Information and Communication Technologies (ICT) for Early warning systems

WMO Technical Conference on : "The UN Global Early Warning Initiative for Climate Adaptation: Early Warnings for all", October 2022

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Our mission: Connect the world

Specialized United Nations (UN) Agency for Telecommunications & Information and Communication Technologies (ICTs)

3

Sectors

- Standardization
- Radiocommunication
- Development

193

Member States

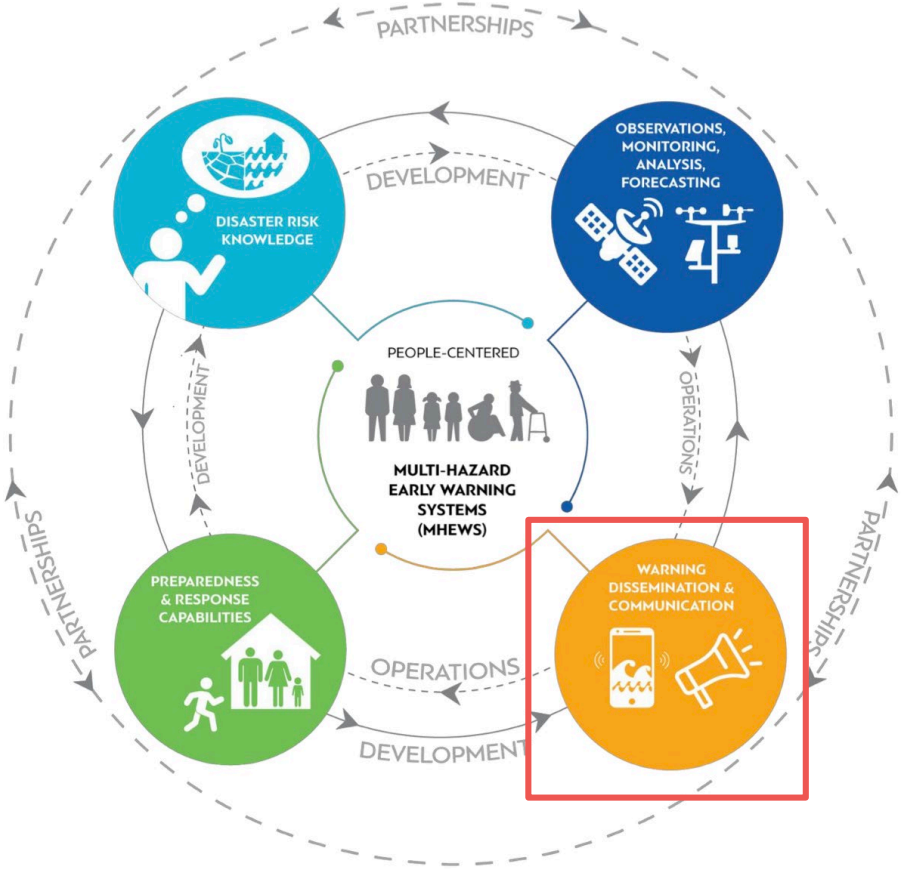
900

Companies, universities, and international and regional organizations.

