Geospatial Data and Technical Support for Humanitarians in East Africa

August 2024

United Kingdom Humanitarian Innovation Hub

Caribou Space

MAP ACTION

Humanitarian OpenStreetMap Team

Objectives of Session

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- Background
- Overview of support offered
- Why geospatial data?
- Application & selection process
- Q&A

1. Background

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- Who are we?
- Why are we doing this?

Caribou Space: who are we?

United Kingdom Humanitarian Innovation Hub

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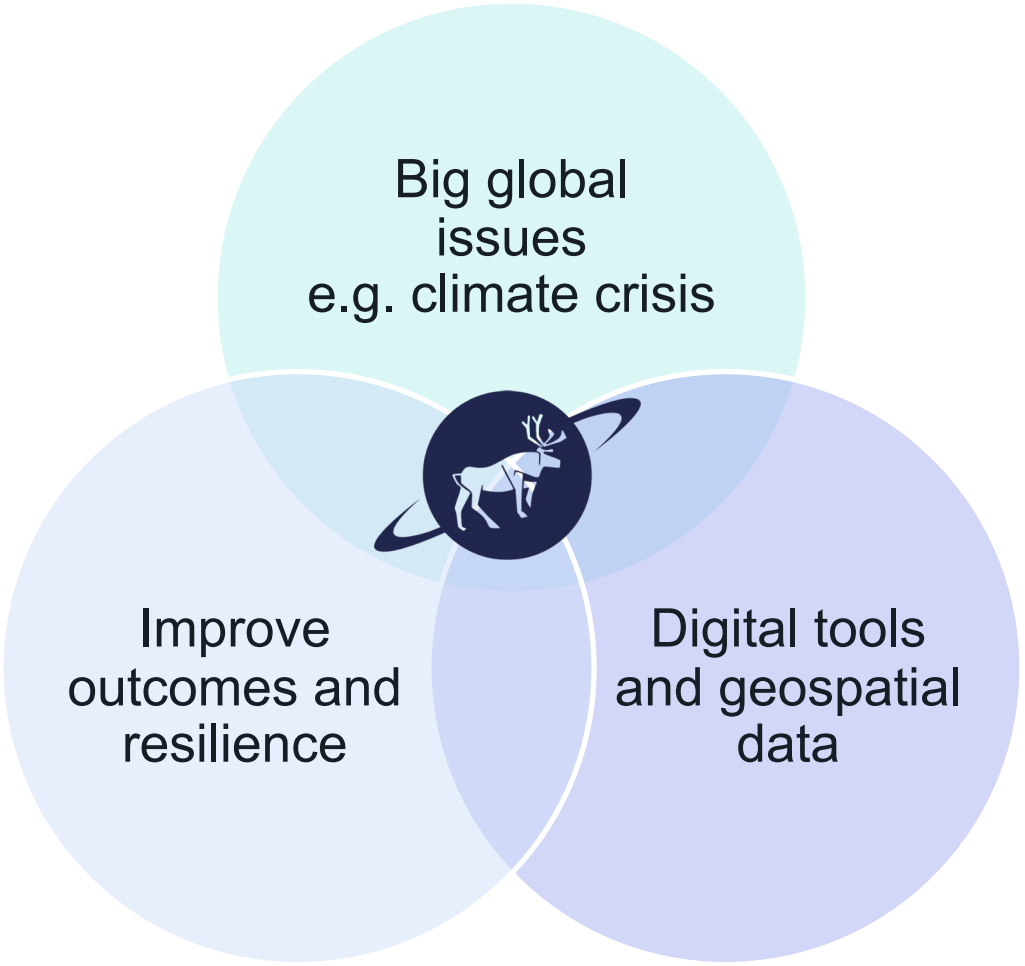

Our objective is to promote the adoption of digital tools and geospatial data to tackle sustainable development and humanitarian issues.

UK Humanitarian Innovation Hub (UKHIH)

United Kingdom Humanitarian Innovation Hub

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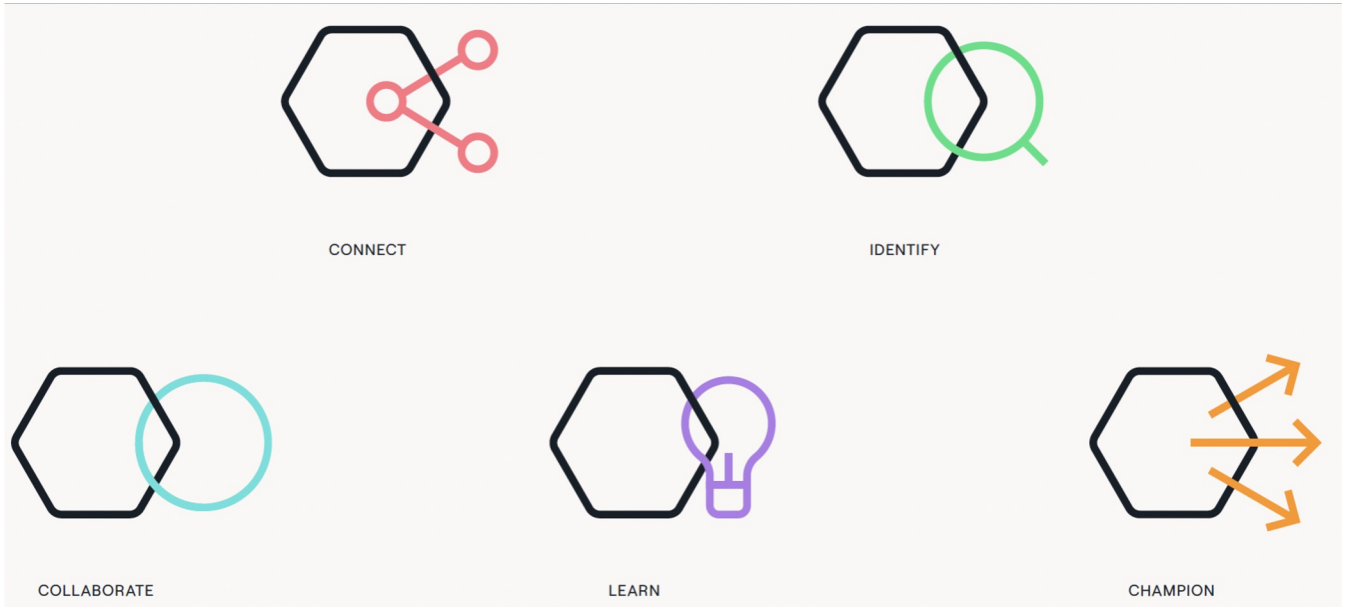
- **A pilot initiative which focuses on harnessing UK and global capabilities for problem-led systems innovation in the humanitarian sector.**
- Since 2020, UKHIH has invested in **Systems Innovation Partnerships** on topics which have real potential to improve the humanitarian system but where progress has been slow or learning has been disjointed.
- We bring together collaborations of diverse actors to map the opportunity space and identify tangible ways to move the dial in each thematic area.
- Find out more ukhih.org



