

Short Course on Modern Tools for Neglected Tropical Disease Programmes, 20-24 January 2014

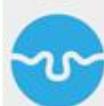
Course completion report



LONDON
SCHOOL of
HYGIENE
& TROPICAL
MEDICINE



CIF CHILDREN'S
INVESTMENT FUND
FOUNDATION



LONDON CENTRE FOR
NEGLECTED TROPICAL
DISEASE RESEARCH



 **Sightsavers**

Background

A five-day training course, *Short Course on Modern Tools for Neglected Tropical Disease Control Programmes*, was held at the Bolton White Hotel in Abuja, Nigeria, on 20-24 January 2014. The course aimed to provide participants with an overview of the use of mapping and epidemiological tools to assist in the design, implementation and evaluation of targeted and cost-effective neglected tropical disease (NTD) control activities.

Course content

The course provided participants with an overview of the use of mapping and epidemiological tools to assist in the design, implementation and evaluation of targeted and cost-effective NTD control activities. The course was structured around five principal, daily themes:

- **Key concepts in NTD mapping.** This provided an overview of the epidemiology, and control/elimination of NTDs, with a focus on soil-transmitted helminths, schistosomiasis, lymphatic filariasis and trachoma. An introduction to epidemiology lecture was followed by a session on basic principles of study designs and skills in data management necessary for mapping. In the afternoon, participants began the first of three geographic information system (GIS) practicals, during which they learned the basics of Quantum GIS, a free, open source GIS programme.
- **Data management for mapping.** In the morning, participants finished the first QGIS practical started on Monday. This was followed by a lecture on GIS sources, including several examples of websites that offer free-to-use quality data, both geographical and epidemiological. The rest of the day consisted of two practicals to obtain spatial data and create a basemap for Nigeria NTD mapping.
- **Mapping of NTDs.** A morning lecture on ensuring data quality raised awareness of issues in data management and introduced data management concepts needed to map data. This was expanded by a practical specifically on managing mapping data. The rest of the afternoon focused on practical exercises on managing spatial data sets.
- **Spatial tools for NTD control.** A morning practical allowed participants to display the outcomes of Nigeria NTD mapping on the basemap created earlier. The afternoon practical introduced analysis of spatial data sets using QuantumGIS.
- **Mapping Nigeria NTD programme.** Participants analysed and mapped data collected in Nigeria's NTD programme and finished the week's work.

The course timetable is provided in [Appendix 1](#).

Participants

A total of 21 participants from Nigeria attended the course. Participants were mainly data managers and consultants from universities. In addition to staff from the Federal Ministry of Health, participants included representatives from the following organisations:

- National Bureau of Statistics
- Sightsavers
- Christian Blind Mission (CBM)
- Helen Keller International
- Mission to Save the Helpless (MITOSATH)
- Nigeria
- University of Lagos
- Nasarawa State University
- University of Jos
- Federal University of Technology, Yola
- University of Portharcourt



For a full list of participants, including job role and institution, please see [Appendix 2](#).

Instructors

The course was led by four instructors, all from the London School of Hygiene & Tropical Medicine (LSHTM).

Name	Title	Institution
Prof. Simon Brooker	Professor of Epidemiology	LSHTM
Dr. Rachel Pullan	Lecturer	LSHTM
Dr. Jorge Cano Ortega	Research Fellow	LSHTM
Jenny Smith	Research Fellow	LSHTM

Materials

All participants received course materials in hard copy and on a USB flash drive at the beginning of the course. Print-outs of slides were also handed out before each lecture.

The three GIS afternoon sessions (Monday, Tuesday and Wednesday) consisted of three sequential practicals. These were developed by the GAHI team at LSHTM and included detailed, step-by-step instructions on using QuantumGIS to map and analyse data.

In addition to being available for course participants, all course materials are available for download from the [GAHI website](#), including practicals, data sets and presentations.

Access is free and materials are available for download under a Creative Commons licence. Users can browse all the course pages and need to create an account to download materials.

