The power of the map:
innovative geospatial approaches and tools for global health

Course facilitator

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Brief course description

This course intends to provide students with understanding about Geographic Information Systems, Spatial Data Infrastructures, mapping and geospatial data, and showcases several innovative approaches in Global Health.

A particular focus is how to model geographic accessibility to health services, with several examples from Africa taken from the facilitator's ongoing applied research projects funded by UNFPA, UNICEF and the Global Fund. A guest speaker from the Global Fund will present his work on using geospatial approaches to better plan geographic allocation of community health workers.

The challenges to discover and access geospatial data are discussed, and several useful online platforms are showcased. Some time is dedicated to hands-on exercises with an open-source GIS software (QGIS) to learn how to import data, transform it, and produce a simple informative map.

Finally, an online open geospatial platform (MapX) is presented and discussed. Participants have the opportunity to use it to discover the huge communication potential of "story maps", a way to mix a narrative with media and dynamic mapping.

Course Objective

The objective of this 2-day course is to provide the participants with basic concepts of Geographic Information Systems and mapping approaches, showcasing various examples in Global Health. This is complemented by a Guest speaker from the Global Fund and by hands-on learning using an open-source GIS software and an online geospatial platform (MapX).

Target Participants

This course is designed for participants who have no or little knowledge about Geographic Information Systems and the use of mapping and geospatial approaches in health, but want to learn about interesting applications in public/global health. The course also allows for a short hands-on session with an open-source GIS package (QGIS).

By the end of this training module, participants will learn:

- Concepts of Geographic Information System and Spatial Data Infrastructure
- Several use cases and best practices on the use of geospatial data and analyses
- How being able to realistically model geographic accessibility can save lives
- What are the main challenges to discover, access, and disseminate geospatial data
- How to import data, transform it, and use symbology to make a simple map in QGIS
- What are the tools to make one's own geospatial data available online for discovery and access, and how to use innovative tools to communicate with maps

Preliminary schedule

All participants are required to bring their laptop with the installed version of the open-source tool QGIS. Instruction for installation will be sent to participants 10 days prior to the course.

Day 1 (April 1st 2019)

Time	Topic
08:30 - 09:00	Welcome Plenary
09:00 - 09:15	Introductions
09:15 - 10:15	Overview (definitions, GeoHealth, concepts of GIS, SDI and online mapping)
10:15 - 10:30	Coffee Break
10:30 - 12:00	Showcase of best practices and innovative geospatial approaches in public/global Health
12:00 - 13:00	Lunch
13:30 - 15:00	Focus on geographic accessibility modelling: the need to go beyond simple distance measures. Concept and applications in several African countries
15:00 - 15:15	Coffee Break
15:15 - 16:30	Invited speaker: Nick Oliphant, the Global Fund. Putting community health workers on the map: Toward a geography of CHWs
16:30 - 18:00	Discussion

Day 2 (April 2nd 2019)

Time	Topic
08:30 - 10:15	How to find and access open geospatial data? Hands-on with QGIS: importing data and making an informative map
10:15 - 10:30	Coffee Break
10:30 - 12:00	Hands-on with QGIS: continued
12:00 - 13:00	Lunch
13:00 - 15:00	The institutional challenges of sharing geospatial data. Introducing the MapX platform
15:00 - 15:15	Coffee Break
15:15 - 17:00	Hands-on with the MapX platform. Building a dynamic story map
17:00 - 18:00	Discussion