



**Synchronizing Action through
Geohazard Information Platform**

link.od

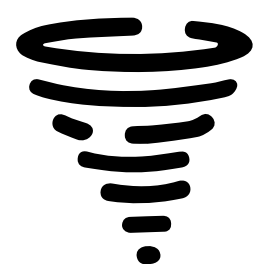
ALEX, DJ, EMMAN, LARA, VINCE

LGU :

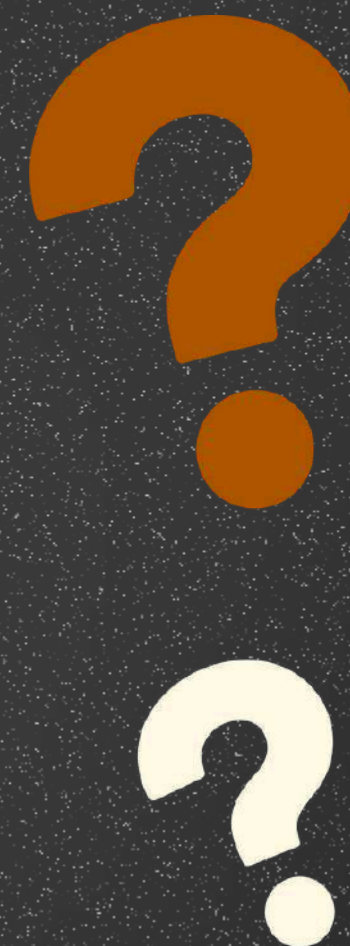
**Stay safe
and dry!**
(or maybe evacuate)



**What am I
supposed to do?**



WARNING

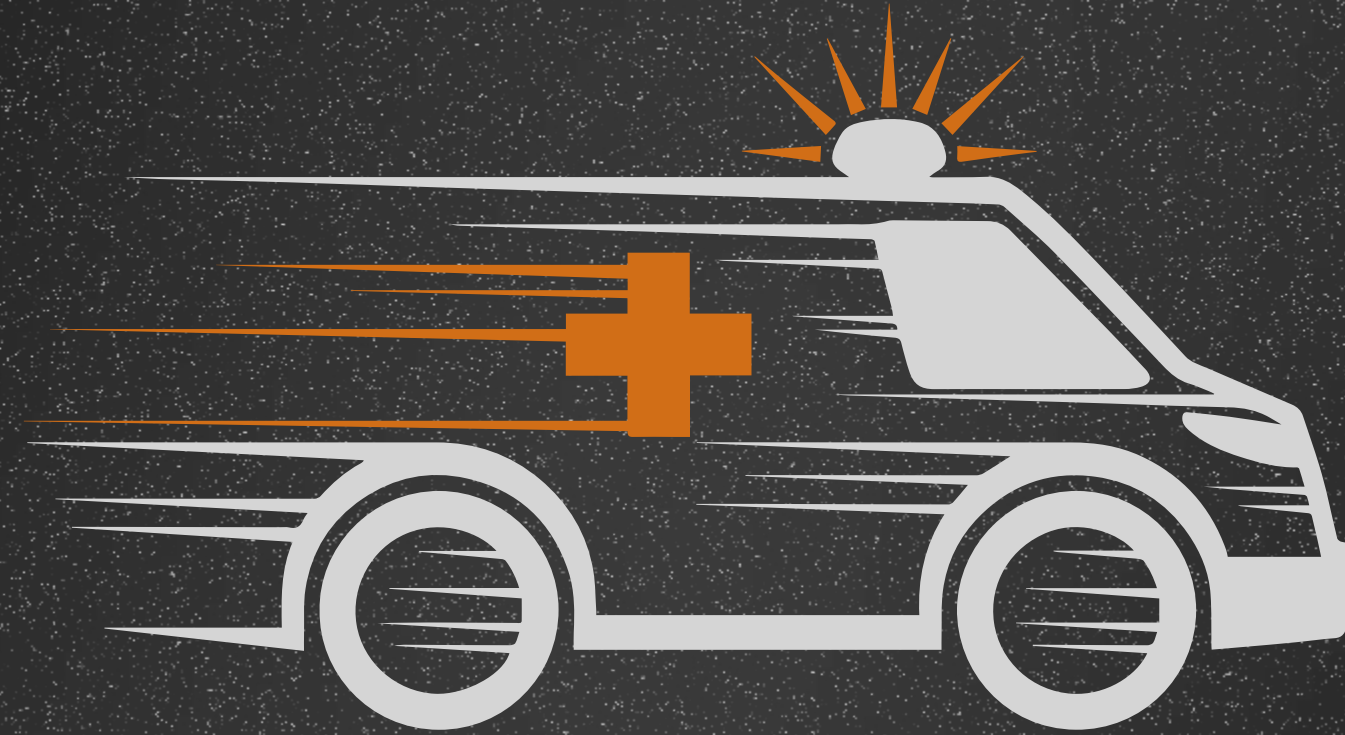


2024 Statistics of National Disasters in the Philippines



Each year, around **20 tropical cyclones** enter the Philippine Area of Responsibility, and the country endures an average of **20 earthquakes** every single day.

