IDEAMAP SUDAN

(IDeAMapSudan)

INTEGRATED DEPRIVATION AREA MAPPING SYSTEM FOR DISPLACEMENT DURABLE SOLUTIONS AND SOCIOECONOMIC RECONSTRUCTION IN KHARTOUM, SUDAN

FINAL SYMPOSIUM

FEBRUARY 2023

African Population and Health Research Center

ITC UNIVERSITY OF TWENTE.

Nuffic meet the world

IDEAMAP SUDAN FINAL SYMPOSIUM

WELCOME to IDEAMAPSUDAN

Presenter: Dr. Monika Kuffer

FEBRUARY 2023

IDeAMapSudan - The Objective

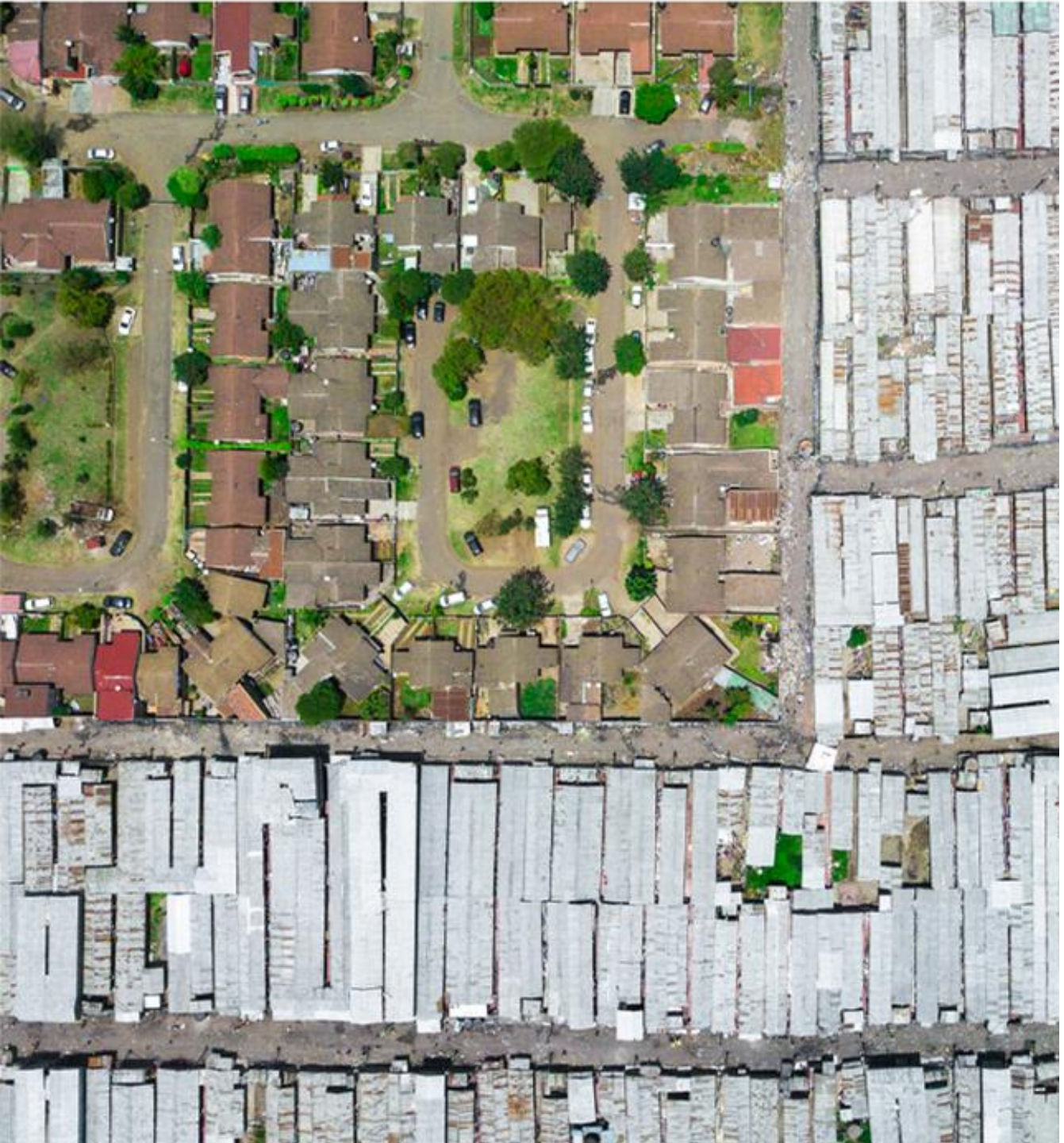
The Project focuses on building the capacity to co-create and use spatial data on deprived areas to develop a geospatial database for deprivation mapping '<u>IDeaMapSudan</u>' to support the understanding of displacement and urban poverty challenges and opportunities associated with socio-economic reconstruction and reform in Sudan leading to more sustainable urban development strategies.