Scan the code to subscribe for updates

Phase 1 – Beyond Borders (2021-2022)

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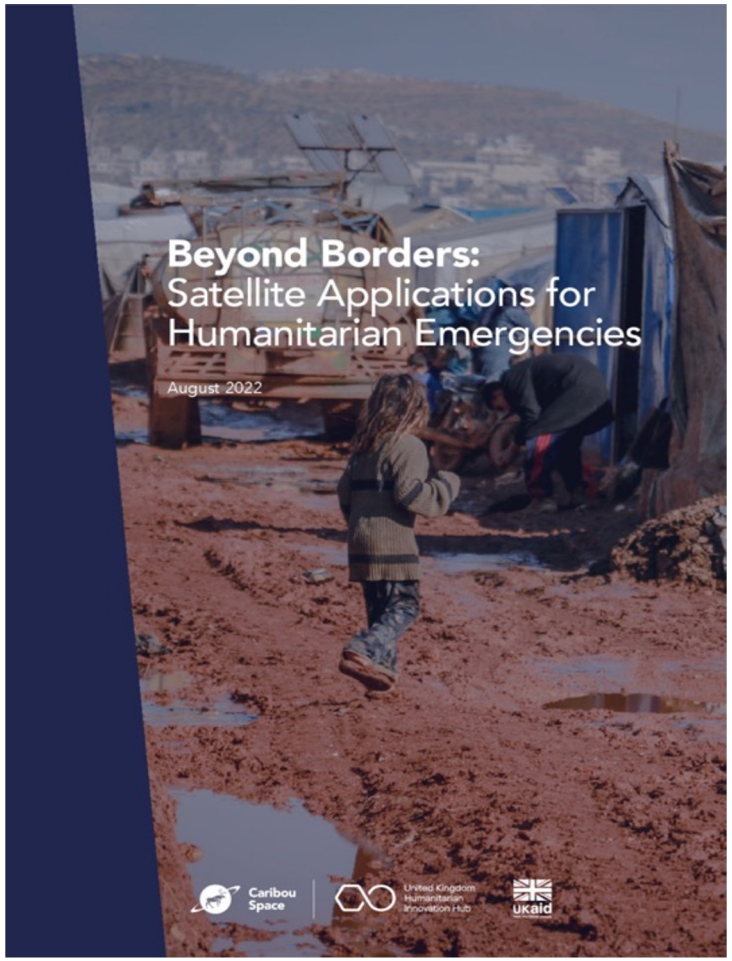

- Report published summer 2022
- State-of-play for the use of satellite technologies in humanitarian emergencies
- Broad coverage of the sector
- Interested in what was already happening, who was involved and where there were gaps

Phase 2 – Ideation Process (Aug - Dec 2023)

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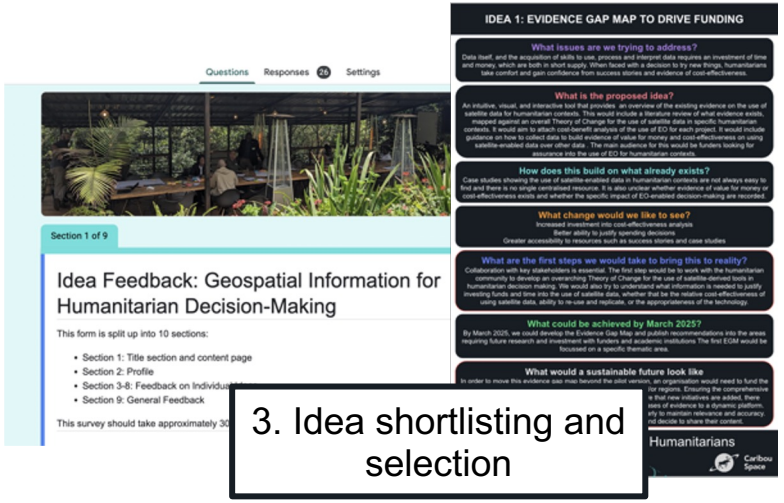
1. Research insights

Ideation process

2. Ideation workshops



3. Idea shortlisting and selection

Phase 3 – Problem Statements

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- Humanitarians struggle to understand how geospatial data could actually impact their operations
- There is a knowledge gap in accessing and making use of available geospatial data and tools
- Humanitarians report that they do not have support or guidance to navigate the fragmented landscape of resources

"Highlighting the added value of EO-driven systems based on success stories is promising, but the entry barrier will still be high, particular for (sub-)national organizations. I believe explicitly answering the questions 'what can we accomplish with EO?' and 'what do I need to get there?' or 'who can I ask for advice?' in parallel could help."

- *The World Bank*

"You'll find these organisations [local humanitarian NGOs] *are interested in terms of learning more and using these tools, but they're not able to meet consultancy fees with like local experts… There might be also the special consultancies who do not have access to the most updated tools and processes and workflows. They might also be interested.*

- *Code for Africa*

"We are using so many, I would say an organisation like Red Cross has their own portals that you would access to look at climate related information… we have the government … I've seen the tendency being the use of Google".