Tagud, J., et al (2025)



Casualty count suggests that **warnings are not effectively translating** into timely and safe community evacuation at the local level.

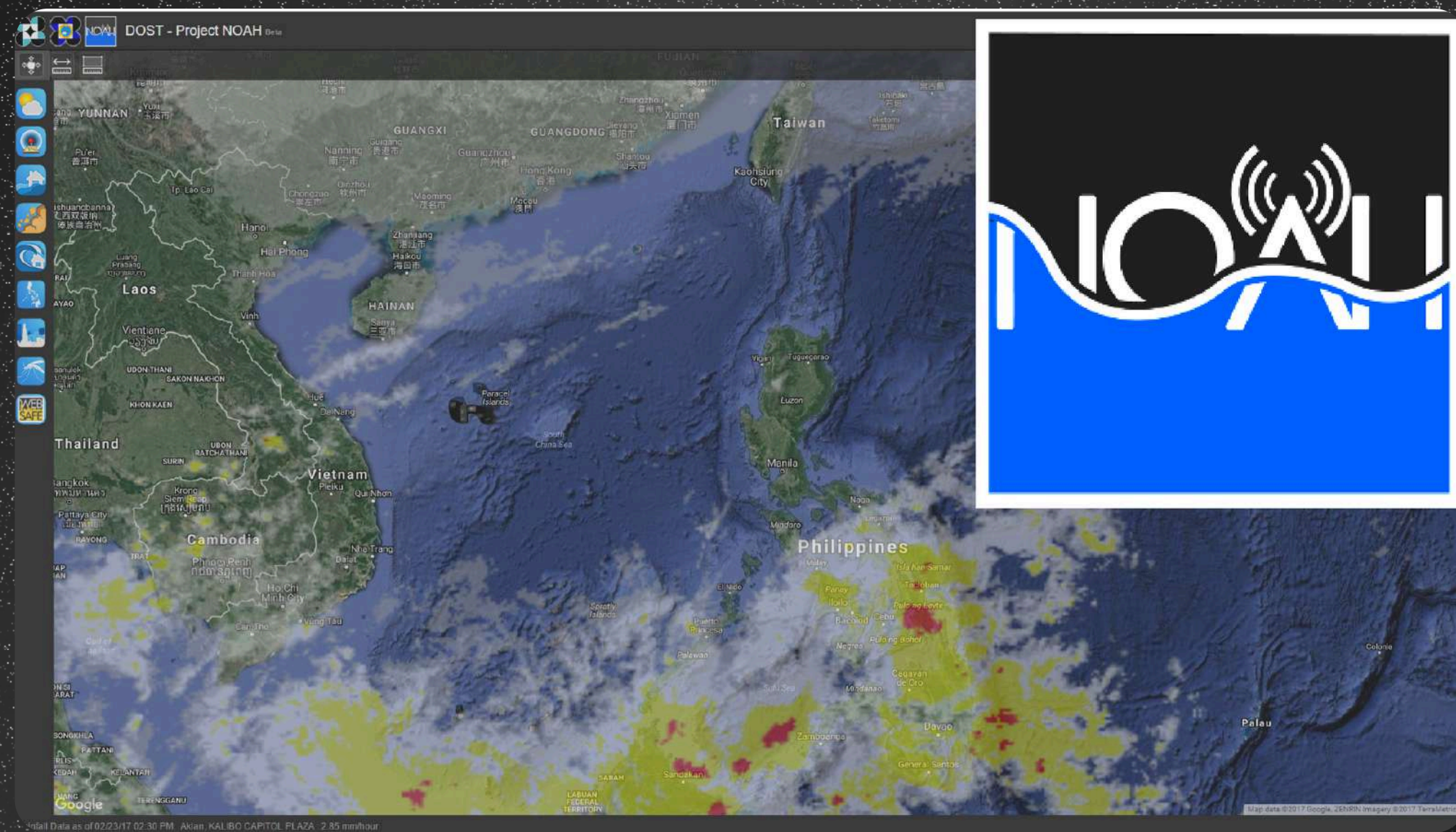


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SOLUTION OVERVIEW

- Establish a comprehensive **historical hazard risk profile**.
- Develop an **interactive, geospatial risk visualization dashboard** (LGU-facing and public-facing).
- Provide stakeholders with essential **data visualizations and summaries** required for strategic decision-making.

DATASET



METHODOLOGY

TECH STACK

NextJS, Leaflet, GeoJson, Python, FastAPI, MongoDB, PWA



IMPLEMENTATION

Multi-platform information exchange of data-driven plans



METHODOLOGY

DATA PREPROCESSING

SHP files from Project NOAH dataset are converted to GeoJSON

DATA MAPPING

Mapped the converted GeoJSON on a GIS dashboard

ENABLE DATA-DRIVEN PLANNING

Provide interactivity and preparation of plans to disseminate to the community

LIVE DEMONSTRATION



RESULTS AND IMPACT

- **Increased community safety** with offline-first PWAs providing maps, alerts, and emergency guidance even without signal.
- **More inclusive response** as unreachable or high-risk areas are automatically flagged for priority rescue.
- Strengthened **data-driven disaster preparedness**, shifting LGUs from reactive to proactive operations.



**THANK
YOU!**