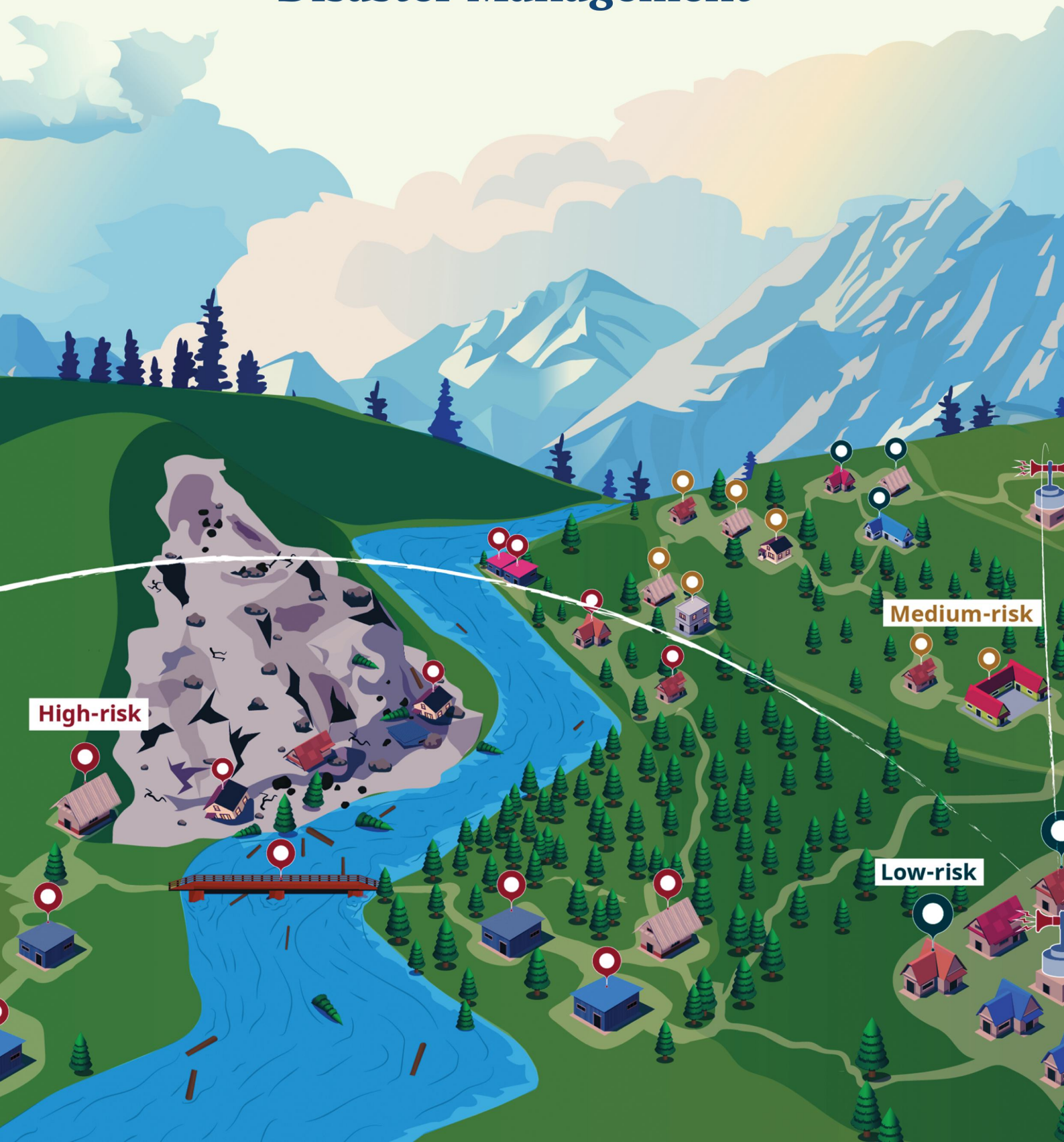




Paradigm Shift from Response-Based to Preparedness-Focused Disaster Management



Problem

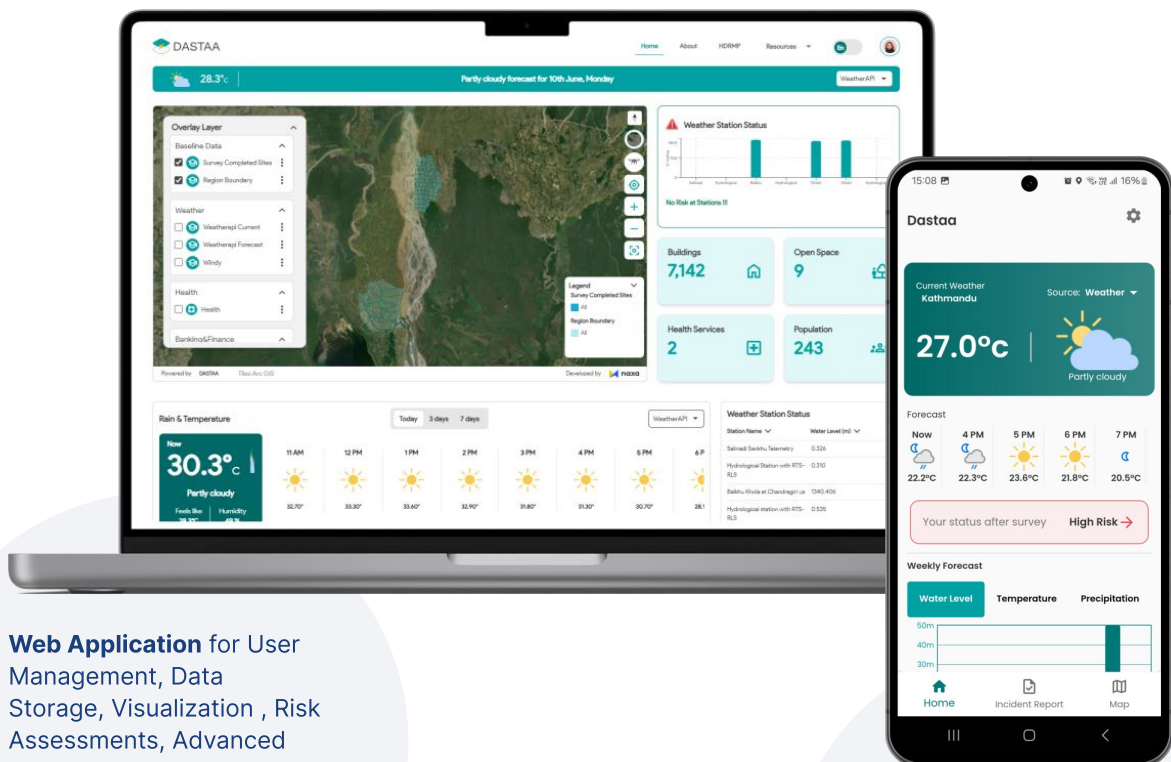
- Lack of Household-Level Vulnerability & Risk Information
- Ineffective Risk Communication Approaches (Not Targeted)
- Isolated Efforts by different organizations
- Lack of Adequate sensor networks & Effective

Solution

DASTAA is a modular digital platform that enhances disaster preparedness through household and community-level data collection, risk assessment, and early action interventions.

From early warning messaging to relief distribution and cash transfers, DASTAA ensures proactive disaster management and supports anticipatory action for building resilience.

Components of DASTAA



Web Application for User Management, Data Storage, Visualization, Risk Assessments, Advanced Query Analysis & Planning Early Action Interventions for Anticipatory Action decision making.

Mobile Application to facilitate field based surveys, push notifications for early warning messaging, visualizing important information and updating household profiles.

Modular Features of DASTAA

DASTAA offers a diverse array of modules, allowing users to select options tailored to their specific needs and the various stages of their projects.