- Beneficiaries المستفيدون

- وزارة التخطيط العمراني ولاية الخرطوم
- وزارة النقل
- وزارة التنمية الاجتماعية

- Implementing Organizations الجهات المنفذة

- منظمة التنمية العمرانية السودانية - SUDTT
- المركز الأفريقي لابحاث السكان والصحة -كينيا
- جامعة بروكسل بلجيكا
- جامعة تونتي -هولندا
  Faculty of Geo-Information Science and Earth Observation



Currently, 1+ billion people are estimated to live in slums and informal settlements worldwide

Where are deprived settlements located?

What are the main priorities for improvement?

How can we use innovative digital technology to support these changes?

https://unequalscenes.com/nairobi by J. Miller

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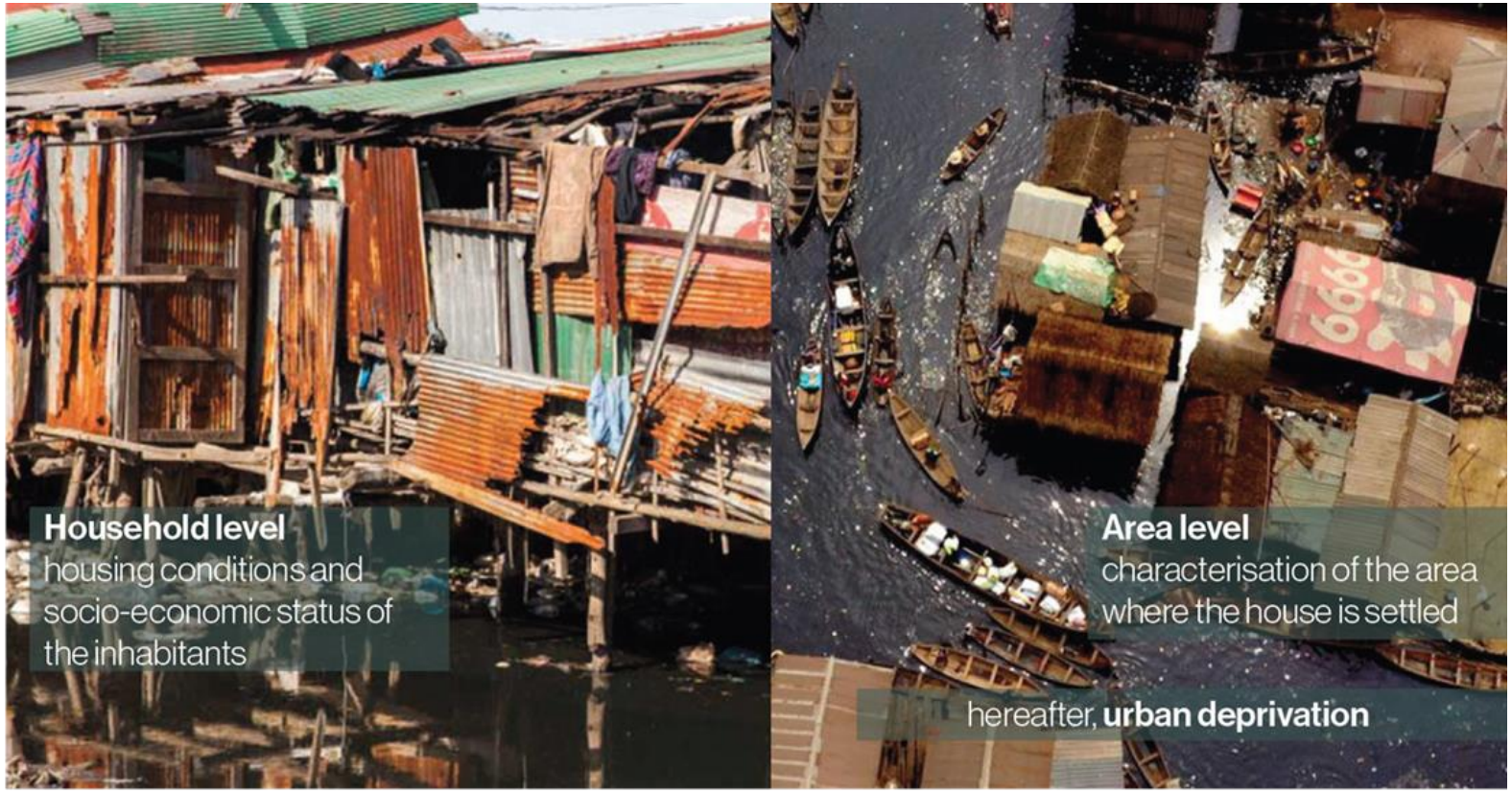
Urban Deprivation