- *GNDR*

"The data exists, the workflows exist, but they seem so far away at the same time, like the people don't have confidence to use it because it is something not created for them or for their purpose"

- *University of Maryland/NASA Harvest*

Phase 3 – Data-Driven Humanitarian Action

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*Developing new **tools and processes** to support greater uptake of **geospatial data in the humanitarian sector**.*

- Articulating a **clearer value proposition** for humanitarians to use geospatial data in their operations through evidence synthesis
- More **equitable access** to knowledge for all, removing barriers such as technical jargon and networks
- Taking stock of what is already available and supporting organisations with **'low hanging fruit'** to make better use of existing open-source data and tools

2. Overview of Support Offered

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- What support are we offering?
- Who’s involved?

Geospatial Data and Technical Support for Humanitarians in East Africa

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Building skills for ongoing use of geospatial tools and sustained adoption of a data-driven approach to humanitarian operations

Hands-on support to humanitarian organisations to facilitate better use of available geospatial data and tools.

- Better prepared to face disasters triggered by weather-related hazards.
- More aware of the physical and human ‘geography’ of your regions of operation
- Better equipped for data-driven decision making

More efficient, more cost-effective and more impactful humanitarian operations

Stages of the Process

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1. Screening and shortlisting	2. Scoping assessment	3. Group training session	4. Technical support	5. Insights development
Sept/ Oct 2024	*Late September*	*Oct. 2024*	*mid Oct. 2024 to late Feb. 2025*	*Ongoing*
Screening and selection of applicants. Applicants may be asked to provide further information during the review process as needed to inform the selection process.	Conducting a one-on-one walk-through of the organisation's current processes to identify areas where satellite data can support better decision-making. Technical expert and organisation agree SOW	Introducing representatives from selected organisations to geospatial information and facilitating peer-to-peer knowledge sharing on their work, objectives, and data/information challenges.	Engaging a technical expert to identify open-access data and tools and providing training and support to integrate these into the organisation's decision-making processes and systems	Participants share their experience and learnings in the form of a short user interview and/or a short video or blog. This will help in capturing lessons learned and assessing the impact of the support provided.

Expectations of Organisations

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- Attend group training session
- Attend scoping assessment
- 5 to 12 days of engaging with technical consultants
- Efforts to sustain/ extend use of geospatial data in your organisation beyond the engagement period
- Short interview/ blog/ video after the end of the engagement (early 2025)

Capacity Building Consultants

Humanitarian OpenStreetMap Team

An international team dedicated to humanitarian action and community development through open mapping

Type of work:

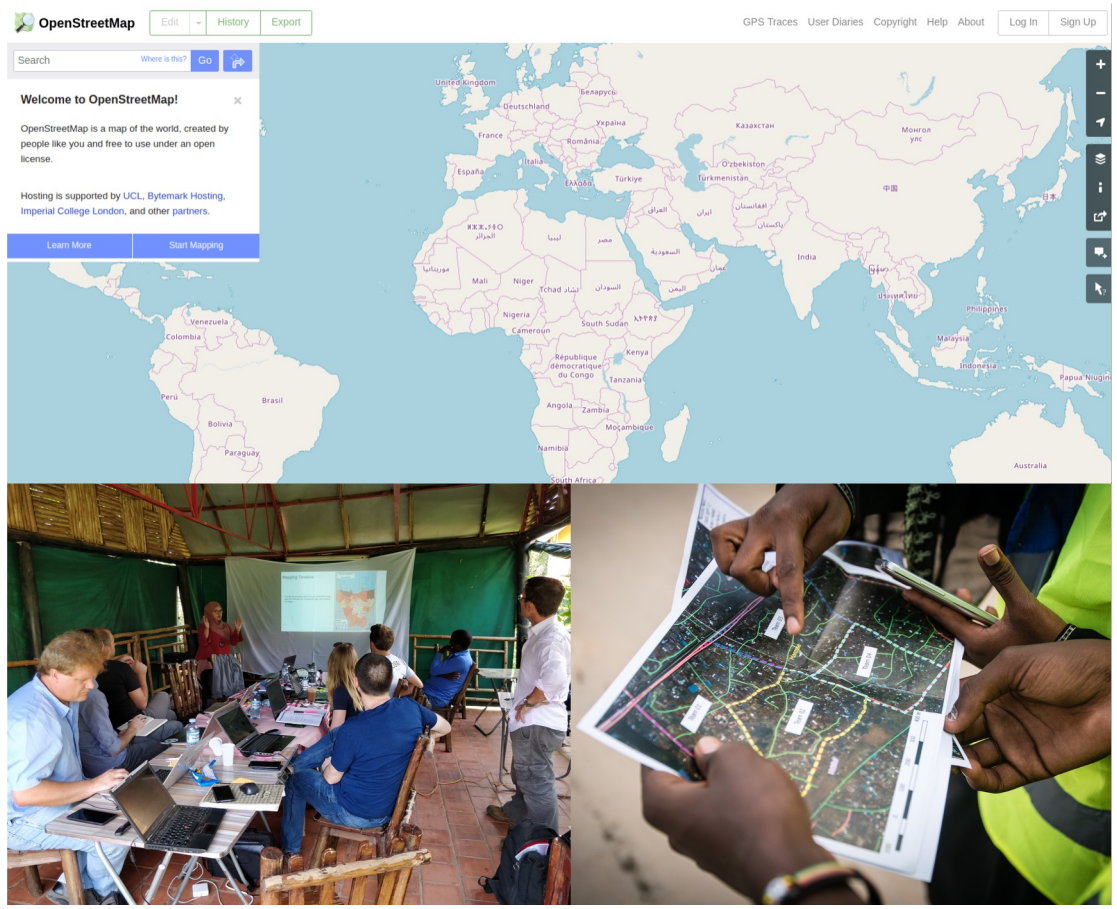
- Implements (Through Regional Networks) Mapping Projects to aid disaster preparedness and Response
- Provides Technical and Programmatic Geospatial support for Humanitarian Organisations

Operations:

- Mobilises volunteers worldwide to contribute to OpenStreetMap data.
- Coordinates remote mapping efforts and on-the-ground projects.
- Offers training programs to build local mapping capacity and resilience.

