Role of Broadcasting in Effective Early Warning Dissemination

Pre-event 20th Asia Media Summit (AMS) 2025

Report

July 2025,

Siem Reap, Cambodia

1. Introduction

ITU Regional Office for Asia and the Pacific organized an event on the role of broadcasting in effective early warning dissemination on 21 July 2025. The workshop was conducted as a pre-event during the 20th Asia Media Summit (AMS) 2025, which was organized by the Asia-Pacific Institute for Broadcasting Development (AIBD) in Siem Reap, Cambodia.

The event targeted to enhance the knowledge of participants on national early-warning systems and the role of broadcasting, both traditional and digital, with a special focus on implementing Cell Broadcast systems and leveraging the benefits of Common Alerting Protocol (CAP). It also included a tabletop simulation focused on early-warning communication using a CAP-implemented scenario.

The workshop also included a live pilot demonstration of Cell Broadcast solution, which was conducted as part of a bilateral collaboration of C-DOT India and the Ministry of Post and Telecommunications of Cambodia, developed under ITU's Partner-to-Connect (P2C) initiative.

2. Scope and Structure

The event was organized as a physical event and brought together participants working in national broadcasting, disaster management, the ICT industry, academia, UN agencies, development partners, and the telecom sector. The session details of the event are as follows:

Session 1: Broadcasting in the National Early Warning and Resilience Strategy

Session introduced the Early Warnings for All (EW4All) initiative, its multi-channel approach to warning dissemination and communications, and the overall design of national Early Warning Systems (EWS). It also featured the role of broadcasting in disseminating timely and accurate information to the public about impending hazards. The session also highlighted how broadcasting can be embedded into best practices of EW through standardized technologies (e.g., cell broadcasting and location-based messaging, AI, satellite D2D), early warning dissemination maps, and protocols (Common Alerting Protocol).

As part of the Q&A session, additional clarifications were provided regarding how to address the inclusivity dimension of EW dissemination, recommendations for managing national frequency bands for radio broadcasting, and strategies for tackling mobile network coverage limitations in specific geographic areas using alternative channels.

Session 2: Role of broadcasting in disaster prevention and early warning

The session highlighted the strengths and challenges of traditional broadcasting, examining the use of modern broadcasting and emerging technologies, present best practices and success stories, and explored the role of AI in broadcast-based Early Warning Systems. Some of the key areas covered under merging technologies for broadcasting include among others, real time translations, geo-tagged and geo-fenced alerting, predictive risk modelling, and automated content optimization.

Session 3: Leveraging ITU-Standardized CAP (ITU-T X.1303) Alerting for Effective Early Warning Dissemination

This session introduced the ITU-standardized Common Alerting Protocol (CAP) as defined in ITU-T Recommendation X.1303, emphasizing its critical role in enabling effective early warning dissemination across multiple broadcasting and communication channels.

CAP message structure, message elements, template-based formatting, and the development of CAP messages, demonstrating how to author alert content with standard elements like headline, description, instruction, and geofenced targeting to ensure interoperability and consistency across media, were discussed along with the integration infrastructure, showing how CAP workflows connect with multi-hazard early warning systems.

Session 4: Cell Broadcast System Implementation and Field Demonstration

Session featured Cambodia's approach in implementing cell broadcast, covering technology design, stakeholder coordination, and included a live demonstration of a cell broadcast message by deploying a test environment. The live demonstration was successfully witnessed by the participants, which helped increase the interest of representatives from other ITU member countries to implement cell broadcast solutions in their respective administrations.

The live demo of Cell Broadcast was carried out as part of ITU's partner-to-connect (P2C) initiative, in collaboration with the Centre for Development of Telematics (C-DOT), India, and the Ministry of Post and Telecommunications, Cambodia.

Session 6: Tabletop Exercise (TTX)

The tabletop exercise included a group activity based on a CAP-implemented scenario with the following scenario background:

Location: Fictional river basin with a history of flash floods.

Trigger: The Meteorological Department issues an ITU-standardized CAP alert predicting severe flooding within 6 hours due to heavy upstream rainfall and rising river levels.