① User & Organization Management Module Manage user accounts, permissions, and organizational structures.	② Data Inventory Module Maintain an organized repository of diverse kinds of datasets.	③ Data Collection Survey Module Plan, execute and monitor household and community surveys.	④ Project Management Module Create, Plan, organize, and track projects effectively, from initiation through completion.
⑤ Risk Assessment Module Set parameters and Indicators to compute risks at community level or individual geographical objects such as households, educational institutions, health facilities, and other geographic units.	⑥ Know Your Risk Module Compute risk score considering multi hazard for any location globally.	⑦ Risk Visualization Module Visualize datasets(risk and hazard) in the form of interactive maps, dashboards, and infographics.	⑧ Hazard Computation Module AI assisted hazard mapping for multiple hazards (flood, landslide, heat wave, etc.)
⑨ Damage Assessment Module Design & conduct damage assessment surveys and generate assessment reports.	⑩ Cash Transfer Module Plan and manage humanitarian cash distribution.	⑪ Relief Distribution Module Conduct data driven targeted relief distribution management.	⑫ Risk Communication Module Manage multi channel risk communication (SMS, IVR, sirens, social media, and mobile push notifications.)
⑬ Beneficiary Tracking Module Identify beneficiaries, monitor their activities, and track progress to ensure effective support.	⑭ Integration with National DIMS (<i>Disaster Information Management System</i>) Automated data linkage with national DIMS platforms.	⑮ Knowledge Management Module Repository of knowledge documents.	

How DASTAA Works?

DASTAA operates in five key steps, ensuring end-to-end disaster preparedness and response:



Risk Assessment

Identify hazards, vulnerabilities, and capacities at household, community, or institutional levels.



Risk Visualization

Visualize risk data through interactive dashboards in the form of maps, charts and infographics for easy understanding.



Risk Communication

Draft, finalize and disseminate early warnings and preparedness messages across multiple channels to ensure inclusivity.



Early Action Planning

Develop detailed plans for pre-emptive interventions like evacuation, cash transfers, and resource allocation



Anticipatory Action Interventions

Implement pre-arranged actions such as relief distribution and financial support to mitigate disaster impacts.

Users and Applications of DASTAA *(Who Can Use DASTAA?)*

DASTAA is designed to serve a wide range of users, enabling effective disaster preparedness and response:



Households

Gain access to personalized risk profiles, early warnings, and preparedness resources. View & update household level datasets.



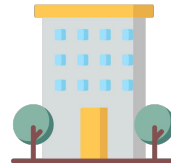
Governments

Custodian of all datasets on the system, update the data on a regular basis and utilize the datasets to conduct evidence informed actions.



Humanitarian Agencies

Design targeted interventions like cash transfers and resource distribution based on risk categorizations.



Private Sector/Insurance Companies

Use beneficiary and disaster forecast data to plan interventions and design insurance products.



Mission

To implement a versatile digital platform capable of estimating, visualizing and communicating risks at both community and individual levels.



Vision

To leverage cutting-edge digital and spatial technologies to empower communities, governments, and shift disaster management paradigm from response centric to preparedness focus.

Use of DASTAA across different thematic sectors

DASTAA has been implemented across Nepal and Bangladesh in collaboration with governments, humanitarian agencies, and private sectors. Projects till date include the following:

October 2023 to March 2025

Adopting Cutting Edge and Frontier Technologies for Building Resilience through Anticipatory Action

Implementation Places - Dodhara Chandani Municipality and Bheemdatt Municipality

December 2023 to February 2025

Digital and Spatial Technologies for Anticipatory Action

Implementation Places - Dodhara Chandani Municipality and Parshuram Municipality of Nepal and Tahirpur Union of Bangladesh

December 2021 to July 2022

Household Level Risk Assessment Tool - A digital system for evidence-based decision support to plan effective risk financing strategies

Implementation Places - Bheemdatt Municipality

December 2021 to March 2022

Development of Mobile Application and Digital Platform for Multi-Hazard Risk Assessment (MHRA)

Implementation Places - Marin Rural Municipality and Dudhauri Municipality

Nepal (October 2020 to March 2021) and Sri Lanka (January 2024 to March 2024)

Software Development for Participatory Disaster Risk Assessment (PDRA) Tool

Implementation Places - Nepal and Sri Lanka

March 2020 to September 2020

Development of a Web GIS based Risk Assessment Platform

Implementation Places - Nepal

July 2018 to September 2018

Development of Vulnerability and Capacity Assessment Tool

Implementation Places - Shankharapur Municipality



DASTAA is being developed as an in house digital innovation product

by a collaborative team of software developers and disaster management experts at NAXA. This comprehensive solution is supported by multiple partnering organizations, each contributing specialized expertise. Our partners include the Institute of Himalayan Risk Reduction as our Research Partner, Nepal Flying Labs as our Frontier Technology Partner, and DCA as our Humanitarian Action Partner.



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