

Phase 1: Problem Definition and Design Thinking

The scope of this document is to identify the problem and find solution for Flood Monitoring and early warning system to receive real time Environmental Data.

Problem Definition:

It has been researched and found that there has been the following issues with Flood Monitoring and Early Warning system. The issues or problems are listed below:

- Floods cause devastating economic losses and extensive damage.
- People are displaced, leading to loss of homes and livelihoods.
- Floodwaters carry contaminants, posing health risks.
- Ecosystems suffer from habitat destruction and pollution.
- Frequent flooding strains public resources and infrastructure.

Design Thinking:

Having understood the above problem. We would designing a solution which would be able to solve the same.

- An IoT based solution could immediately resolve the above issue.
- Designing an IoT flood monitoring system to detect floods in real-time, issue early warnings, and collect valuable data.
- Implementing a robust sensor network, reliable connectivity, and a centralized monitoring platform.
- Ensuring scalability, cost-efficiency, and community engagement while addressing legal and privacy considerations.
- This project aims to enhance flood preparedness and response in vulnerable areas.