Rich network of experts in the global ICT ecosystem

UN Initiative on Early Warning Systems for All

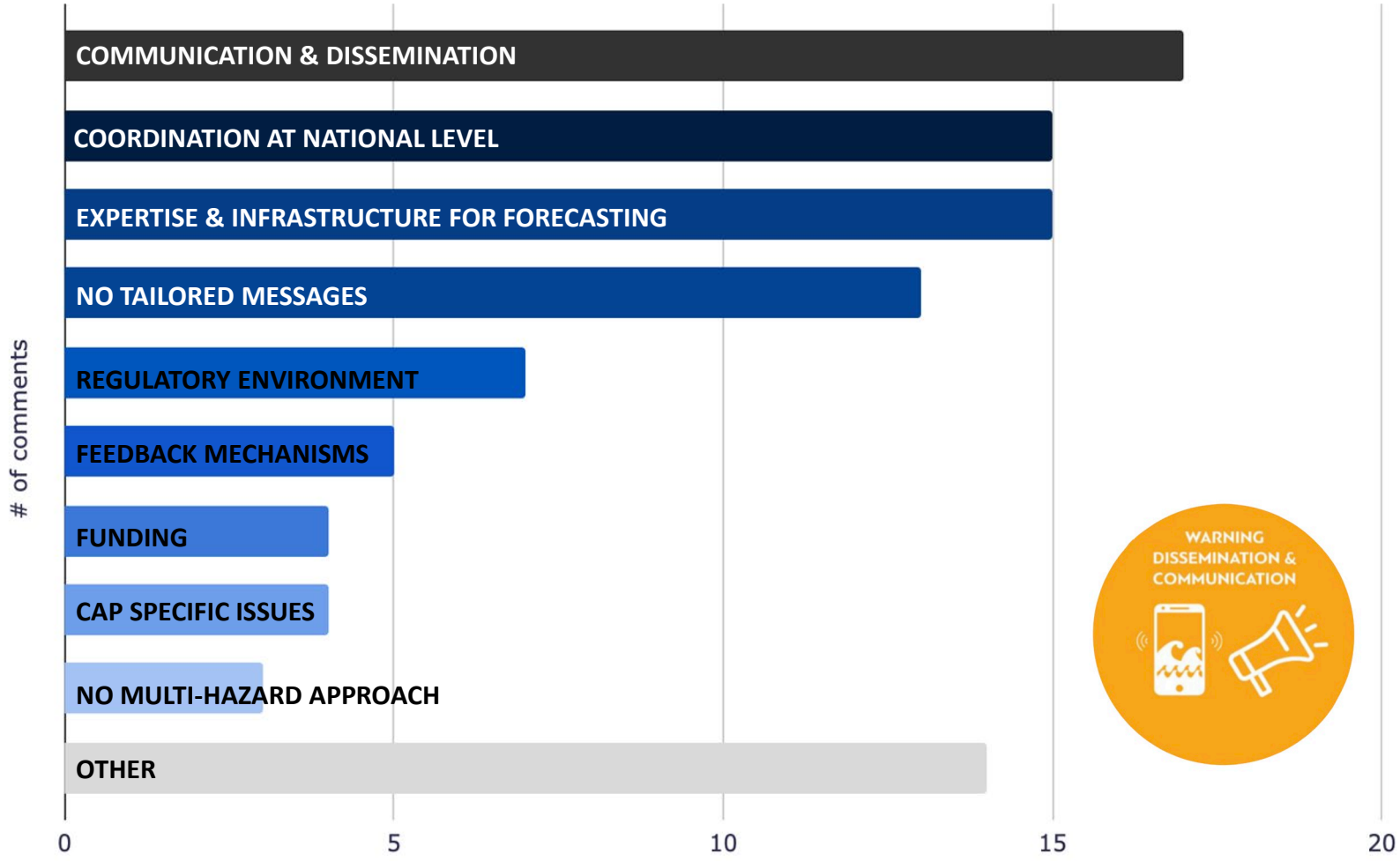
In March 2022, the UN set a new target to **ensure that everyone on Earth should be protected by early warning systems by 2027**.



Multi-Hazard Early Warning System(MHEWS)
Value Cycle – 4 pillars

Warning Dissemination & Communication

-- **is the biggest challenge for EWS,** according to a research conducted in 13 countries in Africa& Caribbean shows that this pillar



