

Practical 1 Introduction and demo

14.8.2025

Open geospatial data, low-cost tools and participatory approaches for urban climate services in Africa

https://kadi-project.eu/



Participatory GIS – Participatory mapping

"Includes social knowledge into the process of collection, management and analysis of spatial information" → Based on the belief that those who are affected by a decision have a right to be involved in and influence the decision-making process

- From the 1990's participatory mapping gained momentum in theory and practice, starting from participatory planning and infiltrating to all sectors of the society and large range of academic disciplines we see today
- Participation of local stakeholders and importance to understand experience-based environmental practices, meanings, values and preferences

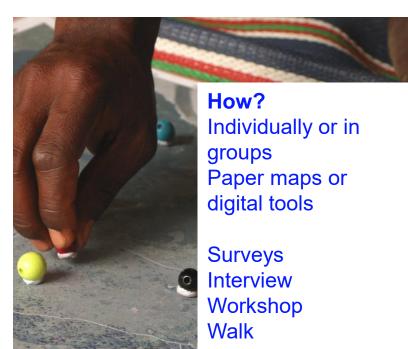
→ PLACE-BASED LOCAL KNOWLEDGE



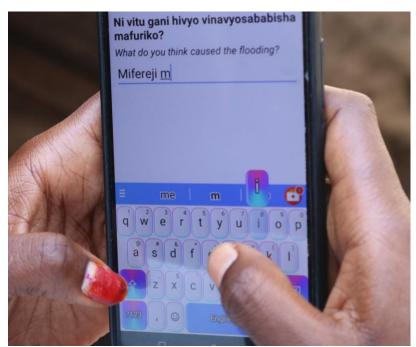
What?

Everyday activities, landuse Values, meanings Development preferences Threaths, condition of environment, crisis events Ecosystem services Environmental impacts Evaluation of drafted plans











You may put as many locations on the map in your neighborhood as you like. The points or polygons represent locations where you have experienced floods, heat or air pollution.

16. Where in your neighborhood have you most often experienced floods?

Flood experience (point)

Flood experience (area)

17. Where in your neighborhood have you most often experienced heat stress?

Heat stress experience (point)

Heat stress experience (area)



Scales?
Block
Neighbourhood
City/village
Regional level
National level



Juntos Mozambi<u>que</u>

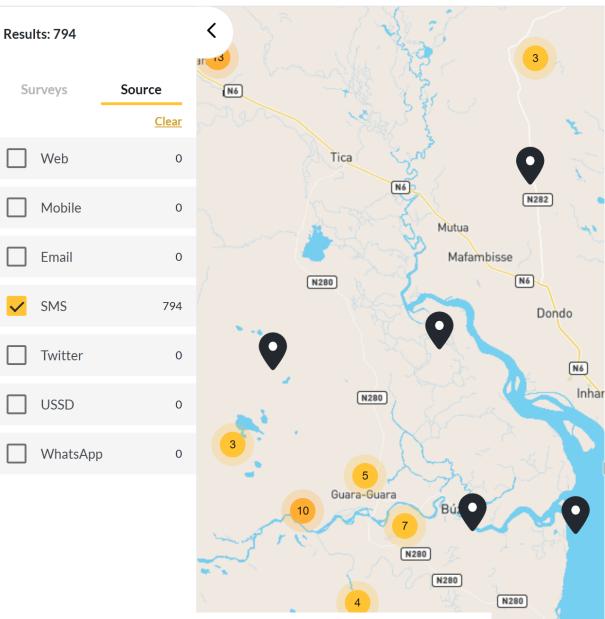
Contact email address: rachid.ibraimo@akdn.org

A platform that focuses on strengthening CSOs in Mozambique by using blended learning approach: https://juntosmocambique.org/

Add new post +

- Map view
- Data view
- & Activity
- OO Collections
- ? Help & Support
- O+ Log in / Sign up

Map



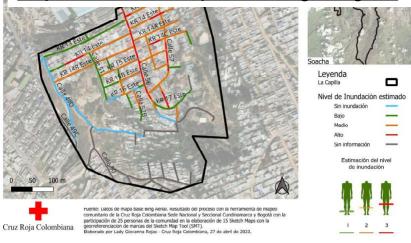
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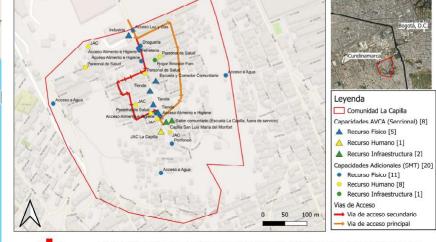
SketchMap Tool

