

Agenda item 4 (a) ii. Emerging and transformational adaptation technologies: early warning systems

TEC GEO policy brief: Realizing Early Warnings for All: Innovation and Technology in support of Risk-Informed Climate Resilience Policy and Action

Technology Executive Committee, 29th meeting and TEC-CTCN AB Joint session
17-19 and 20 September 2024, Bonn, Germany



1- Updates on the work since TEC 28



Pemy Gasela

Activity co-lead for emerging and transformational adaptation technologies (Activity A.2.1.)
Technology Executive Committee (TEC)

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Timeline of actions

- March 2023 – TEC 26: Agreement on the topic of EWS for the TEC work on adaptation technologies
 - September 2023 – TEC 27: Launch of work in partnership with GEO under the EW4All and agreement on key elements of a joint knowledge product
 - November 2023 – GEO Week: Engagement with the GEO community and gathering inputs and good practices
 - December 2023 – COP 28: Engagement with relevant stakeholders to raise the visibility of the work and inform the development of the knowledge product
 - February 2024: Draft annotated outline reviewed by the TEC activity group (and GEO/EW4All experts)
 - March 2024: zero draft of the policy brief is under review by the TEC activity group
 - April 2024 – TEC 28: Feedback on the 1st draft and discussion of preliminary findings
 - June 2024: side event at SB60 and a [UNFCCC blog](#)
 - July 2024: 2nd draft of the policy brief reviewed by the TEC activity group (and EW4All experts) for comments & feedback on section 3
 - August 2024: Final draft of policy brief with KM&R reviewed/discussed by the TEC activity group meeting
 - **September 2024 – TEC 29: Finalizing the draft policy brief and its KM&R**
 - November 2024 – COP 29: Launch of the policy brief
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Ongoing:

- Engagement with the EW4All initiative to ensure synergies and complementarity between this work and broader efforts under the initiative (i.e. 2024 Status Report on MHEWS)
- Coordination with Parties and observers for launch
- Promotion of this work through relevant outreach channels and engagement, as appropriate



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Highlight from the work of the activity group since the launch of work

September 2023 - Launch of work as part of the EW4All



November 2023 - GEO Week and Ministerial Summit

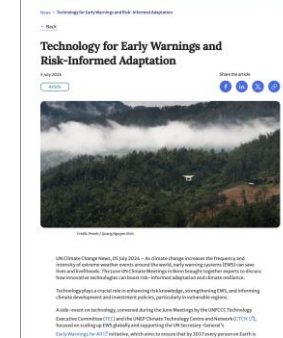


December 2023 - COP28 in Dubai



SB 60 (10 June)- Side event:
Innovation and technology in support of
risk-informed climate adaptation and
Early Warnings for All

Published UNFCCC blog



2- Updates on the final draft policy brief and key messages and recommendations



Rui Kotani

Disaster Risk Reductions Coordinator and EW4All focal point, the Group on Earth Observations (GEO) Secretariat

Type: policy brief

Content: policy insights and technology options for advancing climate information and risk knowledge and fostering risk-informed adaptation policy and action in vulnerable contexts, including in LDCs and SIDS

Contributors: GEO community, EW4All partners, climate funds, UNFCCC constitutes bodies and other interested stakeholders

Target audience: policy-makers at the national levels who are involved in the formulation and implementation of DRR, climate change adaptation, loss and damage, and climate technology plans, policies and actions

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| | <ul style="list-style-type: none"> ➤ Abbreviations & acronyms ➤ Forward & acknowledgements ➤ (Executive summary (=KM&R)) ➤ Why this brief ➤ Introduction |
| Section 1 Policy landscape | <ul style="list-style-type: none"> 1.1. Global status of MHEWS 1.2. Tech needs & priorities 1.3. Barriers and enablers 1.4. Trends and key considerations in tech implantation |
| Section 2 Innovation & Tech solutions | <ul style="list-style-type: none"> 2.0. Background 2.1. Production of RK <small>sensors, citizen science, AI</small> 2.2. Use of RK <small>Simulation Models, IoT, GNSS & TRF, Cloud Computing</small> 2.3. Access to RK <small>GIS, API, ARD & Data Cubes</small> 2.4. Enabling Environment for improving RK <small>Capacity-building, Partnerships and Int'l Cooperation, Indigenous & Traditional Knowledge</small> 2.5. Opportunities & challenges |
| Section 3 KFM&R | <ul style="list-style-type: none"> ➤ Key findings ➤ Recommendations |
| | <ul style="list-style-type: none"> ➤ References |

Introduction:

- Clarified the target audience of KM&R: “especially for policymakers and those design and implement projects”

Section 1:

- Moved Lessons learned of funding entitles from Annex into 1.3 (Table 1)
- Updated statistics on regional and global status of MHEWS, based on consultation with UNDRR

Section 2:

- Added use cases to better showcase the linkages between tech applications and elements of Risk Knowledge (RK)
- Additional information and examples on gender-related aspects in the application and uptake of technologies

Section 3:

- Developed based on preliminary findings and inputs from the SB60 side events and comments
- Fully aligned with the 1-page Key Messages and Recommendations

[FINAL DRAFT – Version AUGUST 2024]

Realizing Early Warnings for All: Innovation and Technology in support of Risk- Informed Climate Resilience Policy and Action

A joint policy brief by the UNFCCC Technology Executive Committee and the Group on Earth Observations



Credit: Faith Kathambi Mutegi (2023). Available at: [Loss and Damage in Focus: 10 Years of the Warsaw International Mechanism \(WIM\)](#).

3- Looking ahead



Mira Markova

Programme Management Officer, United Nations Office for Disaster Risk Reduction
(UNDRR)

Looking ahead



| Timeline | Proposed milestones in the implementation of work on EWS |
|--|---|
| October 2024 | Finalizing the document for publishing online (ttclear and EW4All websites) Coordination with the <u>2024 Status Report on MHEWS</u> by WMO/UNDRR for cross-reference |
| November 2024 at COP29 | Launch of the document at Earth Information Day |
| Rollout as part of EW4All Pillar 1 through 2027 | Operationalization through the Pillar 1 toolkit, as part of the EW4All rollout process; Alignment with Handbook on Use of Risk Knowledge for EWS & other key knowledge products; Rollout in countries through national workshops, trainings and learning labs; visibility through high-level events such as GPDRR, EW4All MSF, etc. |
| 2025-2027 | Potential follow-up work on EWS jointly with CTCN towards implementation |

Looking ahead – rollout & operationalisation through EW4All



- **TEC GEO policy brief as part of Pillar 1 Toolkit:** concrete tools to build technical capacity in countries to strengthen national EWS implementation; operationalization through training modules
- **Handbook on Use of Risk Knowledge for EWS:**
 - **Purpose:** To guide practitioners on integrating risk knowledge into the design and operation of Early Warning Systems (EWS) for effective disaster risk reduction.
 - **Content:** Covers processes for using risk information across EWS pillars: monitoring, impact forecasting, communication, and preparedness actions.
 - **Target Audience:** National institutions, meteorological and hydrological services, disaster risk management authorities, and international organizations.
- **Online toolkit for wider outreach:**
<https://earlywarningsforall.org/site/early-warnings-all/implementation-toolkit>



Thank you!

