

Early Warnings for All

Pillar 3: Warning Dissemination and Communication

Alerts need to reach people at risk, in time for them to take life-saving action. With its technical leadership in telecommunications, digital platforms, and mobile networks, ITU supports countries in delivering early warning alerts through Cell Broadcast, multi-channel systems, AI-powered tools, and more, reaching those who need them most.

ITU turns mobile networks into lifelines.

Cell Broadcast (CB)

No app. No subscription. Just a life-saving message on every screen.

- Instant and geo-targeted alerts
- Works even when phone is on silent mode
- Accessible for persons with disabilities
- Multilingual support
- Secure and authenticated

Only 43 countries currently deploy CB. ITU is helping countries get CB-ready.

Common Alerting Protocol (CAP)

A standardized, XML-based format for emergency alerts, CAP ensures consistent alerting across all channels—radio, TV, mobile, social media, and more.

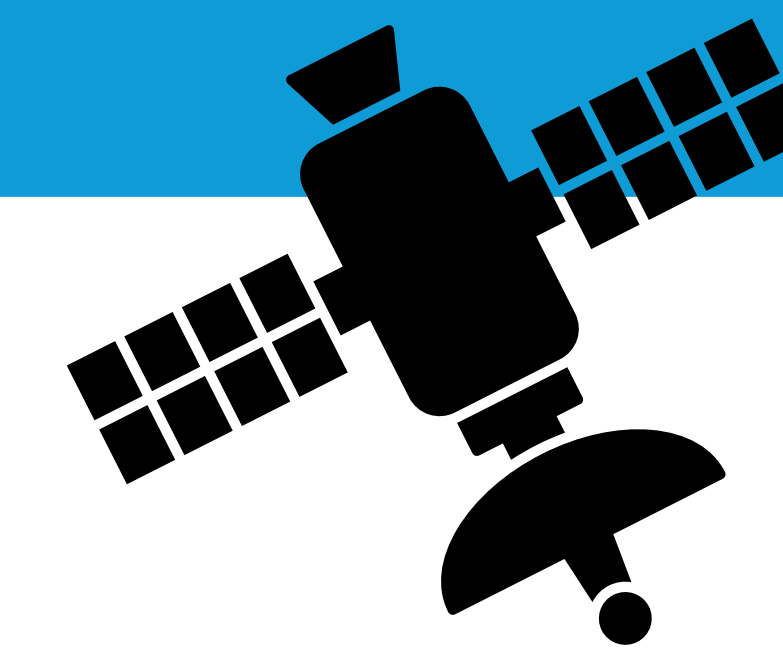
Key Statistics

95% of the global population is covered by a mobile network and 80% owns a mobile phone. Mobile networks provide a powerful platform for disseminating life-saving alerts.

ITU supports **29** countries in implementing early warning systems, bringing together key public and private sector stakeholders, including ICT Ministries, telecom regulators, mobile network operators and the GSMA.

100+ countries reporting on multi-hazard early warning systems (MHEWS) readiness.

Millions of people directly reached through ITU-enabled alerting systems.



Satellite communications extend alert coverage to remote and underserved areas, bridging last-mile gaps in warning dissemination. Emerging direct-to-device (D2D) satellite technologies allow satellites to communicate directly with end-user devices, complementing terrestrial networks. ITU works with partners to explore and scale satellite-based solutions for resilient alerting systems.



AI-powered Tools

The ITU Early Warning Connectivity Map (ECM) uses AI and satellite imagery to map coldspots—areas where people are not covered by digital networks. This helps countries identify vulnerable populations and adopt policies.

Together with WMO, UNDRR, and IFRC, ITU leads the AI for EW4All group that identifies needs in early warning systems to match them with AI solutions.

Community Ownership

Empowering communities is essential for effective early warning systems. ITU, in partnership with IFRC, promotes inclusive, people-centered alerting, ensuring messages are understandable, trusted, and actionable—especially for at-risk and marginalized groups.



Learn more about
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