

CTCN Technical Assistance to
Bhutan for
“Flood risk assessment for
Dungsamchhu Basin in
Samdrupjhonkar Municipality”

August 2016-April 2018

Implementing Organization: Asian Institute of Technology

Background and Context

- Various regions in Bhutan (e.g. Samdrupjhonkar Thrombe) have been grappling with flooding problems for years.
- Problem is compounded by steep topography and the projected increase in rainfall due to climate change.
- The Government of Bhutan recognizes the urgency of the situation
 - It approved a budget of Nu.728 million in the 11th Five Year Plan for flood protection
 - It established the Flood Engineering and Management Department (FEMD) to oversee all flood management works in the country.
- The newly established FEMD lacks the technical capacity to carry out the flood assessment studies, which is crucial in developing flood management interventions.

Objective of the CTCN TA: To enhance the skills of the relevant engineers in FEMD and Samdrupjhonkar municipality to indigenously undertake flood risk assessment and to translate this assessment into flood adaptation interventions.

CTCN TA Activities



Activity-1:

Data collection for flood risk analysis



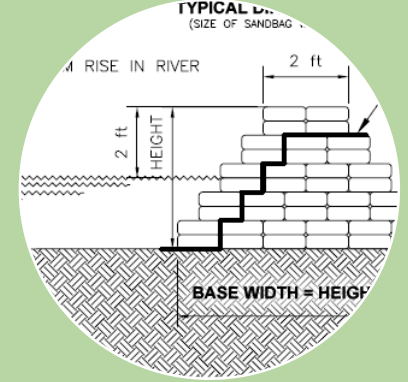
Activity-2

Capacity building programme on flood risk assessment and management



Activity-3

Development of flood vulnerability, hazard and risk maps



Activity-4

Design of a pilot project for flood alleviation

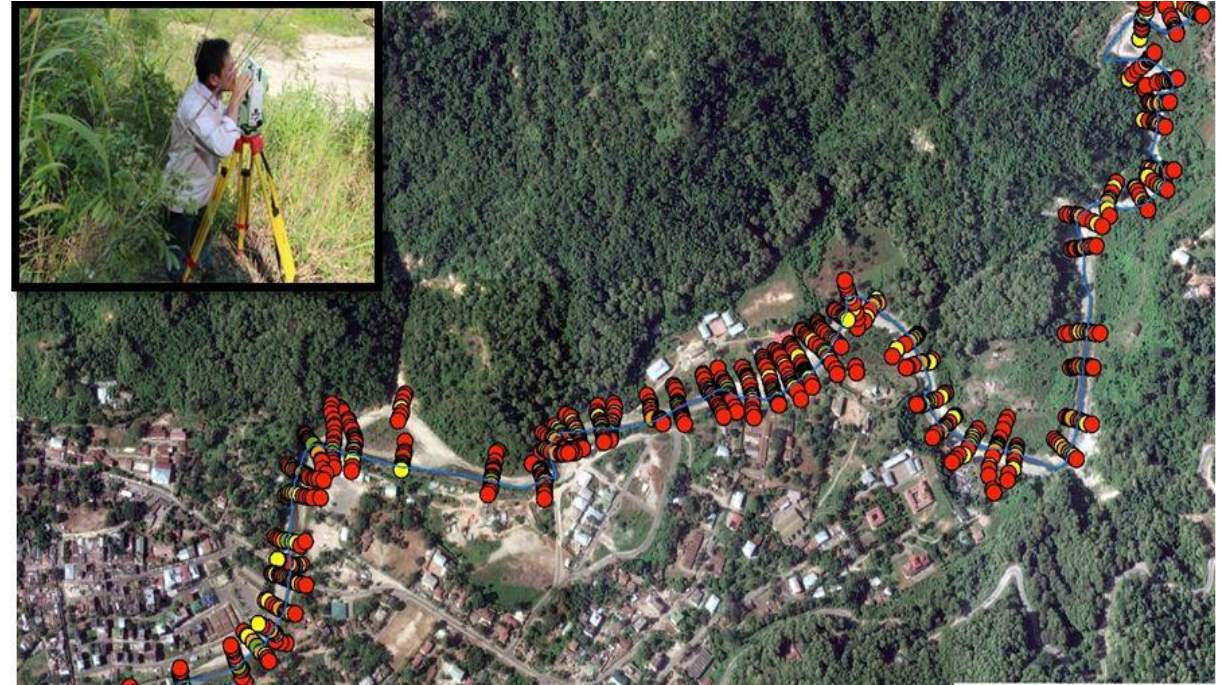


CTCN TA Outputs and Results

Data collection



FEMD team carrying out a questionnaire survey with communities



FEMD team carrying out a river cross-section survey

CTCN TA Outputs and Results

Capacity building programme



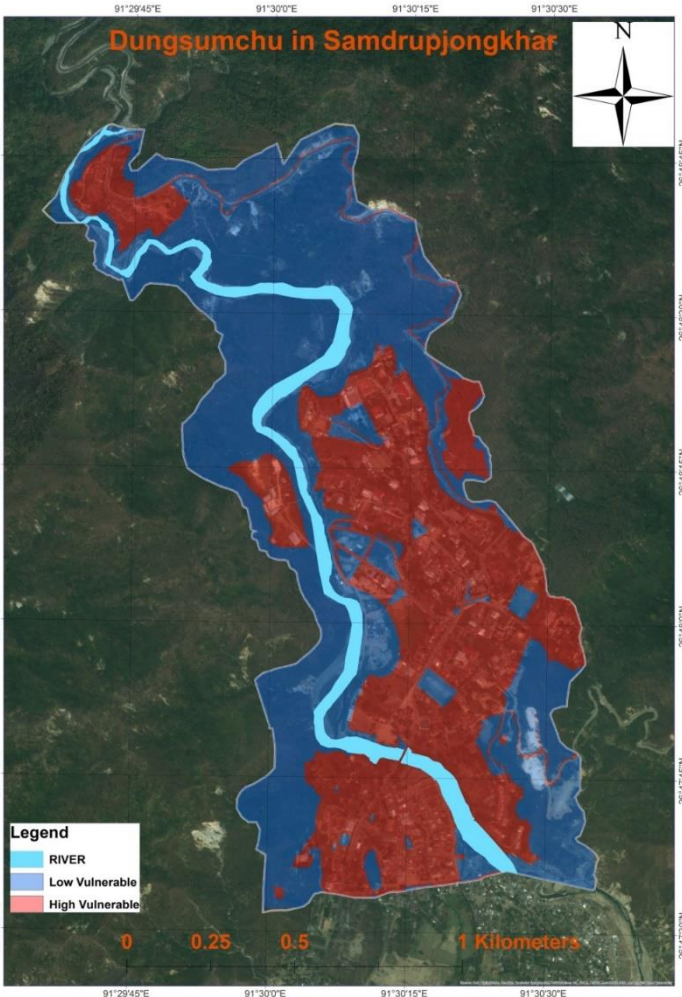
AIT technical experts delivering the training for the capacity building programme



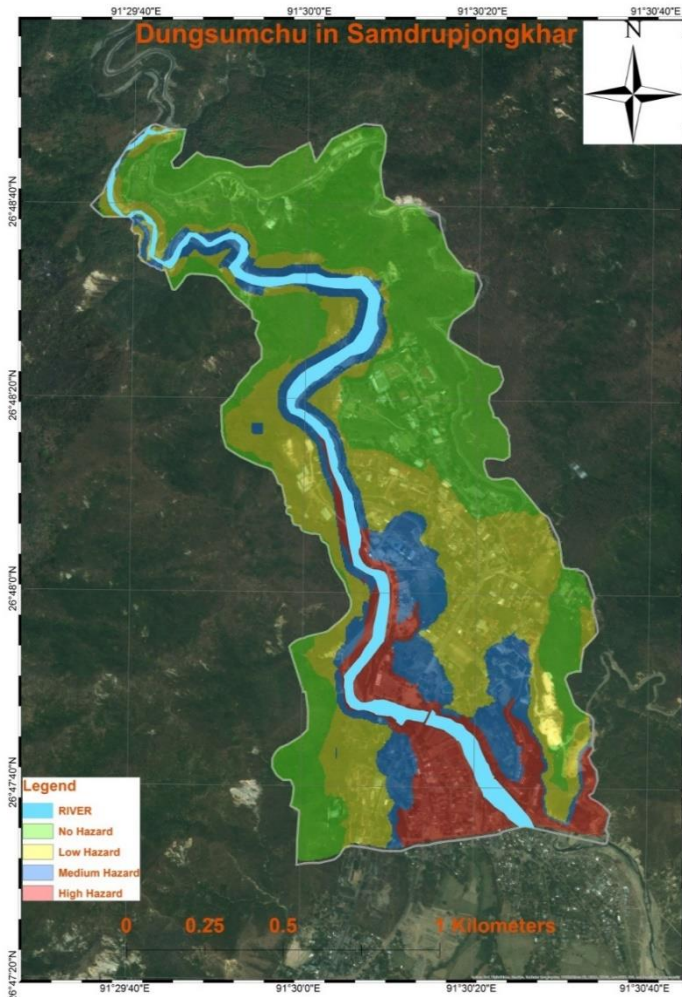
Participants visit Thailand's Smart Water Operating Centre