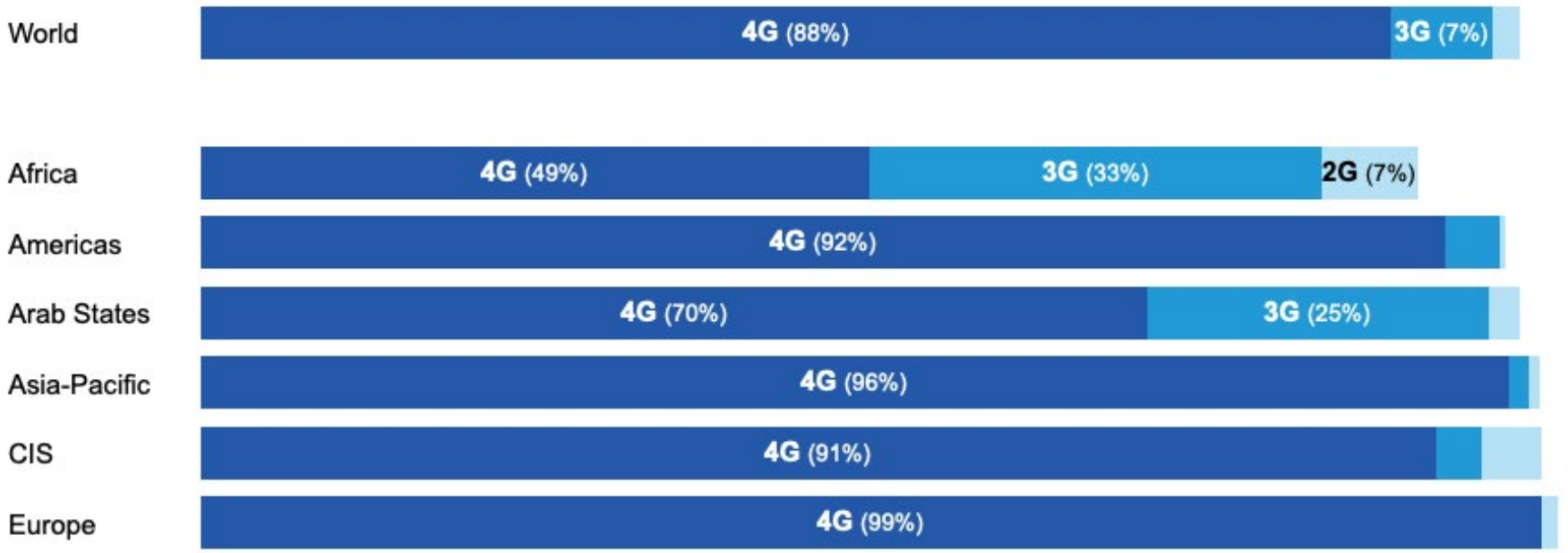
Multi-channel Approach for Warning Dissemination and Communication

- In warning dissemination and communication, a **multi-channel approach** increases the effectiveness of an alert and help address the diversity of communities at risk.
- Digital transformation is bringing huge opportunities in strengthen this pillar and allows us to reach more people through information and communication technologies (ICTs) --such as sending alerts to the phone.

95% of the world population is covered by mobile network

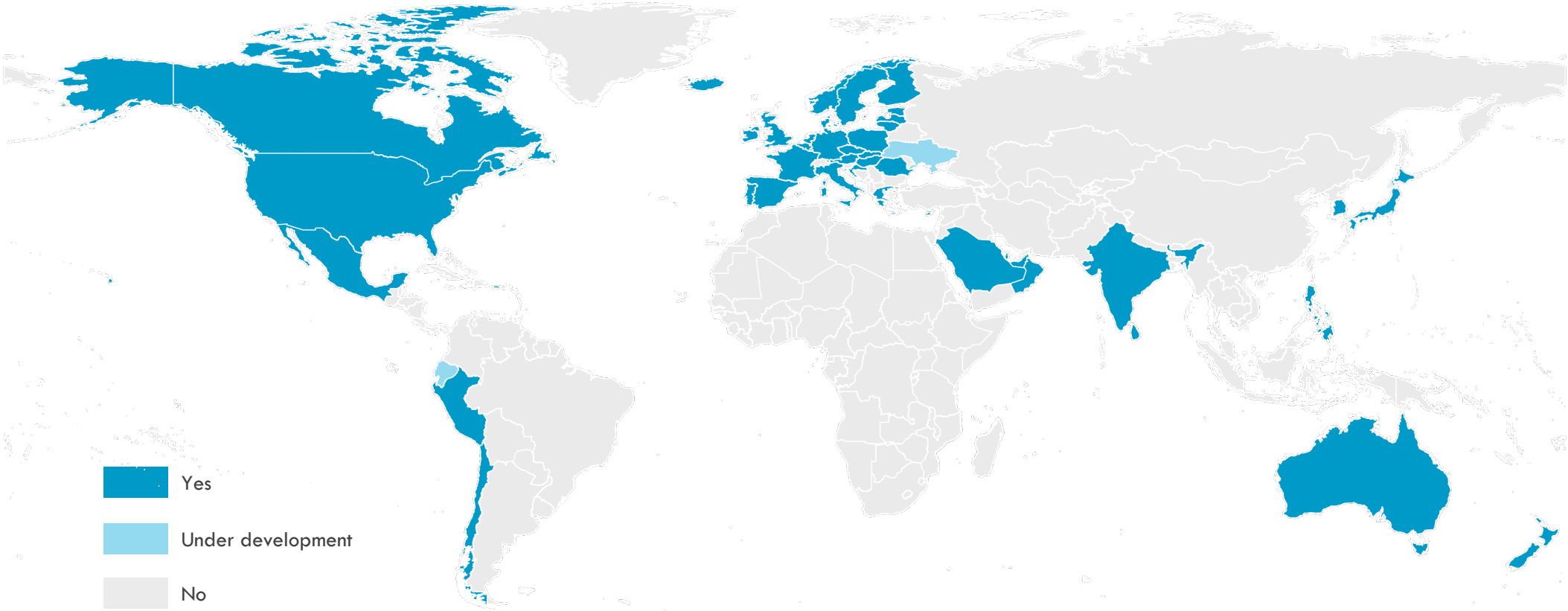
…a great opportunity to use mobile networks for early warning systems!

