DISASTER MANAGEMENT:

GAPS & A SMARTER SOLUTION

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INTRO DUCTION

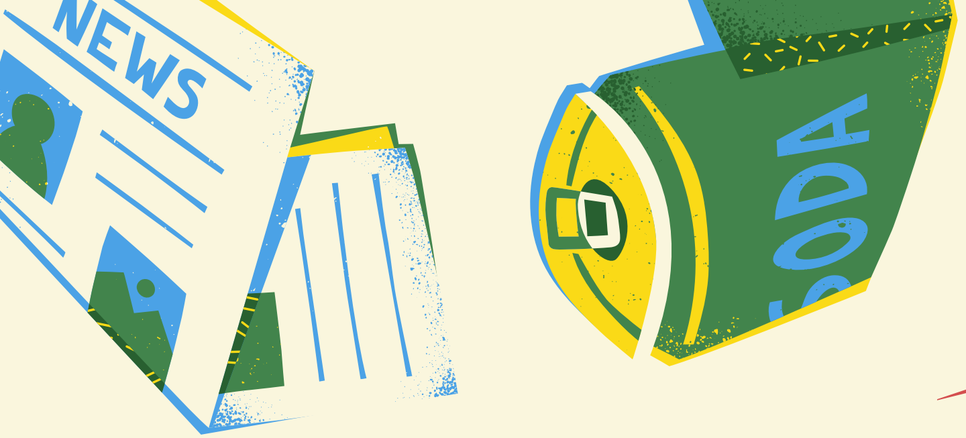
Background:

India faces frequent natural disasters like floods, earthquakes, and cyclones. In such scenarios, timely communication and response are crucial.

PROBLEM STATEMENT

Problem Statement:

Despite having government disaster management apps, citizens find them ineffective due to poor design, outdated features, and lack of multilingual support.

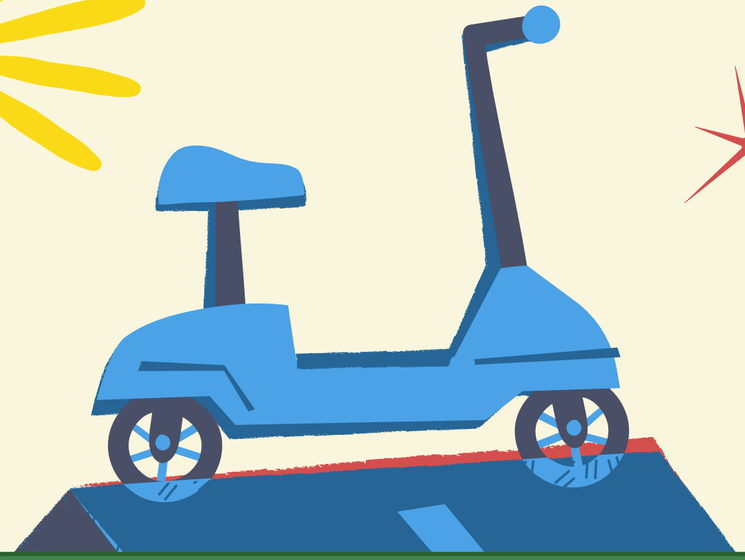


RESEARCH

- Analyze existing government disaster management apps.
- Identify inefficiencies and user pain points.
- Propose a smart, user-centric, and tech-enhanced app solution.

OBJECTIVES

KEY FINDINGS FROM APP ANALYSIS



- **Usability Issues:** Complicated UI/UX, hard navigation especially during panic.
- **Poor Accessibility:** Apps not optimized for rural areas with poor internet; no offline features.

- **Alert Delays:** Lack of real-time or AI-predictive alerts for upcoming disasters.
- **Limited Features:** Few apps include an SOS button or support for differently-abled users.

Language Barriers:
Most apps offer English/Hindi only, ignoring regional diversity.

PROPOSED

TECH-DRIVEN SMART APP SOLUTION

- **AI-Powered Alerts:** Real-time and predictive alerts using machine learning models.
- **Advanced SOS System**: One-tap emergency help with live GPS tracking and auto-alert to nearby shelters.
- **Offline Mode & SMS Fallback**: Alerts even without internet; critical for rural and disaster-hit zones.
- **Multilingual & Inclusive**: Interface available in 10+ languages with visual-audio assistance for disabled.
- **IoT Integration**: Sensor-based early warnings for earthquakes, floods, etc., to improve preparedness.

Comparative Analysis of Existing vs Proposed App

Feature	Existing Govt Apps	Proposed App Design
Real-time Alerts	❌	✅ AI-powered alerts
SOS Button Functionality	Basic	Advanced + Live GPS
Offline Accessibility	❌	✅ SMS/Offline mode
Multilingual Support	Limited (1-2)	✅ 10+ Languages
Accessibility (Disabled Users)	❌	✅ Visual + Audio Support
Predictive Disaster Modeling	❌	✅ Machine Learning-Based

FUTURE SCOPE

Implications:

- A tech-first, inclusive disaster app ensures faster alerts, better preparedness, and saves lives.

Future Work:

- Enhance AI models for hyper-local predictions.
- Expand to wearable IoT integration.
- Centralized national disaster alert system using a unified API.
- Include USSD codes for feature phones.

CONCLUSION

- Government disaster management apps in India lack the efficiency and user-friendliness needed during real emergencies.
- Our research highlights major gaps in accessibility, alerts, and usability.
- By integrating AI, IoT, and multilingual support, we can create a smarter, inclusive solution.
- This approach can save lives by enabling faster, more reliable disaster response.

THANK YOU