CASE STUDY

Flood Simulation and Predictive Analytics

Funded by

MeitY and DST Govt. of India

Implemented by

C-DAC, Pune

Collaborators

IISC, Bangalore

PEC, Chandigarh

User

Central Water Commission
State Water Resources Department
State Disaster Management Authority
District Administration

Implemented for

Mahanadi River Basin (*pilot*)

All River Basins of India

System requirement

High Performance Computing

Services Available

Technical Support

Installation and Setup

Maintenance

Application Support

Hardware Support

Early Warning & Flood Prediction for River Basins of India

OBJECTIVES

Early Warning System for Flood Prediction (EWS-FP) in the River Basins of India on HPC system

Sediment Transport model and Integrated Reservoir Operation tools

Geospatial portal for information dissemination on flood prediction

SALIENT FEATURES & OUTCOMES

Model is scalable and flexible

Free and Open Source Technology

3-days forecast for Mahanadi River Basin

Flood inundation (submerged) maps and Water level forecast

Village-level percentage inundation information

TECHNOLOGY

Free and Open Source Software
Geo Server

Front End: React Web Appl.

Back End Server : Django REST

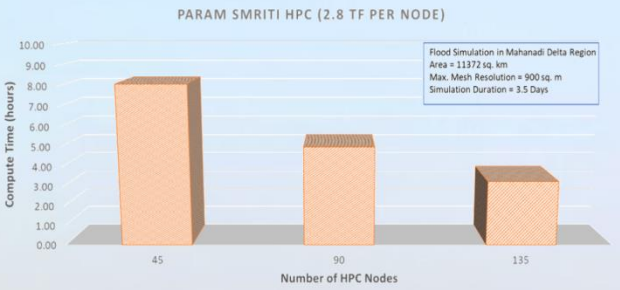
Database: Mongo DB

SOCIETAL IMPACT

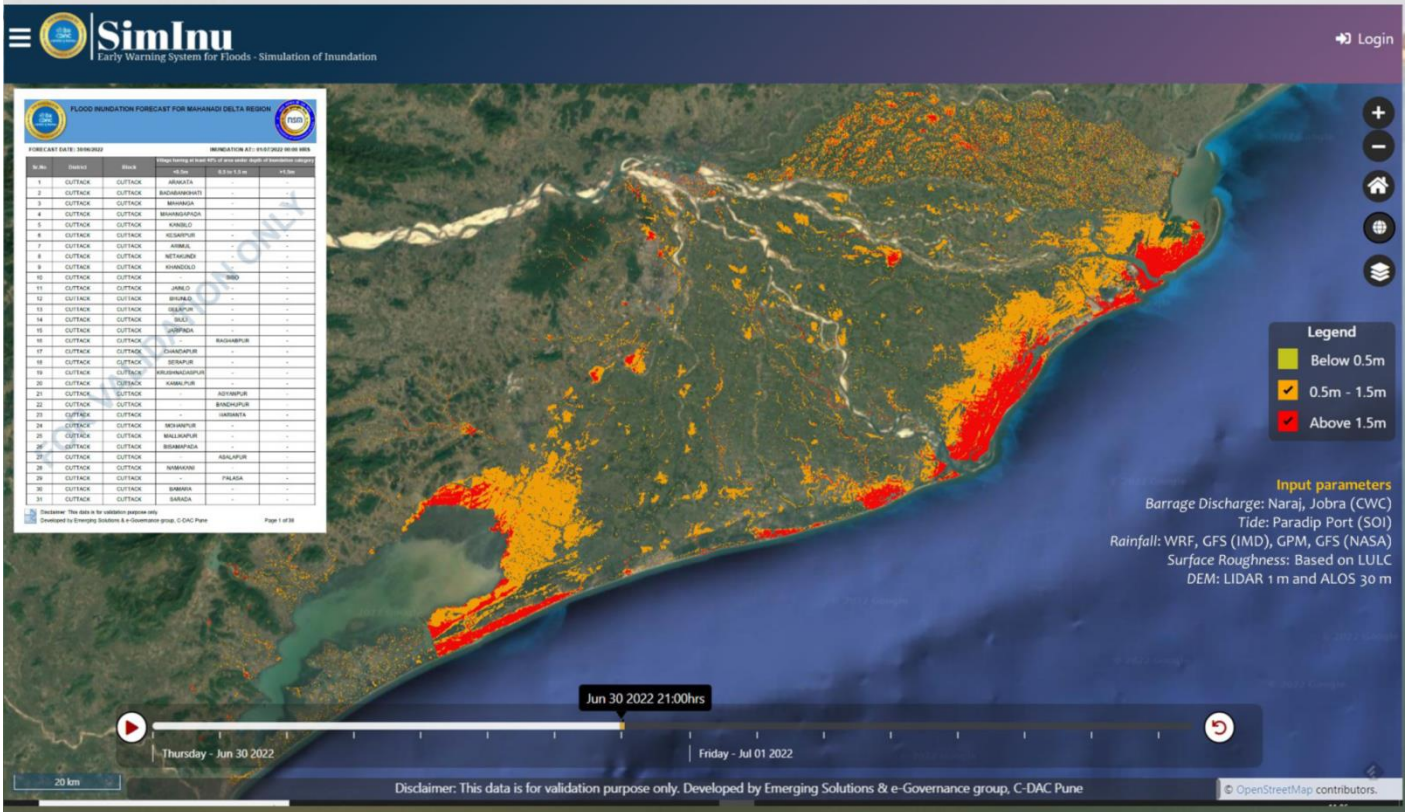
Advance flood information (Inundation extent and Water Level) to help disaster managers and stakeholders for planning flood mitigation measures and informed decision making

NSM Infrastructure

Param Series of Indigenous Supercomputers



FLOOD SIMULATION OF MAHANADI DELTA USING PARAM SUPERCOMPUTERS



OEM of

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