

Speech Recognition & Voice Synthesis

***Use*:** Disseminates multilingual safety and aid information through voice-based systems.

***Benefits*:**

- Reaches populations with low literacy or language barriers.
- Facilitates rapid dissemination of updates during emergencies.

***Risks and Mitigations*:**

- **Critical Dependence:** failure during crises could halt communication + Redundant communication paths and manual fallback procedures.
- **Deep-voice Spoofing:** fake voices may spread panic or false orders + Digital watermarking and cryptographic signing of synthesized voice to verify origin.
- **Eavesdropping & Profiling:** intercepted voice data could be used for political repression + End-to-end encryption and strong authentication for voice channels.