CTCN TA Outputs and Results

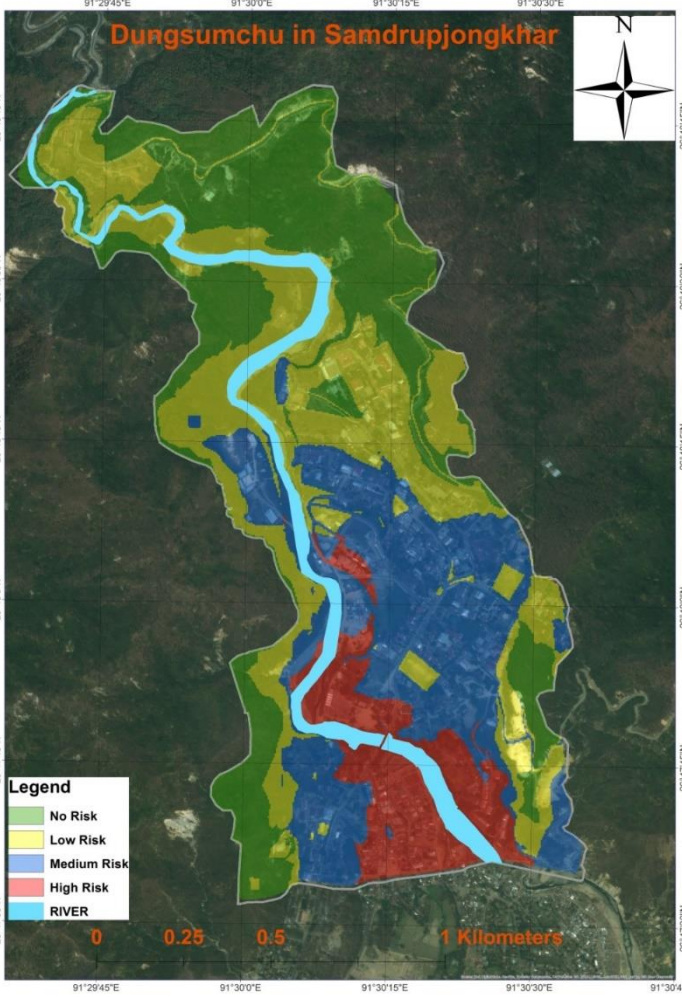
Flood maps



Flood vulnerability map



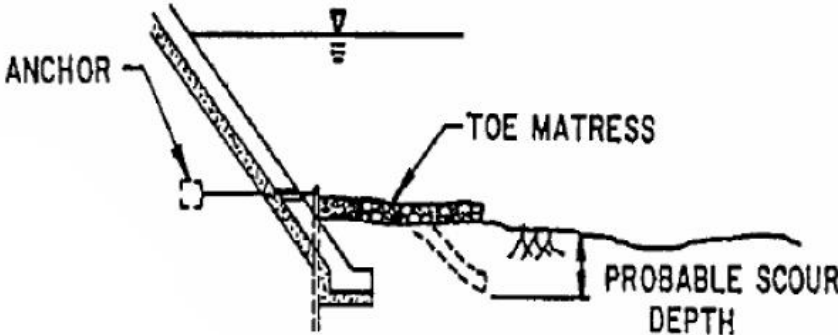
Flood hazard map



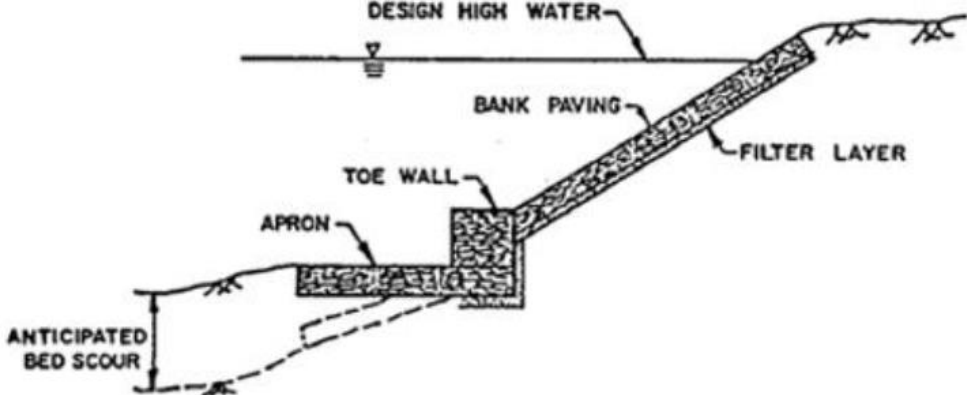
Flood risk map

CTCN TA Outputs and Results