Key strengths

- Network of Humanitarian Organizations and Volunteers
- HOT utilizes, supports and develops open-source tools, such as OpenStreetMap (OSM) and associated technologies, to create and share maps.
- Experience in Mapping Particularly in High-Risk Contexts



Capacity Building Consultants

A non-profit organisation that collaborates with partners around the world to help anticipate, prepare for and respond to humanitarian emergencies

Type of work:

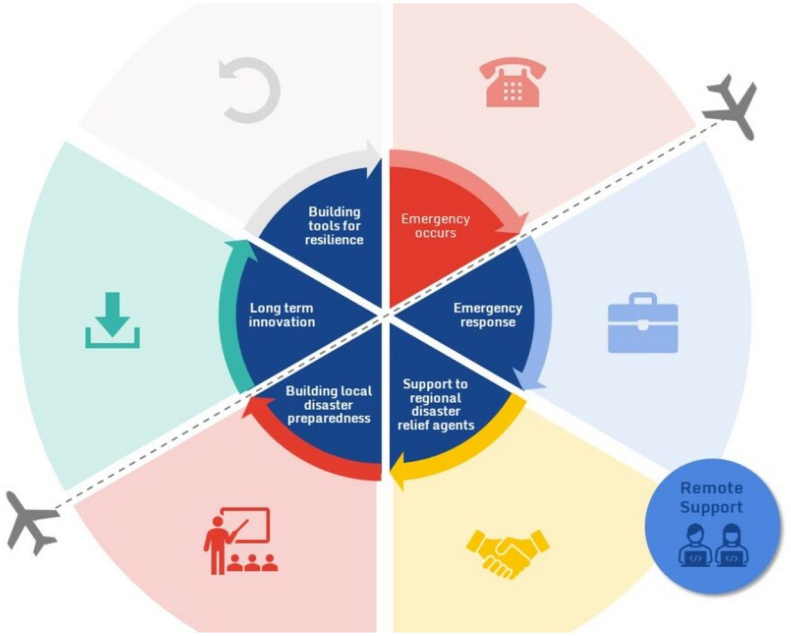
- Mapping and information management support for emergency response
- Training local and regional organisations in developing geospatial skills
- Sub-national risk modelling

Operations:

- Deploys trained volunteers rapidly to disaster zones.
- Utilizes GIS technology to produce real-time maps and data analysis.
- Collaborates with various humanitarian agencies to ensure accurate and useful data dissemination.

Key strengths:

- Over 20 years experience deploying in humanitarian response
- Pool of expert volunteers with wide range of geospatial and data expertise to draw on



Our vision

A world where people vulnerable to humanitarian emergencies are more resilient and those assisting them are more effective through the use of technological advances in information management.

Our promise

We will apply the best geospatial technologies and our expertise to shine a light on tough humanitarian problems, providing critical insights that will save lives, protect, recover and strengthen livelihoods and promote human dignity.

We will serve international, regional and national humanitarian responders to the best of our abilities to enable them to provide the most effective response possible to save lives and reduce suffering.

3. Why Geospatial Data

- What do we mean by geospatial data?
- How could geospatial data help you?

What is Geospatial Data?

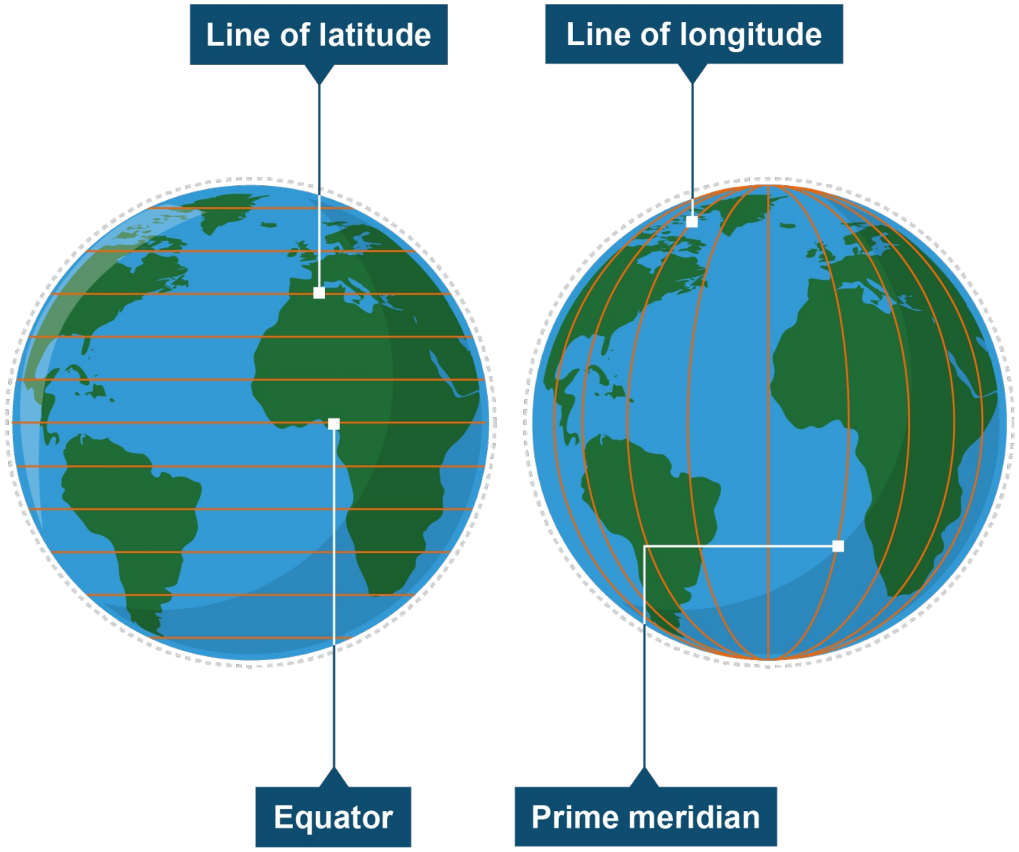
Geospatial data is any **information** that has a **location**

