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IDEAMAPS Network

https://ideamapsnetwork.org/

Domains of deprivation framework

mapping deprived urban areas through a multidimensional perspective

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Background

- **Cities** in low and medium-income countries (LMICs) are facing unplanned growth of built-up areas resulting in **deprived areas** defined by slum conditions, informality and higher poverty rates.

- There are **no accurate and scalable** methods to map deprived areas across LMIC cities

- To do so requires a general framework with identified physical and social datasets .

- **Deprivation characterisation** has been tackled from a **household level perspective** but an **area-level** characterisation and interpretation is needed (Kuffer et al. 2020).

- Detecting and characterising **degrees of deprivation** to prioritase and guide **slums upgrading programs**.

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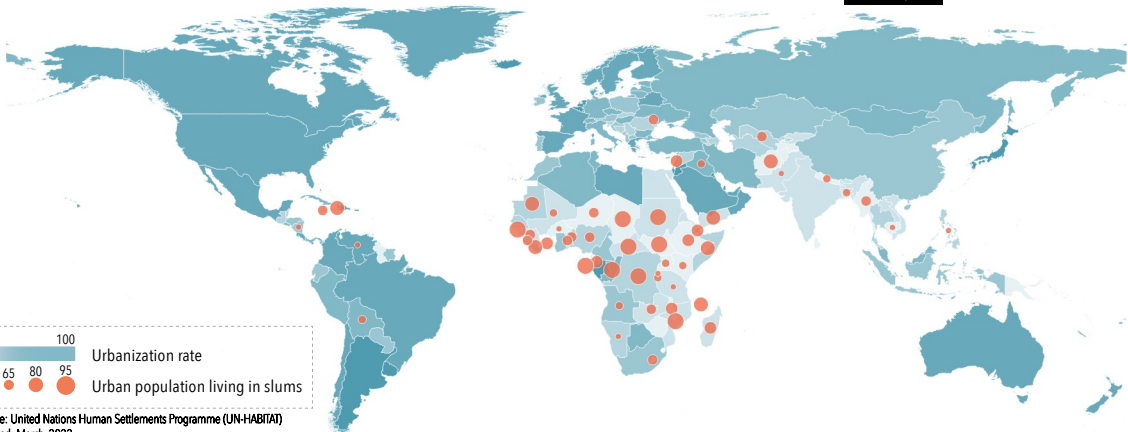
1/7 total population lives in slums

by 2030 1/4 live in SLUMS



source: United Nations Human Settlements Programme (UN-HABITAT)
accesed: March, 2022

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UN HABITAT
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SLUM DEFINITION UN-HABITAT, 2003

1. **Durable housing**
of a permanent nature that protects against extreme climate conditions.

2. **Sufficient living space**
which means not more than three people sharing the same room.

3. Easy **access to safe water**
in *sufficient amounts* at an *affordable price*.

4. **Access to adequate sanitation**
in the form of a private or public toilet shared by a *reasonable* number of people.

5. **Security of tenure** that prevents forced evictions.

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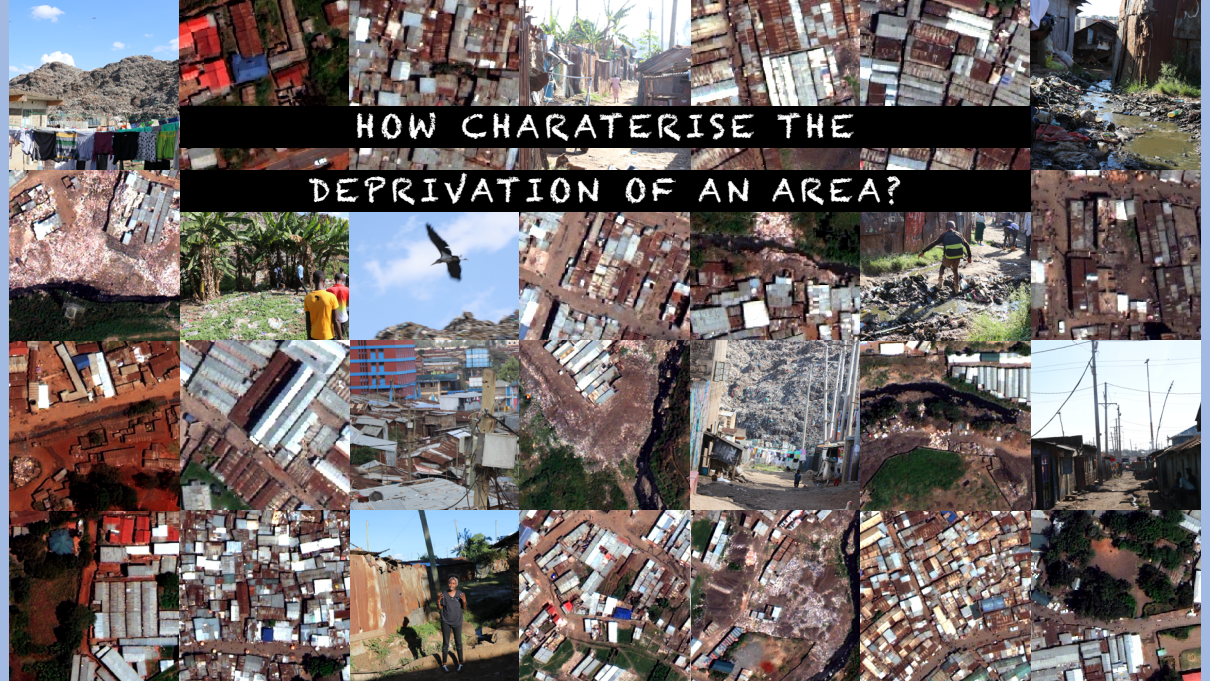
Article