Mapa de amenaza de inundación estimada - La Capilla

https://sketch-map-tool.heigit.org/en

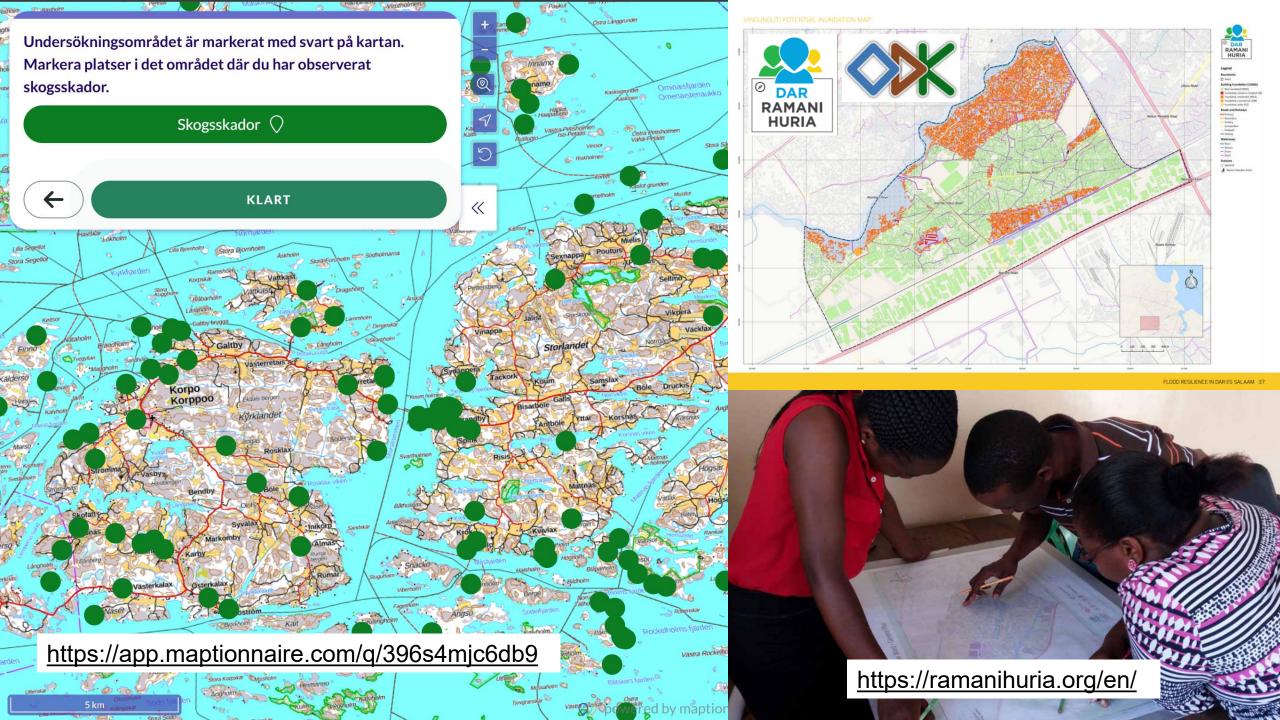


Mapa de Capacidades La Capilla





Fuente: Datos de mapa base Bing y Bing Aerial, Resultado del proceso de AVCA con la herramienta de mapeo comunitario de la Cnuz Roja Colombiana Sectional Cundinamarca con la participación de 6 personas de la comunidad en la elaboración de nucras del Sketch Map Tool (SMT). Elaborado por Ing. Daniel Gallario e Ing. Juan David Rodríguez - Cnuz Roja Colombiana, 26 de abril de 2023.







When was the last time you were asked for your opinion on a development project that would impact your everyday life? Billions of euros are being used to renovate our urban spaces, public buildings and transport facilities. But public consultation and stakeholder involvement is often reduced to a formality. It is clear however that in order for a project to be successful, the needs and concerns of the people who use the new infrastructure on a daily basis must be taken into account alongside professional considerations. The modernization of a station is not the goal in itself, but rather to increase the number of people travelling by train. Smart benches don't make a public square a community place, only locals, if they grow to like it

Participatory mapping is a process by which the invaluable knowledge of stakeholders is incorporated into community developments designed for their benefit. PARTIMAP's map-based survey application makes engaging with local stakeholders quicker, simpler and more efficient. It is free to use after registration, has customizable design features, and can also be freely developed as it is an open source platform. Whether you represent a public body, a municipality or a local advocacy group, if you're looking for a smart and transparent way to get to know the views of your community, try PARTIMAP and join its development!

Today!

TASK 1: Testing an online participatory mapping tool PARTIMAP

- Register to PARTIMAP and create an online participatory mapping survey
- Follow the example given, or come up with your own questions
- Share your survey link to others, and try someone else's survey

TASK 2: Analysing and visualising participatory mapping data in QGIS

- Download KADI Dar es Salaam pilot data of community members' climate stressor experiences and bring it to QGIS software
- Conduct Kernel density estimation analysis for the datasets
- Visualise and understand the results



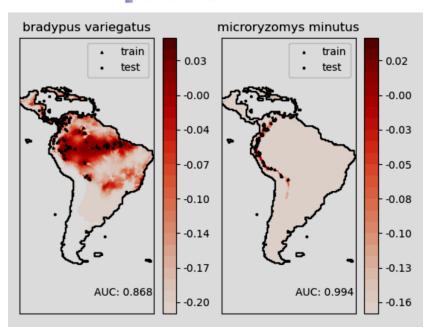
Kernel Density Estimation??

Interpolation method suitable for non-continuous phenomena, e.g. crime, ecosystem service locations, wildlife sightings, disease outbreak cases...

Vs. Continuous phenomena, e.g. temperature, elevation, flood water depth within flooded area... → Suitable interpolation methods e.g. IDW and Kriging and their derivates



- Late night road accident locations
- Road network
- Calculated density





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