



# Participatory Mapping in Timor Leste

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**Climate  
Centre**

*Red Cross Red Crescent Climate Centre Team for Anticipatory Action*

The mission of the Climate Centre's team is to support the Red Cross and Red Crescent Movement and its partners in reducing the impacts of climate change and extreme-weather events on vulnerable people.

The Anticipatory Action team conducted a pilot project in Timor Leste to implement anticipatory mapping using OpenStreetMap (OSM). This project aimed to address the lack of baseline data necessary for planning effective anticipatory actions in the region.

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## The Project

This project aimed to enhance anticipatory mapping in hazard-prone communities in Timor-Leste by creating and using OSM data.

By providing accurate information, the project promoted the development of proactive strategies and the establishment of early warning systems to mitigate the risks posed by natural hazards. A key objective was to explore innovative methods for capturing community knowledge of historic flood events, their impact on the community, and existing early warning systems.

A thorough nationwide multi-hazard analysis identified high-exposure areas, leading to the prioritization of mapping these regions within the OSM framework. The community mapping with the Sketch Map Tool was part of a broader activity, which began with remote mapping and local mapping to improve building information of residential buildings and critical buildings in OSM via KOBO questionnaires.



**SketchMapTool**

**HeiGIT**

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## Why the Sketch Map Tool was used?

The Sketch Map Tool was used to capture the community knowledge of historic flood extents and their impacts as well as capacities.

## How was the Sketch Mapping organized?

Prior to the mapping activities, the team organized community meetings to ensure resident participation throughout the process. Residents of flood-prone villages were contacted through the trusted network of the Timor-Leste Red Cross and its local branches. Community representatives from each village were invited to these meetings and asked to bring along community members who had been affected by recent floods. The selection process had no age restrictions and emphasized maintaining an equal ratio of men and women at the meetings. The participants mapped the extent and location of historic flood events on one map, and on a second map, they identified capacities such as evacuation sites and natural protection areas.



This Sketch Map shows the result of community mappers marking historic flood areas in orange. © Red Cross Red Crescent Climate Centre team for Anticipatory Action.

## How were the Sketch Maps analyzed?

The mappings on the Sketch Maps were combined with other collected local data and visualized in a community map using geoinformation software (in this case, ArcPro was used). The community mapping results were also used to improve OSM data by adding local names to rivers, villages, and including nature conservation areas directly via the OSM editor.

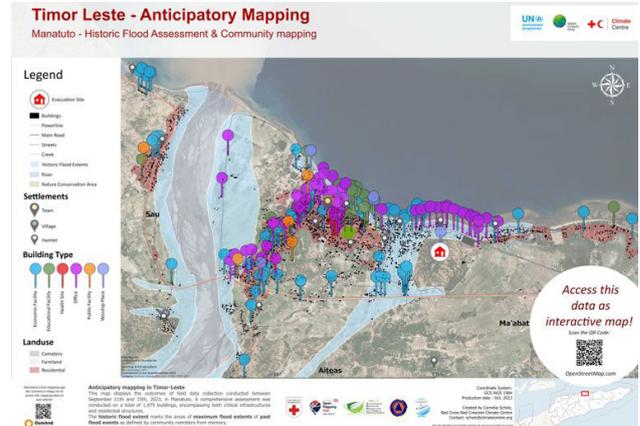
Sources:

Final Report: <https://drive.google.com/file/d/1xKjBA9eicqon-Qnbiv-pWzSGuX0cldIn/view>

Blogpost: <https://www.climatecentre.org/13645/blog-mapping-for-anticipatory-action-in-timor-leste/>

## Results and Impact

The gathered information and created maps were used to support local communities and decision-makers in making informed decisions and facilitating anticipatory action planning.



This Community map shows the results of the different mapping activities conducted in the area including the historical flood areas mapped in the Sketch Map. © Red Cross Red Crescent Climate Centre team for Anticipatory Action.

## Lessons learnt

1. One large format map (A3) proved to be handier than multiple smaller maps with detailed depiction of specific areas.
2. Best results were achieved in smaller groups of 4-6 people.
3. An additional satellite imagery can help the orientation on the OSM base maps.
4. The digitization process is sensitive to the map's condition and the quality of the photos taken. Using document folders helps keep fragile paper maps clean and smooth, protecting them during fieldwork.
5. A pretest of the mapping with the markers/pens you use is very helpful to ensure everything works as planned.



Community meeting in the Laclo valley to capture community knowledge of floods, impacts, and capacities. © Red Cross Red Crescent Climate Centre team for Anticipatory Action.

