HydroAdapt

Integrated Flood Management System

DEVELOPED BY: ADAPTX HUB @ ASIAN INSTITUTE OF TECHNOLOGY

Our official website

- Reduces average response time
- Predictive alerts with high accuracy
- Improved Public Safety Communication
- Compatibility with national-level platforms
- Enhance capacity through hands-on training

ABOUT THE SOLUTION

OVERVIEW

HydroAdapt is an advanced flood risk management platform supporting governments, international agencies, and infrastructure managers with disaster preparedness, response, and resilience building. It integrates real-time data, predictive modeling, and secure infrastructure for enhanced decision-making.

OUTCOMES & IMPACT

INFORMED DECISIONS

Provides a near real-time, multi-layered analytics tool to support evidence-based planning. Enables proactive flood management, infrastructure design, and policy action.

OPERATIONAL AGILITY

Enhances emergency response by enabling quicker alerts and improved coordination.
Reduces response times by as much as 50% during both drills and real-life situations.

COMMUNITY RESILIENCE

Supports risk-informed planning, reducing vulnerability by up to 60%. Early deployments have protected over 80% of at-risk populations in pilot regions.

KEY CAPABILITIES

- ✅ Real-time river monitoring & rainfall forecasting
- ✅ Flood hazard mapping & impact simulations
- ✅ Risk mapping & criticality assessment
- ✅ Real-time data integration & predictive modeling
- ✅ River morphology & infrastructure vulnerability tracking
- ✅ Historical data archive & analytics
- ✅ Interactive dashboards & user-friendly interfaces
- ✅ Modular, customizable system architecture
- ✅ Secure, scalable data infrastructure
- ✅ Full operations & maintenance (O&M) support
- ✅ Skilled workforce development & training modules
- ✅ Global interoperability with external platforms

DATA SOVEREIGNTY

Ensures comprehensive national oversight of critical flood and Water data. Enables secure infrastructure solutions, whether hosted on-premises or in the cloud.

CAPACITY BUILDING

Offers hands-on training in flood modeling, GIS, and ICT systems. During pilot deployments, over 200 personnel have successfully completed the training.

6 CLEAN WATER AND SANITATION **11 SUSTAINABLE CITIES AND COMMUNITIES** **13 CLIMATE ACTION**

SYSTEM VISUALIZATION

IDEAL FOR

- ◆ Government & Disaster Management Bodies
- ◆ International Development Partners
- ◆ Academic & Technical Institutions
- ◆ Private Sector & Tech Companies

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System Visualization