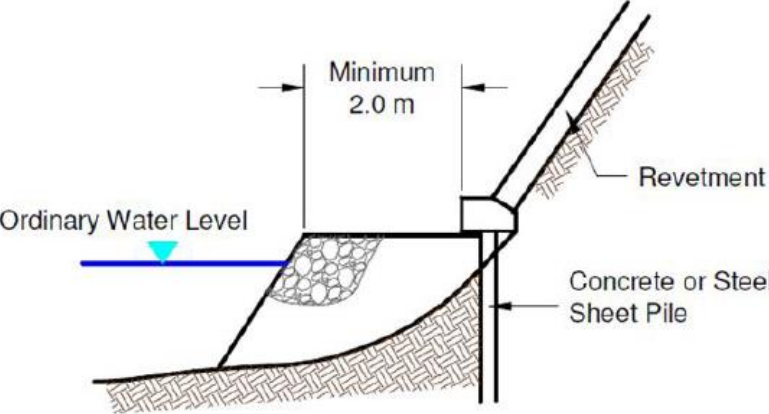
Pilot project preliminary design



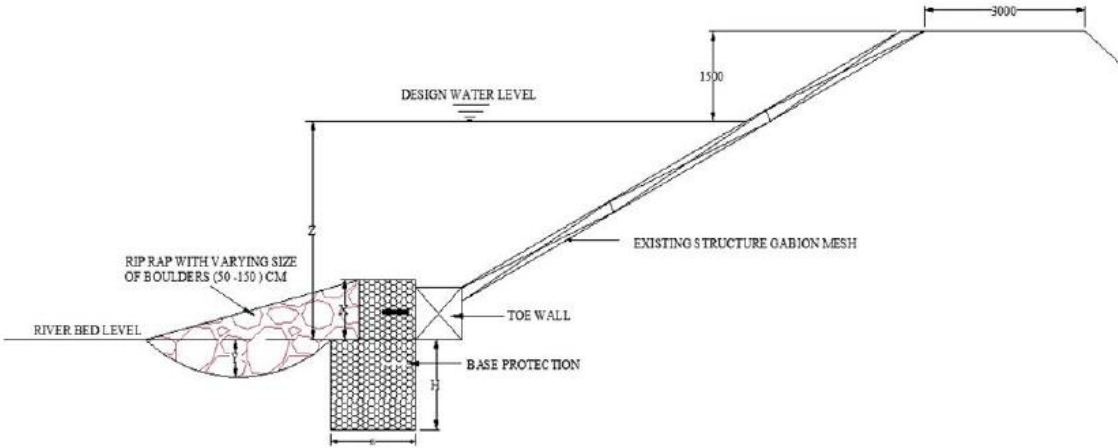
Toe protection against scour



Apron for scouring protection



Concrete/sheet pile for scour protection



Rip rap to protect base of rivetment