90% of the global population increase through 2030 will be in low- and middle-income cities…
… mostly in deprived urban areas

- The concept of a slum household and deprived areas is not the same
- UN-Habitat slum definition focuses on **households**
- Importance to add **area level** definition



Source: A. Abascal

Project Timeline

Sep. 2020 - March 2023

IDEA MAP SUDAN

TP1

Preparations, Gap analysis, and Team formation

Sep. 2020 – Feb. 2021

التحضير للتدريب و تحليل الوضع الحالي و تقييم الحوجة

Stakeholders mapping, Gap and need analysis was conducted to guide project implementation. Participants are selected from 3 ministries to get the ToT and develop IdemapSudan.

Sep. 2020

Gap analysis & Selection of ToT

The kick-off workshop introduced IdeaMapSudan project to stakeholders and interested parties, to communicate the value that earth observation data can bring to many aspects of urban planning, development and monitoring. The workshop provided an opportunity to meet, share and discuss the overall priorities of IdeaMapSudan.

January 2021

Kick-off workshop

TP2

Technical training of ToT and design of IdeamapSudan System

March 2021 – May. 2022

تدريب المدربين و انشاء نظام IDeAMapSudan

TRAINING OBJECTIVE: Build capacity to co-create and use spatial data on deprived areas.

Combine Earth Observation methods with available information and community-based knowledge to understand challenges and opportunities

March - December 2021

Local Training

Deprivation modelling (Mini Project)

Aug. 2021

The team worked on a mini-pilot project to apply their knowledge. A workshop was held for Experts consultation

MINI PROJECT OBJECTIVE: Develop a first model of multiple deprivations for Jebel-Aulia

Community mapping training - Kenya

Sept. 2021

Community-based data collection training in Kenya

TP3

Co-design IdemapSudan

May 2022

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Design and local testing of Idemapsudan system

Deprivation modelling, City level

Feb. 2022 - Ongoing

OBJECTIVE: Develop a first model of multiple deprivations for Khartoum

Geo-Spatial Modelling

Working with IDeAMapSudan

June - Nov. 2022

التدريب على نظام IDeAMapSudan

Local transfer of knowledge

TP4

Training IdeamapSudan users

July 2022

Transfer knowledge from ToT participants to users from ministries, NGOs, local authorities and community representatives

City-to-City (C2C) Dialogue

Dec. 2022 – Mar. 2023

تبادل التجربة و نقل المعرفة مع الدول المجاورة

Data System and access to data and knowledge

City dialogue symposium

Jan 2022

City-to-City (C2C) resilience-building knowledge exchange. Objective is to foster the implementation, sustainability, and regional cross-ventilation of IDeAMapSudan. Including dissemination and stimulation of using the developed IDeAMapSudan framework to neighboring countries.

Dissemi -nation

Up to March 2023

Reporting, Dissemination and development of best practise guide

Khartoum Deprivation Modelling
The Approach

تطوير نموذج تخريط الحرمان بولاية الخرطوم

Deprivation Framework and Indicators

- Ideamap Frame work
- Experts consultation workshop

Understanding of what defines deprivation

Users need assessment in the experts consultation

Data Collection

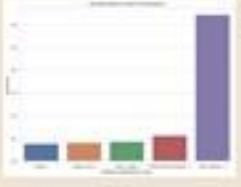
- Existing data collection challenges and gaps
- Open data sources (OSM, EO,..)