Examples include:

- Places (settlements, administrative areas …)
- Population
- Natural features (rivers, elevation, forest, climate…)
- Infrastructure (roads, health facilities …)
- Anything else that has a real-world location

Location information may be provided as:

- Coordinates
- Names or code of a known location



Data to Information to Knowledge

Geospatial data helps us capture information about place into a map allowing us to understand and analyse the complex world around us – and make better decisions.

Example

- Population data
- Settlement locations
- Coordinate of reported road blockages

- Calculated water requirements per settlement
- Map of which routes remain accessible

- Knowing how much water is needed where and by what route to transport it

Why Use Geospatial Data?

Geospatial data is critical during humanitarian crises to inform **timely** and **evidence-based decision-making** and can help ensure effective **coordination**, **prioritise** areas of intervention, and **allocate resources.**

Prepare:

- Capture early signs of events such as storms and droughts
- Identify vulnerable locations and populations

Respond

- Assess impact and needs
- Prioritise resources
- Implement and monitor progress

Recover

- Inventory of resources and infrastructure
- Population movements

The Questions Geospatial Data Answers

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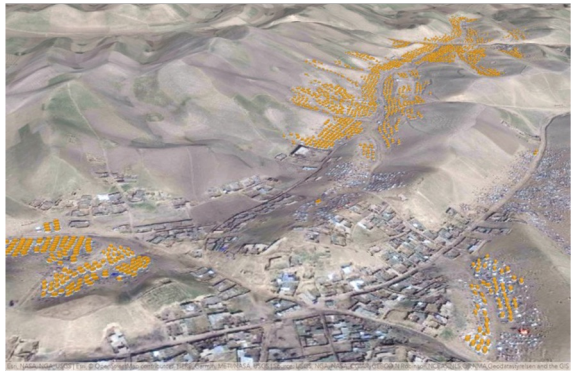
Understanding where

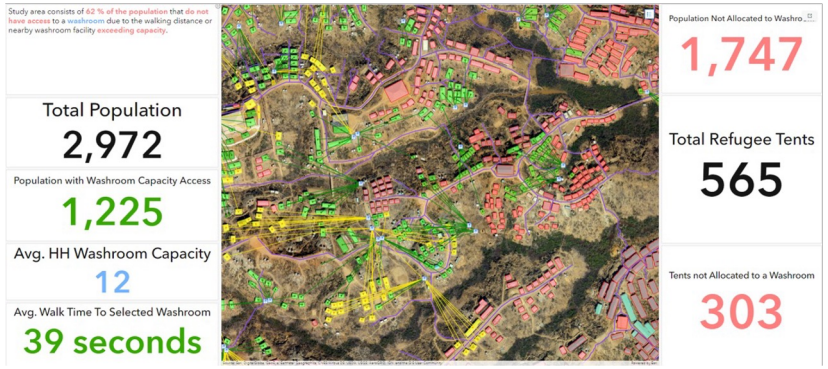


Counting IDP tents ©Alcis

Understanding relationships

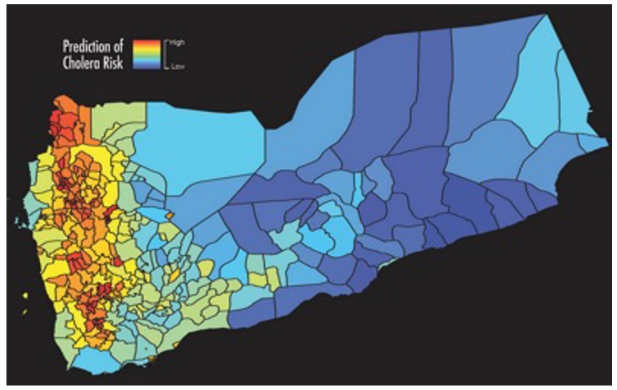
Boosting immunisation coverage ©Acasus

Finding best location



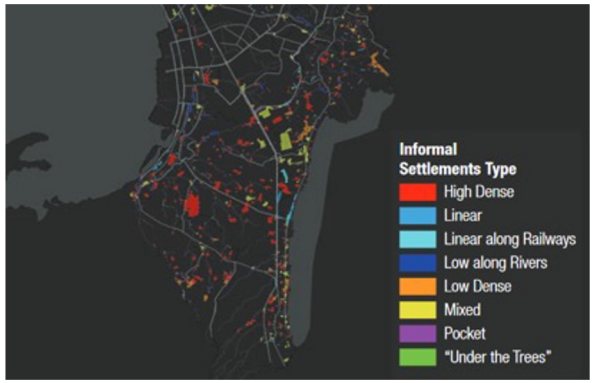
Rohingya refugee camp analysis ©ArcGIS

Making predictions



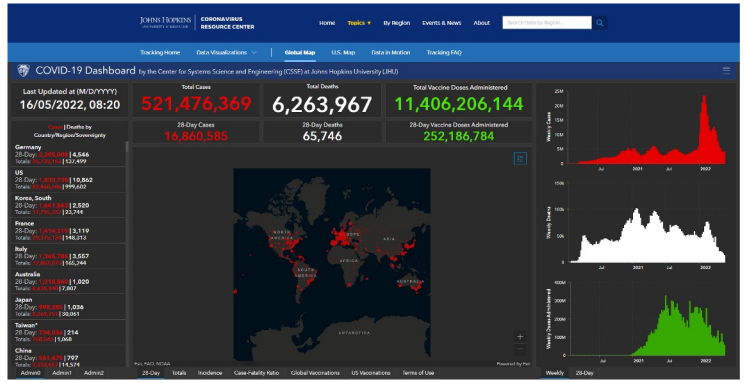
Cholera prediction modelling system ©NASA

