11th Session Side Event

Working Group on Geospatial Information and Services for Disasters

“Strategic Framework on Geospatial Information and Services for Disasters Assessment Survey - Results & Way Forward”

Thursday August 19, 2021
6:00 - 7:45 am (EDT)
Presenter Bio

- Humanitarian applications of GIS for over 15 years
- Emergency responses, preparedness, and capacity building
- With MapAction since its start in 2003
- MSF ebola (Sierra Leone) and yellow fever (DRC) responses
- UN Joint Logistics Centre in South Sudan
- British Red Cross
- Background in geography and statistical modelling – previously lectured on GIS for ecology, and with British Antarctic Survey as a data analyst

Nick McWilliam
Lead for Covid vaccine support
MapAction
MapAction’s Covid vaccine support: A pilot Integrated Humanitarian Data Package for South Sudan

Nick McWilliam
Lead for Covid vaccine support
MapAction
Context: data for Covid vaccine delivery & delivery

- Known needs from published UNICEF-WHO literature and National Deployments and Vaccination Plans (NDVPs)
- Data themes focussed broadly around:
  - Demographics: target populations
  - Public health infrastructure
  - Transport & logistics
COVAX Facility global supply forecast

By AMC-eligible and Self-Financing Participants

PRELIMINARY AND SUBJECT TO ASSUMPTIONS

COVAX Available Supply, Cumulative, M doses, 2021 and 2022

Potential volumes currently available, assuming all deals under negotiation are signed and all options are exercised, subject to funding availability.

Equivalent to >30% coverage in AMC

Equivalent to 22% coverage in AMC

Reflects COVAX deliveries to date

1 Timing of available supply is based on anticipated date of release of doses from manufacturers. Volumes of expected single-dose regimen candidates dosed to ensure comparability across vaccines. Volumes have been rounded to nearest 5M, except those less than 10M, and so totals may not equal sum of segments.

2 Final SFP volumes may be lower than forecasted based on split-out and dose-sharing behavior. Volumes only account for current SFP demand based on Commitment Agreements.

3 Vaccine donations are estimated based upon commitments from donors to share new doses bilaterally with COVAX. The transfer of COVAX allocations between COVAX Participants from SFPs to AMC Participants are already included in the AMC Participant volumes. Total donations on this chart are larger than 515M due to doubling of single-dose candidates.

Context: delivery challenges and ‘absorptive capacity’

● “When we are budgeting, we are not thinking beyond the purchase of the vaccines. We need to think of the whole program — from purchase to the delivery — what it would cost us and what needs to be put in place for that to happen” Joachim Osur, technical director at Amref Health Africa

● “I think the logistical challenges become enormous in terms of making sure that we have the vaccines in the right places” Alinafe Kasiya, Malawi country director at VillageReach
MapAction’s South Sudan Pilot Project

Aims

1. To build a portfolio of immediately useful geographic data needed by agencies planning and delivering Covid vaccines
2. To be ready to respond immediately to COVAX needs, particularly via the UNICEF-WHO GIS Working Group
3. Learning and experience to expand our contribution in South Sudan and further COVAX eligible countries
Why focus on data?

Vaccine planning and delivery

Questions such as: Who will be vaccinated? How many people? Where? Optimum delivery routes? Storage? Who will deliver them?

Geographic tools: mapping, analysis, modelling, forecasting

Underpinned by data

Outcomes and Use cases

Bottleneck
Why focus on data?

Geographic tools and applications
- Data preparation e.g.
  - Source, evaluate and select relevant layers
  - Clean, gap fill, QC
  - Apply consistent data model
  - Consistent metadata and documentation
  - P-coding, other enrichment
  - Format, import

Individual datasets
- Multiplicity, redundancy
- Inconsistencies, mutual incompatibilities

Data sources / providers

Resulting problems
- Technical and capacity barriers
- Time and expense
- Delayed results
- Duplication of effort
- Divergent datasets in use

Population >55
Health catchments
Health Facilities
Integrated Humanitarian Data Package

- Time, money and expertise needed to prepare data

From Health GeoLab Collaborative’s presentation on SE Asia vaccine support work, highlighting the investment in data preparation
Integrated Humanitarian Data Package

What are the results?

- Integrated Humanitarian Data Package for Covid Vaccine delivery in South Sudan
- Publication on Africa GeoPortal and MapAction’s repository
Integrated Humanitarian Data Package (IHDP)

A consistent, accessible and open set of geographic data built around use cases for Covid vaccination planning and delivery in South Sudan -- adaptable to other geographies, scales, users and humanitarian needs.
Integrated Humanitarian Data Package

Key data characteristics

- Cleaned, checked and enriched geographic data
- Layers selected for needs of specific use cases
- Consistent data model (layer names, field names)
- Consistent documentation and metadata
Integrated Humanitarian Data Package

- Data Package
- Metadata
- GIS Projects
- Data Collection
- Code Snippets
- Narrative

- Data
- P-codes
- Standard
- Format
- Licensing
- ArcMap
- ArcPro
- QGIS
- Excel
- Kobo
- Survey123
- R/Python
- Code/JN

- Project
- Geography
- Provenance
- Creation
- Uses
- Limitations

- GeoPackage container
Integrated Humanitarian Data Package

What are the benefits?

- **Readiness**: data ready when needed, without lead time
- **Adaptability**: to data needs and use cases
- **Scalability**: to different geographic extents and user groups
- **Relevance**: data selected and structured for use cases
- **Accessibility**: lower technical and capacity barriers to data use
- **Value**: reduce duplication of time, expertise and money
- **Commonality**: use of common datasets between related applications
Integrated Humanitarian Data Package

Next phase: South Sudan outreach

- Ministry of Health
  - National Deployment and Vaccination Plan (NDVP)
- National Bureau of Statistics
- UNICEF and other agencies involved in vaccine roll-out
Integrated Humanitarian Data Package

Concluding themes

- Linking datasets to use cases
- Consider data usability as well as availability
- Data readiness for rapid emergency response
- Data package concept to support readiness
- Connection with National Mapping Agencies and Government users as well as other humanitarian actors