➢ Filling data gaps by combining digital innovations with local knowledge

Developing of Indicators Maps

- Indicators maps Analysis

Weighting of indicators

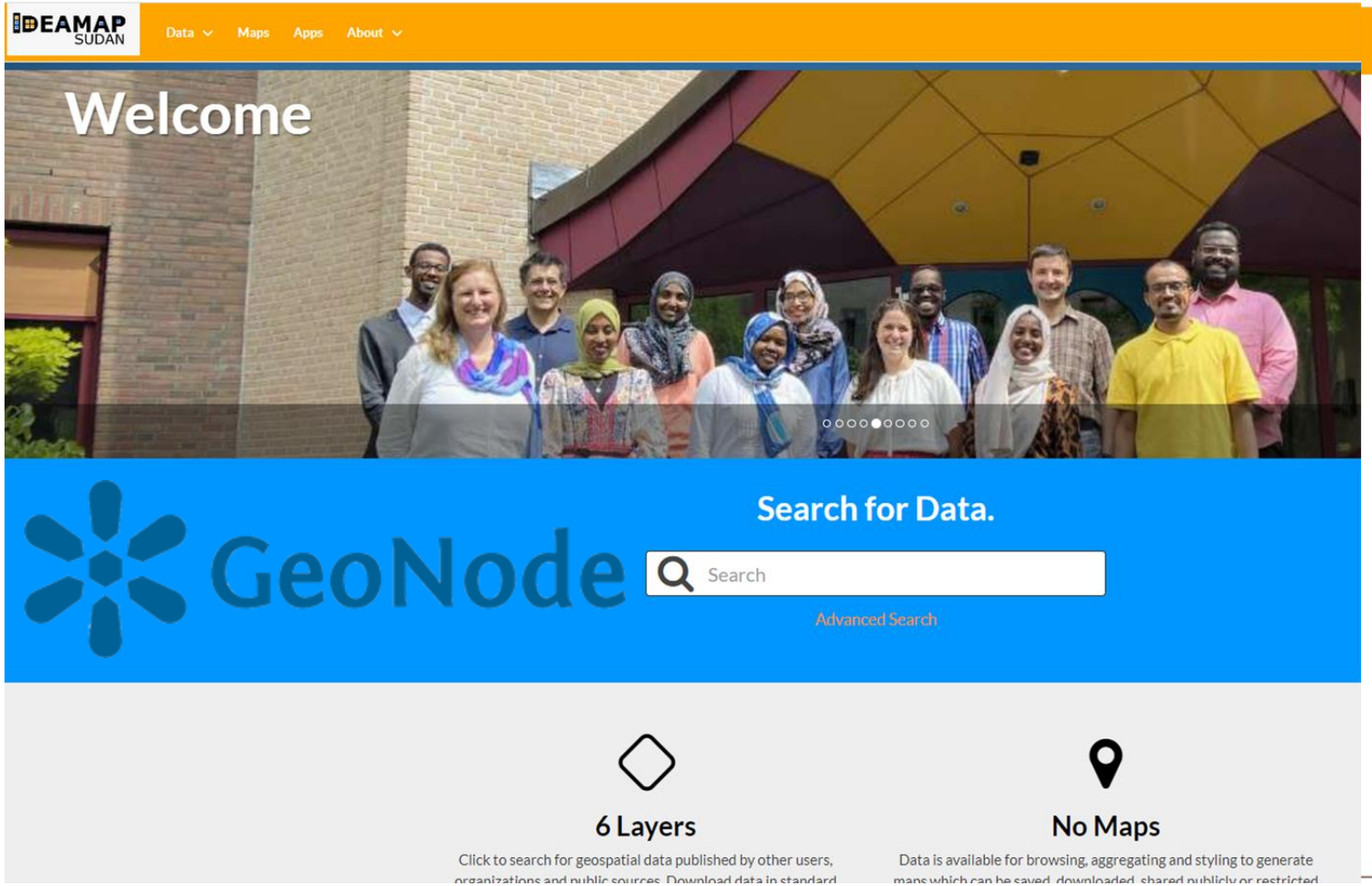


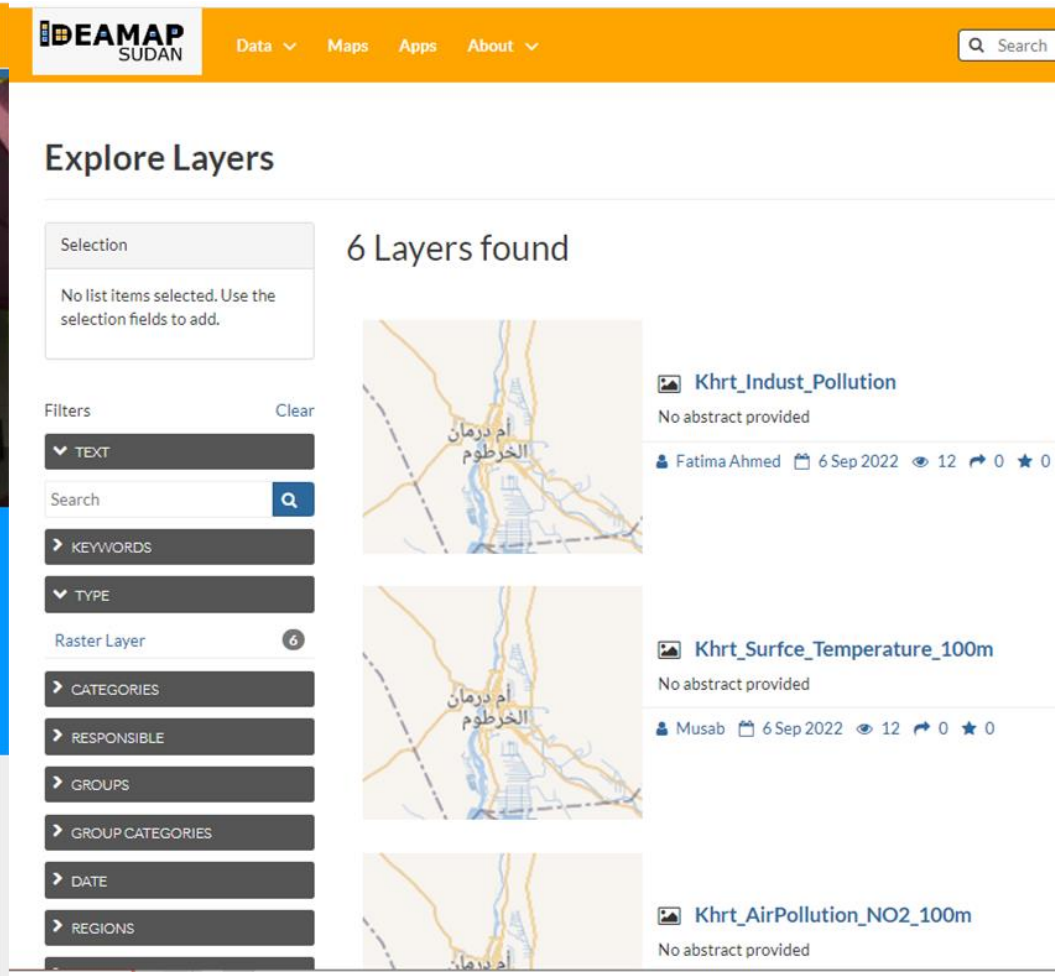
- Statistical analysis and Experts feedback

Model Development/ Combined Deprivation Map

Developing a Geonode

Under construction





ToTs organizing training

Open Access Training Materials: https://www.idea-maps.net/workshops/

3 Training Sets

- GIS Expert Training
- Non-GIS Expert Training
- Community Groups Training

GIS and Earth Observation - Information sources and analysis to support decision-making

- Day 1 - Introduction to Spatial Data and QGIS
- Day 2 - Spatial Data Collection & Analysis
- Day 3 - Earth Observation
- Day 4 - Modern Geospatial Methods

Day 1 - Introduction to Spatial data and QGIS

Facilitator guide day 1

1) Welcome and Introduction to IdeaMapSudan
2) Introduction to GIS modelling
3) Using secondary data
4) Introduction to OGC Web Services
5) Downloading open-source data
6) Data quality and validation
7) Using primary data
8) Exercise - Introduction to QGIS

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