Need for an Integrated Deprived Area "Slum" Mapping System (IDEAMAPS) in Low- and Middle-Income Countries (LMICs)

Dana K. Thomson [1], Monika Kuffer [2,*], Gianluca Boo [3], Beatrice Hati [4], Iain Grippa [5], Helen Elsey [6], Catherine Linard [7], Ron Mahabir [8], Catherine Kyobutungi [9], Joshua Mavitì [10], Dennis Mwaniki [11], Robert Ndugwa [11], Jack Makau [12], Richard Sliuzas [2], Salome Cheruiyot [11], Kilion Nyambuga [12], Nicholus Mboga [5], Nicera Wanjiru Kimani [12], Joao Porto de Albuquerque [13] and Caroline Kabaria [9]

IDEAMAPS


HOW CHARATERISE THE
DEPRIVATION OF AN AREA?

Research objective

To assess existing literature on deprivation with a view to producing a deprivation framework that can be used to respond to urban deprivation issues within LMICs contexts.

- How is **urban deprivation conceptualised** within the academic and grey literature focusing on cities/urban areas globally?

- How can these conceptualisations be translated into **domains of deprivation** and related **indicators that measure aspects of deprivation** within LMIC cities?

- Which domains are particularly relevant to urban **stakeholders** in LMICs, and how can they be presented in a **framework to facilitate response** to urban inequities?

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IDEAMAPS FRAMEWORK

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Results

The domains of deprivation framework conceptualizes urban deprivation at **3 different** SCALES : 9 domains and 70 indicators.

Combination of **different** DATA SOURCES **:** spatial data with community field observations.

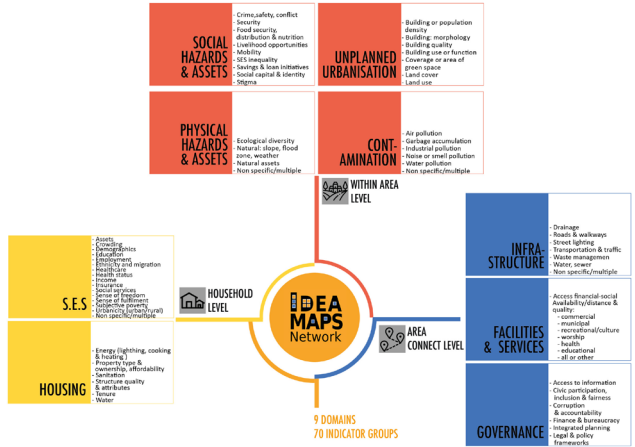

Fig. 1
IDEAMAPS Domain of Deprivation Framework (adapted from Abascal et al., 2022)

IDEAMAPS

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SCALE

WITHIN AREA LEVEL

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UNPLANNED URBANISATION

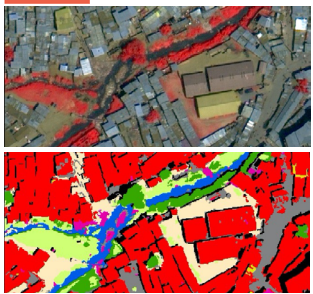

Fig. 2
Nairobi LAND COVER. Mapped data is ground referenced.(adapted from Georganos et al., 2021)