Population coverage by type of mobile network, 2021



Source: ITU, *Facts and Figures 2021*

Draft list of countries having EWS based on mobile network (work in progress)



How and why alerting via mobile-cellular networks works?

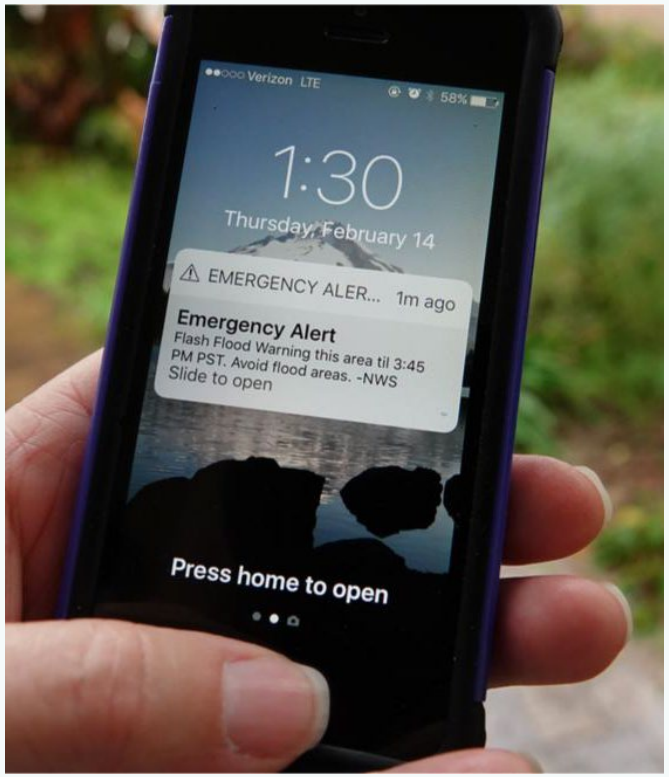


Photo credit: Dimone Hogan/Shutterstock

Cell-Broadcast (CB) & Location-based SMS (LB-SMS)

- **Wide reach:**
  - Send geo-located messages to users within risk areas, including roamers
  - Opt-in challenges limited(as opposed to mobile-apps)
  - Compatible on most (CB) /all devices (LB-SMS)
- No risk of congestion (CB)
- No subscription needed (CB)
- Supports multi-language alerts (CB & LB-SMS)
- A “blind technology” that does not allow 2-way communication (CB)
- 2-way communication to provide information such as number of users in risk areas (LB-SMS)

ITU background paper:

Next steps for digital transformation & EWS for saving lives

- Use growth in digital services and networks to deliver alerts to people at risk
- Focus on mobile networks and services
- **Promote regulatory approach adopted by EU**
- **Bring on board MNOs/GSMA**
- **Discuss technologies and standards for implementation (including CAP)**
- **Identify experts and share best practices for awareness raising**
- **Bring on board partners and identify financing opportunities**

Photo credit: USAID

Thank you!