

Open Street Map Gambia Initiatives

Project Title: Disaster Risk Assessment of Flash Floods in Banjul North and Banjul Central

Open Street Map Gambia Chapter in partnership with the volunteer community of Connected Youth Mappers held a field work assessment visit in Banjul ahead of the 2024 rainy season (June- October 2024). The assessment visit was done as part of the capacity building programs to enable our volunteer community to learn and put to practice data collection mechanisms used in the assessment of flood prone areas. In the past years, the city of Banjul experienced flash floods as reported by the national disaster agency. The floods affected a great part of Banjul Central and some parts of Banjul North.

Our flood assessment field visit was done in the form of a survey to get insights from residents in the neighbors of how the floods have affected their lives and movement. The data collected include:

- Number of houses per street.
- Geolocation of houses.
- Number of commercial and public infrastructure in the areas.
- Condition and type of drainage systems available.
- Type of assistance offered by the city council.
- Damage of flood to property, neighborhood, and homes.
- Interventive measures taken.
- Condition of road networks in the neighborhoods.

The field assessment visit ended with a record of 85 home owners interviewed to note concerns and effective intervention measures that had worked in the past to avoid a recurrence of heavy flood damage as recorded in the 2022 flood incident in Banjul.

Project Title :Analysis of 360-Degree Imagery of Road Networks in Banjul and Kanifing (Google Street View Project)

Dates: July- September 2024

Analysis of 360- degree Imagery of Road Networks in Banjul and Kanifing Project implemented by Jokkolabs Banjul in partnership with the Open Street Map Gambia Chapter is an initiative pioneered by Ripple Nami. The project involves the analysis of 360-degree imagery of road networks in Banjul and Kanifing spanning 785km to identify and gather data about 135000 thousand buildings in these areas. It also involves the documentation of the building attributes along with the 2D images of the building, and its corresponding Google Buildings footprints in the areas of interest. Participants of the project use the Google Plus Codes used for the blue digital address signs allocated to properties analyzed to reflect the point at the gate of the compound, with an accuracy of 3 meters.

The projects involve the use of QGIS and Mapillary to visually analyze data, identifying buildings in the 360-degree imagery that corresponds to those in the Google Buildings shapefile. This is done to verify each buildings polygon in QGIZ, to gather substantial data from 360-degree imagery to add to each buildings polygon record as well as identify the Plus code for each building to be added to the polygon records in QGIS.

Open Buildings Data and Street View imagery using QGIS, which is an open-source software program that allows users to create, edit, visualize, analyze, and publish geospatial information.

The following elements have been incorporated into the project:

- Plus Code Data: To capture the formal address of a property
- Open Buildings Data: To determine the location and square footage of building footprints in Banjul and Kanifing
- Street View Imagery: To determine the number of story buildings through a visual analysis.

Building height is an important piece of information that is being determined from Google Street View imagery, which when combined with the building footprints derived from Google Open Buildings Data, can be used to determine a building's overall square footage. This information will be used in algorithms to estimate rent per square foot of buildings in Banjul and Kanifing.

The project will further enhance the skillset of the Open Street Map chapter members in contributing to the provision of geospatial data in The Gambia.

Open Street Map Capacity Building Program

Date: April- November 2023

The Open Street Map chapter began the capacity building program on OSM in April 2023 to strengthen the mapping capacity of its volunteer members at the University of The Gambia and the American University of West Africa. The project was set up to put in place sustainable measures for the community to thrive during a change of student leadership. The program introduced Open Street Map to year 1,2,3 students as introductory mapping trainings. Eight mapping sessions were held in total, 6 were done at the university of the Gambia and two at the American International University of West Africa.

The capacity building program has attracted new members increasing the number of volunteers to thirty-five students from the two schools.

Training content:

- Introduction to Open Street Map
- Building an Maintaining a Youth Mappers Chapter
- Introduction to mapping on QGIS
- Introduction to Humanitarian Open Street Map for management and creation of projects
- Facilitating Open Street Map training and Workshops

Other Open Street Map Initiatives

- Host of the Africa Virtual Mapathon, March 2024
- QGIS training for the Geography students of the University of the Gambia, November 2024.
- Introduction of Open Street Map to the University of Applied Science, Technology and Engineering, November 2024.