accountability issues; (iii) Co-design of (multi-hazard) early warning systems – tailoring warnings and advisories to specific user needs through fostering participatory approaches; (iii) Achieving last mile connectivity and an acceptable balance to provide a reliable alert in the shortest possible time; (iv) Understanding how risk perceptions, past experiences and awareness shape the understanding of warning messages; (v) Difference between real risk and perceived risk (e.g. in urban vs. rural areas); (vi) Risk and warning communication (considering education, training and awareness raising efforts at national and local levels designed for specific target groups of the population and the strategic role of the international community in facilitating such initiatives and supporting the national authorities); and (vii) and Using the CAP standard to leverage all available media for all hazards alerting;

## Session 2

Enhancing the link between Early Warning and Early Action (EWEA) through impact-based forecasts (IBF): (i) Readiness of communities to take action on early warnings; (ii) Need for accessing and including vulnerability and exposure data into the hazard models to identify potential impact areas and magnitudes; (iii) Sectoral impacts addressed by e.g. food-chain and health related warning systems; (iv) Good practices on integrating indigenous/local knowledge on the risk assessment and warning message design; (v) Good practices and challenges to incorporate the impact dimension in warning messages to allow relevant decision making; and (vi) Forecast-based action and financing;

## Session 3

Science, technology and innovation: (i) Improving observation, monitoring and forecasting systems and other technologies (e.g. portable modelling); (ii) Effective use of latest/advanced and appropriate/suitable/fit-for-purpose science and technology (e.g. innovative low-cost measures and novel IT tools); (iii) Governance challenges to effectively and sustainably integrate and test new technologies, approaches, data sources (Big data, satellite-based data, crowdsourcing, etc.) to enhance monitoring and forecasting capabilities and to build and share relevant and fit-for-purpose risk information; (iv) Ensure socially relevant warning communication technologies; (v) Incorporating science and technical research departments and institutes, agencies, and universities in national (multi-hazard) early warning systems (e.g. through working closely with academia through secondments, PhD programmes and/or embedding research institutes/departments within the organizations delivering key components of the warning system; (vi) Implications for the research agenda; and (vii) Private-public collaborations for improved observation, monitoring and forecasting;

## Session 4

Making early warning systems multi-hazard: (i) Implementing a multi-hazard approach (marine submersion, flash floods, landslides storms, tropical cyclones, earthquakes and tsunamis for coastal regions, liquefaction, etc.) also from an observational network perspective and given that many hazards are consecutive/cascading/compound events and have spatio-temporal dependencies; (ii) Harmonising multi-hazard impact estimations coming from hazard-specific algorithms and analyses; Multi-hazard early warning systems for man-made (air quality, atmospheric accidental pollution, oil spills), nat-tech and biological hazards, agriculture-related and health-related hazards (looking at the correlations between food chain and health, from climate to short term); (iii) Capturing cascading effects of a hazard (e.g. volcanic eruption that provokes underwater landslides that can trigger tsunamis) vs. simultaneous hazards or all hazards vs. multiple hazards; (iv) Considering different time scales from real time to a seasonal perspective (tsunami warnings vs El Niño-la Niña SOPs); (v) Estimating the

reduction or increase of vulnerability to a hazard caused by a prior hazard/disaster event; and (vi) Making hazard-specific early warning systems interoperable and integrating them to become a reliable multi-hazard early warning system;

## Session 5

Evaluation of the socio-economic benefits of multi-hazard early warning systems: (i) Assessing the performance and scope of (current) hazard-specific and multi-hazard early warning systems, including how to quantify how many people have access to and benefit from a multi-hazard early warning system; (ii) Return on investment of (multi-hazard) early warning systems and EWEA; and (iii) Assessing the integration of early warning systems for individual hazards into multi-hazard early warning systems and the usefulness of a system specific to one hazard for other hazards/purposes;

## Session 6

Governance for multi-hazard early warning systems: (i) Regulatory/legal frameworks; (ii) Institutional arrangements; (iii) Partnerships, including the role of the private sector (with its positive and negative impacts, especially for sustainable funding), of civil society and of international cooperation; (iv) Financing and sustaining multi-hazard early warning systems to fulfil the global Targets (e) and (g) of the Sendai Framework; (v) Lessons learnt from the recent reporting by countries on Target (g); (vi) Perspectives on how countries are planning/shaping their policies to implement Target (g); (vii) Increasing human resources especially those with multi-disciplinary skills and young professionals; and (viii) Integration of early warning systems as part of national and local disaster risk reduction strategies (Linkage to Sendai global Target (e));

## Closing Session:

Wrap up of the Conference sessions, addressing progress, evaluating the current situation through (regional) assessments of effectiveness and investments)andsummarizingchallenges; Highlight of good practices; Formulation of input into the GP2019 working session on MHEWS and the High-level dialogues.