CONT-AMINATION

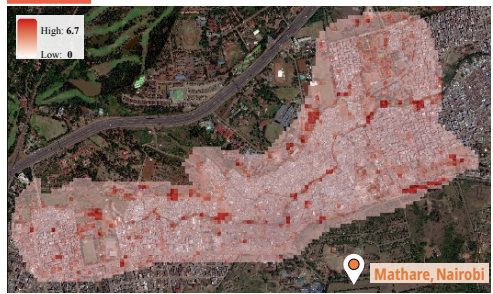

Fig. 3
Nairobi WASTE DENSITY
Mapped waste data is ground referenced

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SCALE

WITHIN AREA LEVEL

AREA CONNECT LEVEL

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Nairobi, Kenya

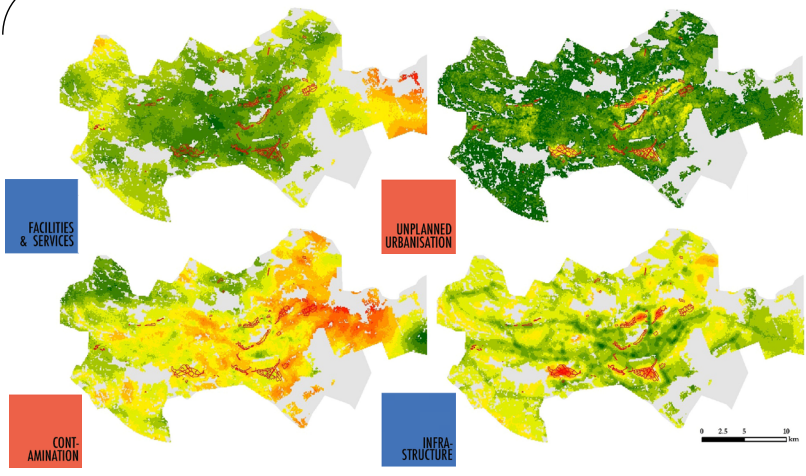
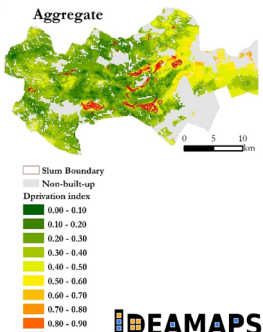


Fig. 4
Nairobi spatial distribution of the 'multi-deprivation portfolio' at 100m grid, with the reference slum boundaries overlapped above. (adapted from Luo, Kuffer & Wang, 2021)



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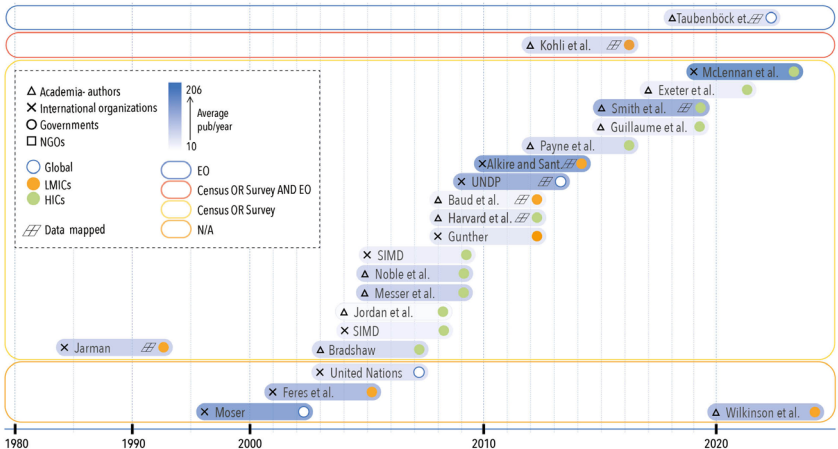
Results


Taubenböck et.
Kohli et al.
McLennan et al.
Exeter et al.
Smith et al.
Guillaume et al.
Payne et al.
Alkire and Sant.
UNDP
Baud et al.
Harvard et al.
Gunther
SIMD
Noble et al.
Messer et al.
Jordan et al.
SIMD
Jarman
Bradshaw
United Nations
Feres et al.
Moser
Wilkinson et al.
Academia- authors
International organizations
Governments
NGOs
Global
LMICs
HICs
Data mapped
206
Average pub/year
10
EO
Census OR Survey AND EO
Census OR Survey
N/A
1980
1990
2000
2010
2020

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DATA SOURCE

EO FOR SDG MONITORING

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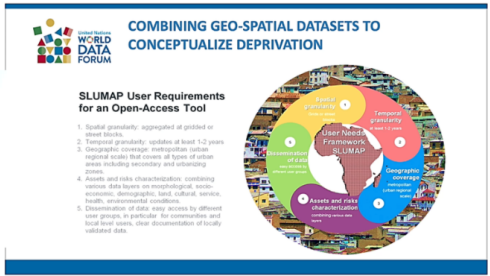

United Nations WORLD DATA FORUM

BERN, SWITZERLAND 3-6 OCTOBER 2021

IDEAMAPS

Remarks

- Given rapid urbanisation in LMICs, the **lack of updated and georeferenced data** is an urgent knowledge gap

- We reviewed deprivation frameworks developed by physical and social scientists.

- A multidimensional analysis is needed for **mapping and characterising deprived areas**, resulting in high accuracy in detecting poverty levels from different settlements of the city

- A **framework** was designed to improve **data availability, quality, consistency, timeliness and disaggregation in LMIC cities.**

- **IDEAMAPS-framework combines household and area-level characterisation.**

Computers, Environment and Urban Systems
Volume 93, April 2022, 101770

Review

"Domains of deprivation framework" for mapping slums, informal settlements, and other deprived areas in LMICs to improve urban planning and policy: A scoping review

Angela Abascal [a], Natalie Rothwell [b], Adenike Shonowo [c], Dana R. Thomson [f], Peter Elias [c], Helen Elsey [d], Godwin Yeboah [e], Monika Kuffer [f]

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THANKS