Urban Flooding

Potential Climate/ Disaster Impacts addressed and Justification for this Approach

Urban flooding is a challenge that cities are facing. The city of Bhubaneswar has been facing this challenge every season. When it rains the area of Nayapalli gets flooded. Thus, a drainage master plan was developed for a brownfield (Nayapalli) and a greenfield area (Ward 4).

Process of Implementation

1. A rapid assessment of the integrated urban water management was conducted looking at the key issues pertaining to overall water management
2. A gap assessment study was conducted and based on which recommendation and way forward was shared with city for improvement of urban flooding issues
3. Urban design thinking methodology was adopted which used the gap analysis report, stakeholder consultations and online surveys and prototype was developed for a pilot area (Nayapalli) in Bhubaneswar using the sponge city concept
4. Taking into consideration the prefeasibility concept a detailed drainage plan was prepared for Nayapalli including detailed drawing and bill of quantities. This will be a brownfield development
5. Ward 4 area of Bhubaneswar is an upcoming area and a lot of development activities are happening. It is more like a greenfield area as there are no existing drainage network. First of all a toposurvey of the area was conducted and then drainage plan was developed.
6. muSAvior app: an early warning system was developed under the ICT-A project for a pilot area which was then upscaled to the whole city under the CSC project
7. The drainage plan for ward 4 was overlayed on the revenue map with each plot level details on the map. A phase wise development plan was proposed with detailed design and bill of quantities which can be implemented by the city.

Project Title

Climate Smart Cities Project

Project Number

2019.15.9

Results and Impacts

1. Drainage plan for Nayapalli area was developed and submitted to the city
2. Drainage master plan for ward 4 was developed and submitted to the city which is under implementation.
3. The musaviour app which was extended to the city under the CSC project is planned to be implemented by the Smart City Limited of Bhubaneswar to integrate in their command and control centre.

TYPE OF APPROACH
Plan & Strategy Development

COUNTRY
India

LEVEL OF INTERVENTION
city, neighbourhood

TYPE OF RISK MANAGEMENT
prevention, resistance, transformation

MAIN HAZARDS ADDRESSED
flood

URBAN FUNCTION PROTECTED
Basic existential functions (water, electricity, etc.), Public security/ civil protection

SPHERE OF INTERVENTION
economy, environment

RESOURCES REQUIRED
External consultants, Volunteers from college, online survey tool

COOPERATION PARTNERS
BSCL, BMC, Residential welfare associations, institutions

LINKS
https://urban-industrial.in/hrdpmp/igep-uid/content/e5170/e6258/e14274/e15856/MODRAINStoSPONGECITY.pdf