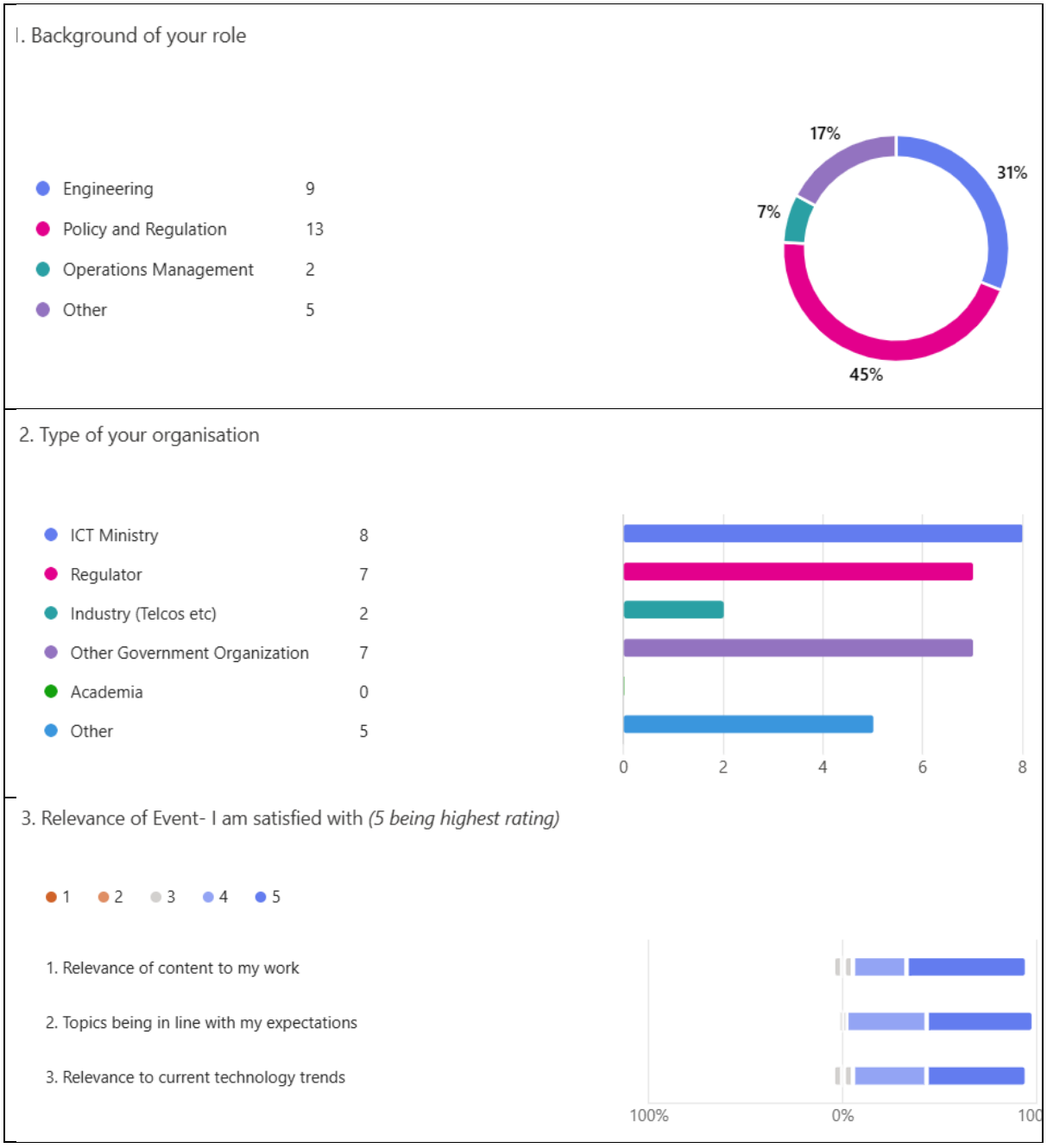
An initial CAP alert was converted into human-readable text, and participants were then tasked with crafting an appropriate early warning message suitable for dissemination via the cell broadcast service. Five groups of participants shared their solutions for the challenges posed (Annex A).

