

1. Project Idea Definition

1.1.Detailed Explanation

Problem: In recent years, Kenya has faced recurring disasters such as floods, droughts, and landslides, often resulting in significant humanitarian and infrastructural challenges.

The lack of a centralized system to coordinate response efforts, allocate resources, and manage data on affected individuals and organizations often hampers effective disaster response.

Our project aims to develop a relational database system to support Disaster Response Coordination. The system will centralize data related to disaster events, response teams, aid distribution, and affected individuals. This supports SDG 11 (Sustainable Cities and Communities) and SDG 13 (Climate Action) by improving disaster preparedness and community resilience.

1.2.Scope and Objectives

Scope:

The system will be used by government agencies, NGOs, local authorities, and emergency responders to manage and track disasters, relief resources (food, medicine), disaster response activities (e.g. relocation) across various affected regions of Kenya.

Objectives:

- Maintain records of disaster events (type, date, location, severity) and real-time impacts (e.g., displaced persons)
- Track available emergency response teams and their deployment
- Manage aid resources and their distribution to affected individuals or regions
- Record information about affected individuals or households
- Generate reports and queries to support decision-making
- Monitor NGO/agency interventions to avoid duplication

1.3.Stakeholders

- Government agencies (e.g., NDOC – National Disaster Operations Center) – need structured data for coordination
- NGOs & relief organizations (e.g., Kenya Red Cross, UN) – need access to affected population and aid tracking
- Local affected communities – benefit from faster and more efficient responses via mobile alerts
- Emergency responders – need to track missions and resource usage

- Researchers & policymakers – need historical data for planning and analysis