State of the Map 2018

Slum health mapping as catalyst for a collaborative agenda for research, practice, local citizens and volunteers

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Overview

• Introduction to our ongoing large-scale project
• Our mapping approach
• Current state of slum mapping in the project
• The research challenge
• Discussion
Our ongoing project: title and goals

Short term
• Map slums
• Map health services & facilities
• Understand usage

Medium term
• Identify cost associated with seeking health care

Long term
• Build models of health services
• Create platform of funded activities

- Involve people who can change things
- Synthesis of existing evidence

National Institute for Health Research (NIHR) Global Health Research Unit on Improving Health in Slums at University of Warwick
Project partners (study sites)

University of Ibadan
(Sasa, Idikan, Bariga)

African Population and Health Research Centre
(Korogocho, Viwandani)

University of Warwick [Lead institution]

Aga Khan University
(Azam Basti, Neelam Colony)

Independent University Bangladesh
(Korail)
Work packages (WPs) in the project

- WP1: Geo-spatial mapping
- WP2: Household survey
- WP3: Evidence synthesis
- WP4: Health economics
- WP5: Engaging stakeholders
Overview of WP1: Phases

- WP1 phases and timelines (2, 3 & 4 conducted iteratively)
  
  
  
  
 Outputs of WP1

Socio-Spatial data
- Accurate maps at building level
- Household heads listing

Healthcare data
- Health services and facilities
- Accessibility metrics

Sampling frame
- For sampling at least 1000 households

Methodological framework
- Addressing spatial data quality & community engagement
A methodological challenge

Spatial Data Quality
- completeness;
- logical consistency;
- positional, temporal and thematic accuracy

Community Engagement
- capacity building,
- empowerment,
- local ownership,
- sustainability

Method
The challenge
Our mapping approach

Authorisation needed

Preparation → Online mapping → Online Validation → GPS Field Mapping → GPS Digitisation

Slum access

FieldPapers (Structure Geometry Verification) → Structure Coding and Field Notes (ODK+OMK) → FieldPapers scanning and conflation

Household heads survey with questionnaire (ODK+OMK) → Healthcare facilities survey with questionnaire (ODK)
Participants and mapathon snapshots

Bangladesh

Nigeria

Kenya

Kenya
Participants and mapathon statistics

- **Kenya (Korogocho, Viwandani)**: 100% of people trained.
- **Nigeria (Sasa, Bariga, Idikan)**: 100% of people trained.
- **Bangladesh (Korail)**: 80% trained, 20% trainers/facilitators.
- **Pakistan (Azam Basti)**: 100% of people trained.

**Improving Health in Slums**
Improving Health in Slums

Current state of our slum mapping in Kenya

Number of buildings added: 13,560
Road length added: 2.6 km
Current state of our slum mapping in Bangladesh

Number of buildings added: 1,761
Road length added: 19.26 km
Current state of slum mapping in Nigeria

Number of buildings added: 9,488
Road length added: 35.7 km
The research challenge

Spatial Data Quality

- Accurate
- Complete
- Consistent
The research challenge

Community Engagement

- Inclusive
- Local context
- Empowering
Improving Health in Slums

Discussion
A systematic approach with multi-level collaboration

- Training the trainers
  - Local institutional partners

- Digitisation
  - Partners, community and OSM volunteers

- Validation
  - Partners and OSM volunteers

- Ground-truthing
  - Partners, community
Research challenge
Involving the local community

• Local partners and community: mapping and reflecting on space

Bangladesh mapathon
Nigeria mapathon
Research challenge
Involving the wider OSM community

• International institutional and volunteer participation and mobilisation

The Warwick Resilience Mappers
The research challenge

Spatial Data Quality
- Accurate
- Complete
- Consistent

Community Engagement
- Inclusive
- Local context
- Empowering

Trusted evidence
Improving Health in Slums

Discussion
The trade-offs (example of potential parameters)

Top-down parameters
+ Accepted classifications
+ Objective accuracy
+ Completeness – macro

Tradeoffs

Bottom-up parameters
+ Local meaning
+ Participation
+ Completeness - micro

What is quality?
Discussion
The trade-offs (example of potential parameters)

- Top-down parameters
  + Accepted classifications
  + Objective accuracy
  + Completeness – macro

- Bottom-up parameters
  + Local meaning
  + Participation
  + Completeness - micro

- Tradeoffs
- Project need?
- Local context?
Discussion on quality

Examples:

- Quantitative criteria: Completeness / accuracy: recent HOT community discussion, local contextual knowledge?

- Qualitative criteria: community involvement? Inclusion?

- Trade-offs?
Thank you!

- The OSM community, HOT and Missing Maps

- Partners and funders:

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Let’s continue the discussion!

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#slummapping