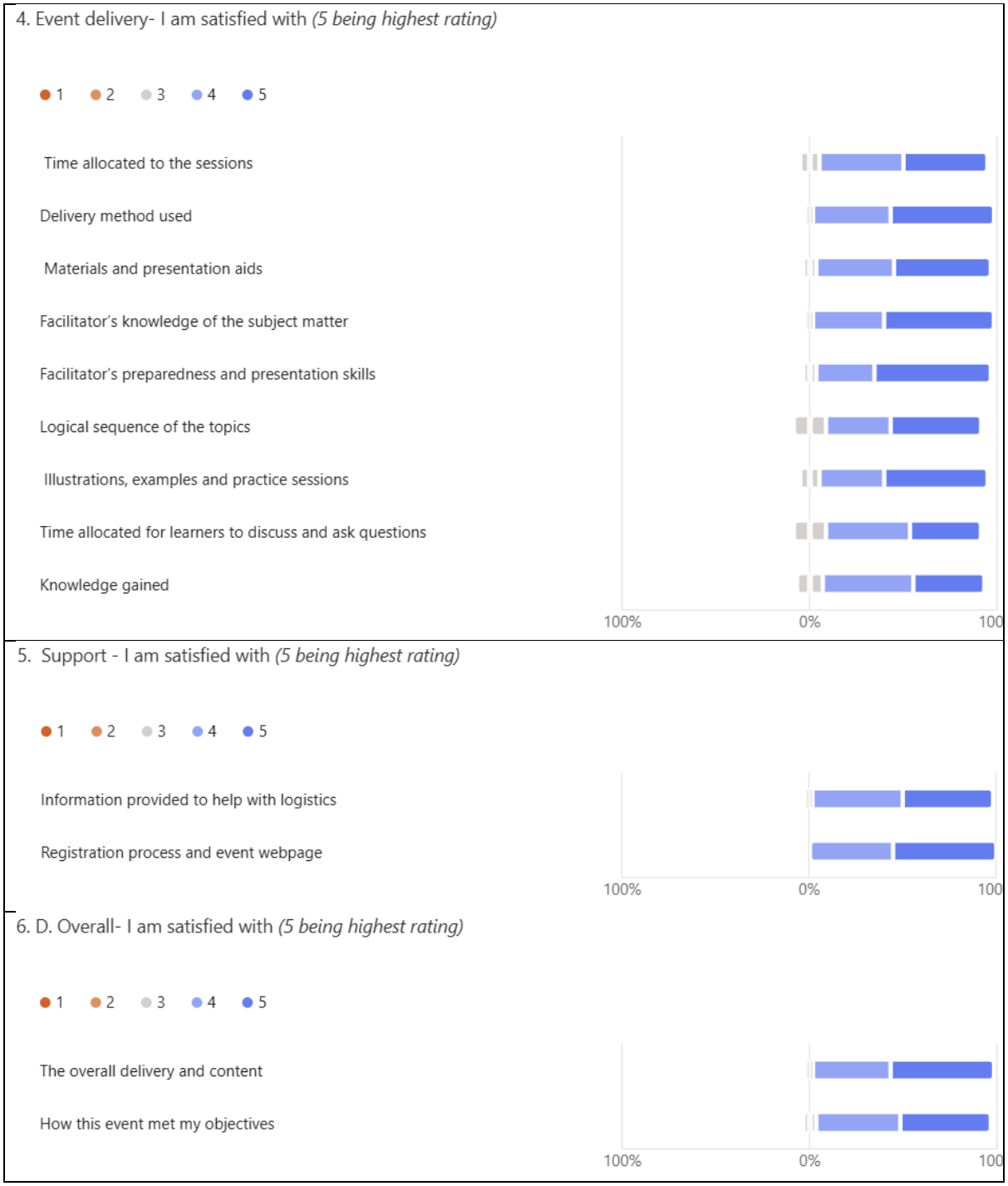
3. Participation

The event was attended by **65** Participants from ITU member countries, including Bangladesh, Bhutan, Cambodia, China, India, Indonesia, Kiribati, Lao P.D.R, Malaysia, Maldives, Mongolia, Nepal, Solomon Islands, and Tonga, as well as mobile service providers, disaster management authorities, UNDP, and WFP. The details of the participants are attached as per Annex C.

4. Event Feedback

An online feedback form was developed to collect participants' evaluations of the workshop. The responses were overwhelmingly positive, with more than 90 percent indicating that they were satisfied with the content and delivery, and that the workshop met its stated objectives. This evaluation provides essential insights for future improvements, refining planning, enhancing content, and defining the scope of future similar events.





What did you like best about the event? (summary)

- Real case demonstrations
- Practical knowledge sharing
- Focused discussion
- The demo of cell broadcast
- Cell broadcast presentation
- Group discussions
- How to write a broadcast message is important
- Practical session
- Exercise on scenario

- Exposure to the cell broadcast
- The content and flow of the prepared material delivered
- Sharing information between agencies and countries
- Topics and Presentations
- CAP

What did you like least about the event?

- Demo too short
- Group discussions time
- Time management
- Lack of time
- The agenda time of the morning session. Lunch is so late.
- Not enough plug points to charge our laptop and mobile phone
- Lunchtime is too late.

Please state things you would want to see improved in future events

- How to avoid Human error, which is still a danger prone to broadcasting
- More practical examples
- Details of the cell broadcast
- Additional one day
- Having more time for technical presentation and group discussions
- More about the technology involved in EW and its practices
- More scenario practice
- Extension plugs for a laptop
- Less people in a group, say only a group of 5
- I think the technical part of EWD might be widely elaborated on how reporters at the location have to react and report when a disaster takes place.
- It's better to give more information about the regulation
- To share about CAP.
- More details about Cell Broadcast.
- AI

What other topics should be considered in future events?
How AI automation helps broadcasting
How to implement EW4All in different geographies
More case studies
Other relevant and emerging technology related to EWS
More details on cell broadcasting
Early warning system by cell broadcast - internal best practice
More on cell broadcast technology implementation SOP preparation guidelines and Depth of Technology involved in EW
Discussion on tools and technology
Traditional knowledge on EWS

Preparedness matters more than technology
Cell broadcast using AI
Two drill exercises
Satellite for Early Warning and other advanced technology with the use case of other countries.
AI
The SOP when reporting a disaster area.
More about regulation and more technique
How to use AI tools for the Early Warning System
Technology trends
CBE input involvement with CBC
Shortwave broadcasting
Cell Broadcasting
Ai
New media and classical media workshop.

5. Conclusion and Outcome

The event enhanced the knowledge of participants on key solutions to effectively disseminate EW information. The workshop emphasized how broadcasting service is an integral part of actionable and trusted early warning dissemination and communication.

Overall, participants confirmed that the event met their expectations, and the session outcome is expected to support the implementation of cell broadcast and CAP in the countries represented.

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ANNEXURES

Annex A: Tabletop group Exercise

Adobe Acrobat Document

Annex B: Tabletop group Exercise reporting slides

Adobe Acrobat Document

Annex C: Attendance List

Adobe Acrobat Document