Measuring size/shape/distribution



Mapping slums ©EOWorld2

Detecting patterns



COVID-19 mapping ©Johns Hopkins

Case Study Example

Anticipatory Response to Disasters, Zimbabwe, 2024

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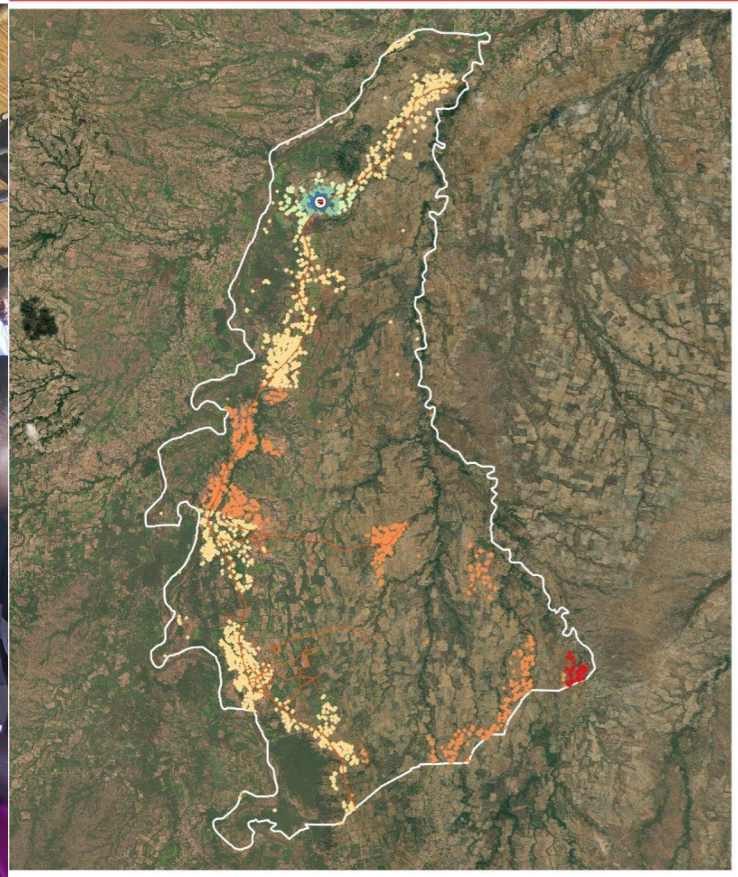
Kapembere — Access to markets



The Anticipatory Response Program (**ARP**) -that was implemented in **Zimbabwe - Muzabani district** - incorporated open mapping tools and workflows into **disaster response** and **resilience** efforts to move from a reactive to a proactive approach

The **ARP** program aimed at exploring the concept of anticipatory response that involves taking proactive measures to anticipate and address potential disasters before they arise. Primarily focusing on:

- Adequately mapping of relevant map features that would inform better disaster response by Caritas Zimbabwe alongside other relevant stakeholders in Muzarabani district. These features include buildings, roads and relevant points of interest (POIs) such as health facilities, shops, markets, schools, water sources, flood prone road sections, religious centres and public toilets. All collected through remote and field mapping initiatives.
- Evaluating the suitability of POIs to act as evacuation centres and cash voucher assistance (CVA) points, in the event disasters of catastrophic magnitude do occur in Muzarabani district.
- Evaluating proximity of settlements in Muzarabani district to such key POIs. Thus understanding community vulnerability to disasters - communities that will be at risk whenever disasters occur by virtue of them being far from such critical POIs.

This **map** showcases accessibility of communities (settlements) to **markets** in wards in Muzarabani district, Zimbabwe using open data from OpenStreetMap (OSM). During disasters, **markets** play a vital role during disasters by facilitating access to essential goods and services, sometimes through cash voucher assistance programs. These programs enable affected individuals to purchase items they need, supporting local economies and ensuring efficient distribution of aid while preserving dignity and autonomy for disaster survivors. So WHAT does this **map** tell us?

THAT in Kapembere

5486 buildings are mapped on OpenStreetMap

1 markets that were mapped on OpenStreetMap

Of the **markets**:

1 have poor suitability scores to be used as cash voucher assistance facilities

0 have average suitability scores to be used as cash voucher assistance facilities

Suitability scores were evaluated using relevant attributes including if shops have been used as cash voucher assistance facilities before and if crucial commodities are sold in shops.

0 been used as cash voucher assistance facilities before

1 not been used as cash voucher assistance facilities before

1 with mealie meal

1 without mealie meal

1 with cooking oil

0 without cooking oil

0 with meat

1 without meat

1 with salt

0 without salt

1 with toiletries

0 without toiletries

1 with cereals

0 without cereals

1 with vegetables

0 without vegetables

And that:

2 percent of settlements are within 0-250 meters to the nearest market

3 percent of settlements are within 250-500 meters to the nearest market

5 percent of settlements are within 500-1000 meters to the nearest market

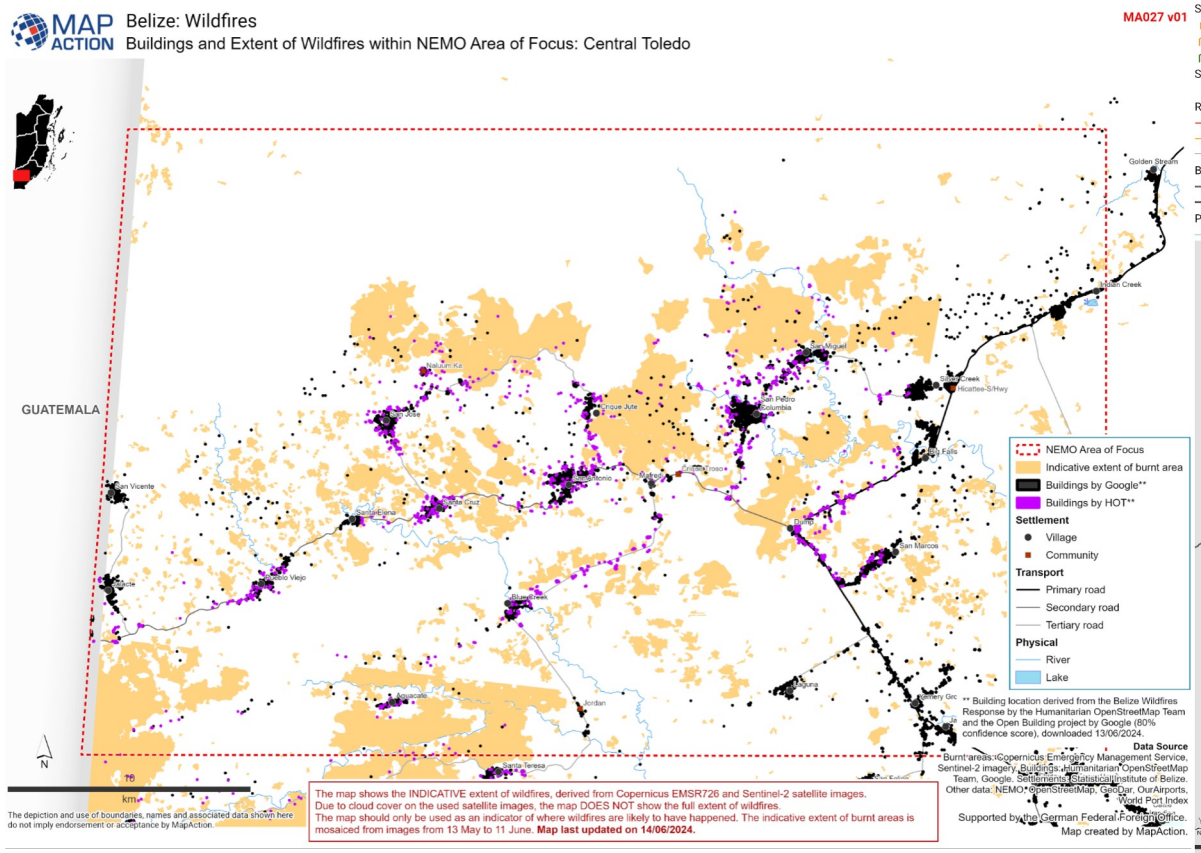
60 percent of settlements are within 1000-5000 meters to the nearest market

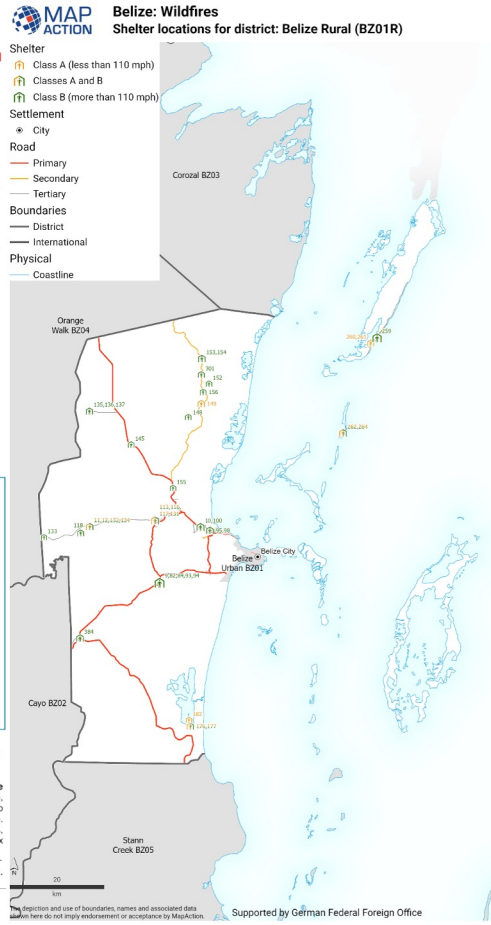
28 percent of settlements are within 5000-10000 meters to the nearest market

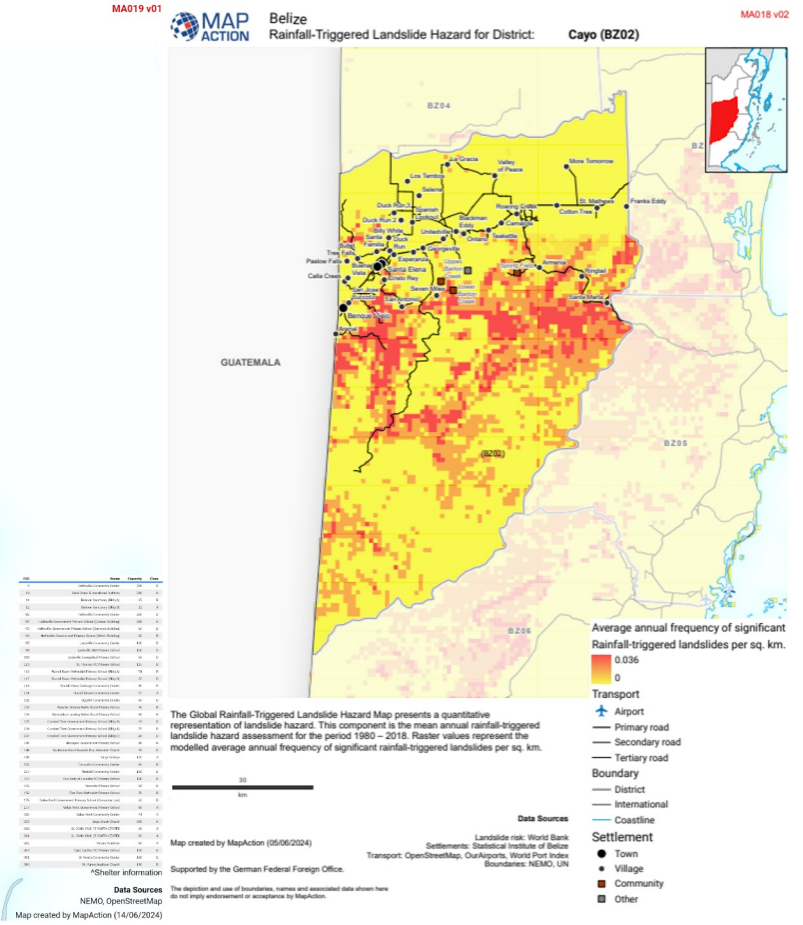
2 percent of settlements are beyond 10000 meters to the nearest market

Case Study Example

Response to Wildfires, Belize, June 2023







4. Application & Selection Process

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- How to apply?
- What is the selection process and criteria used?
- What are the expected benefits?

Application Process

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Follow

Geospatial Data and Technical Support for Humanitarians in East Africa

Ends on Wed, Sep 4, 2024 11:59 PM

Caribou Space, in collaboration with the UK Humanitarian Innovation Hub (UKHIH), invites applications for hands-on support to integrate geospatial data and tools into the working processes of smaller humanitarian organisations.

Applications close on 4 September 2023.

We are unable to accept any applications beyond this date/time.

After some discussion, we've decided that we are only able to support applications in English since that will be the language of technical support delivery. We invite you to submit your responses in whichever format is most convenient and comfortable for you (written, audio or video).

Please visit the Geospatial Data and Technical Support for Humanitarians in East Africa page for more information, including:

- The Call for Applications
- Frequently Asked Questions (FAQs)
- Full Terms and Conditions
- Beyond Borders report, which looks into the **current use of satellite-enabled data in humanitarian decision-making.**

If you have any questions, feel free to contact us at info@caribou.space.

For technical assistance, please visit:

- Submittable website
- Contact Submittable

By proceeding, you agree to the Terms and Conditions and our Privacy Policy.

Scan here to fill in the application form

- Apply Submittable by September 4, 2024:
  - Applications in English
  - Application accessibility issues - let us know at: geoteam@cariboudigital.net
- Successful applicants notified by early October 2024
- All engagements end by February 2025

Who is eligible for this support?

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Likely Profile:

- ❑ Recognise value of geospatial data
- ❑ Humanitarian work affected by extreme weather events
- ❑ Limited geospatial in-house expertise and support

Requirements:

- ❑ Burundi, DRC, Ethiopia, Kenya, Rwanda, South Sudan, Tanzania or Uganda
- ❑ Minimum 5 day-commitment
- ❑ Support delivered in **English** only
- ❑ More than 10mb internet download speed

Selection Criteria

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Commitment & Motivation

- Interest in applying geospatial data
- Commitment to engage in assignment

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MAP ACTION

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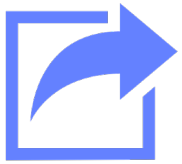
Impact & Sustainability

- Potential to make a difference
- Likely to be sustained in long-term

Applicability & Transferability

- Tackle common challenge in humanitarian sector
- Potential for wider learning



Our Commitment to Learning and Wider Benefit

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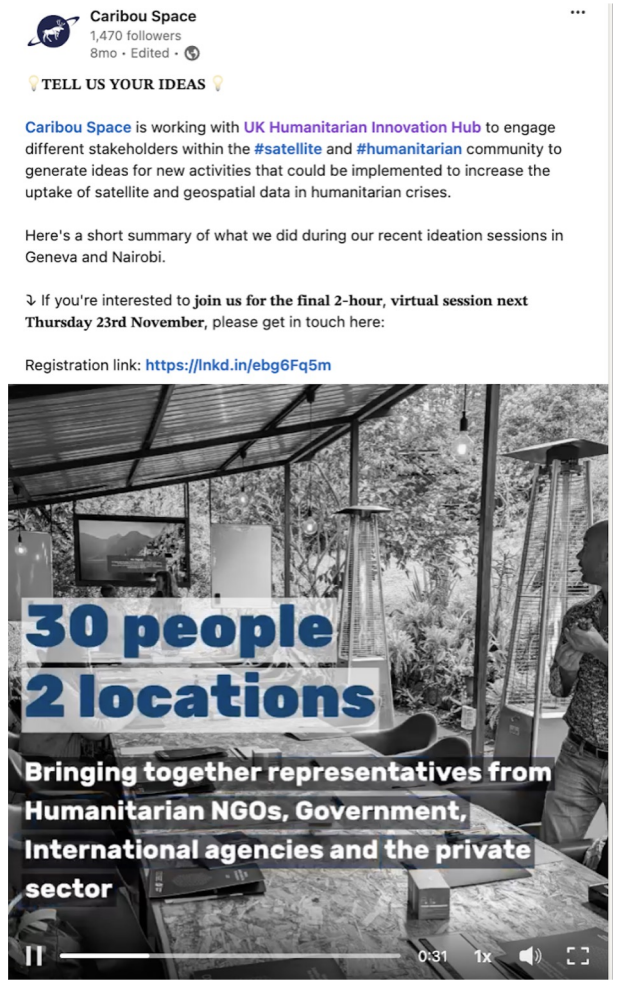
- Engagement with 4-7 organisations
- Portfolio of diverse organisations to maximise learnings
- Feed insights into multi-media knowledge repository
- Share insights and learnings through videos, blogs and/or webinars with other capacity building organisations



6. Q&A

- Any Questions?

Next Steps

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- A recording of this webinar will be made available with the Call for Applications.
- FAQ including questions from today will be uploaded at the same link.
- Further questions can be submitted to geoteam@caribou digital.net - responses will be added to the FAQ.
- Application Deadline: 4th September

Scan here to access the Call for Applications Blog

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