Partners and funding

The course was a collaboration between the [Global Atlas of Helminth Infections \(GAHI\)](#) at the [London School of Hygiene & Tropical Medicine](#), [Sightsavers Nigeria](#), the [Children's Investment Fund Foundation \(CIFF\)](#), and the [Federal Ministry of Health in Nigeria](#).

Principal funding was provided by CIFF, and supplemented by a grant from the [Bill & Melinda Gates Foundation](#) to the London School of Hygiene & Tropical Medicine.



Feedback

To help guide the content and structure of future courses, participants were asked to complete an exit feedback questionnaire. Answers to statements ranged from 1 - 5, 1 being “strongly disagree” and 5 being “strongly agree.” Detailed results of feedback are found in [Appendix 3](#). Key findings included:

- 75% of participants strongly agreed (5) the topics covered were relevant to their work.
- Only 10% of participants strongly agreed (5) that the schedule for the training provided sufficient time to cover all of the proposed activities.
- 80% of participants strongly agreed (5) the goals of the training were clearly defined. However, 40% of participants strongly agreed (5) the course covered the topics they expected, and 50% strongly agreed (5) the goals of the training had been met.
- 45% of participants strongly agreed (5) there was sufficient opportunity for participation.
- 25% of participants strongly agreed (5) the methodology used for the training was appropriate (65% agreed, 4).
- 90% of participants strongly agreed the facilitators were easy to approach.
- 50% of participants strongly agreed (5) they are satisfied with their increased understanding of the topic, mapping tools and their use in NTD control. 45% agreed (4).

Statements taken from the surveys include:

Strong points

“An enabling tool has been put at programme disposal. With this good skill-transfer, this would complement the use of all data being collected over the years, particularly during the mapping exercises of 2013-2015. The WHO database in Nigeria would find a complementary link in the QGIS at all levels in Nigeria.”

“Developing NTD maps of Nigeria using the QGIS tool; control of NTDs in Nigeria using the lessons of other countries; developing linkages with partners in NTD control.”

“The course is apt for NTD programming in Nigeria; facilitators are well grounded on the topic; participants were friendly and eager to help each other; the working documents were made available although it would have helped if they were received prior to the workshop.”

“The summaries we had every morning to refresh our memories for the previous day’s work.”

“Availability of materials which explain the step by step in producing the maps.”

What could be improved?

“More time for practice.”

“The course should be separated into modules and more time allocated to each unit module.”

“Duration of the workshop to allow more time on the practicals while the team of participants are still together.”

“The methodology used for the training could be improved. For future training, facilitators should always have one-to-one time with all the participants.”

“The number of facilitators should be improved on and should be made to be at least 1 facilitator for each four trainees.”

“Making the training completely in-house would have helped participants more.”

“Introduction to the course”

What additional training related to this topic would you like to have in the future?

“Data cleaning and statistical softwares relevant.”

“Advanced training on aggregation of layers and chloropleths”

“Overlaying risk maps for various NTDs”

“It will be good to have some more form of data analysis training including using one statistical software.”

Additional comments

“It will be nice to state the recommended computer systems for the programme. Also consider stating the minimum computer literacy level required for this form of training.”



“The course should be organised at national and sub-national levels in Nigeria.”

Expenditure

Pending

Lessons learned

Feedback is overwhelmingly centred around the duration of the course and suggests we increase duration to up to two weeks. Some participants suggested making it a residential course. Pace of work varied significantly and facilitators noticed a growing gap in progress. Due to cost issues and time commitments, it is unfeasible to expand the course beyond a week, but participants could be more carefully selected to ensure the content is directly relevant to their work and that their existing skill set and computer literacy are sufficient.

As this course was organised by the Ministry and CIFF, our involvement from a logistical perspective was much more limited. This greatly reduced our workload leading up to the course, but it also limited our input into preparations and the daily running of the course. It will be better to be more involved from the start again next time.

Participants seemed to engage more in the Nairobi course, since many of them were from different countries and did not know each other previously. This is an added value of the course that should continue to play a role where possible. In future courses it would be beneficial to maintain the network building aspect of the course.

Future plans

A pilot course in Spanish will be conducted in Salta, Argentina, in May 2014. It is led by partners from the National University of Salta, and will be taught to PhD students to test the level of difficulty and clarity of the translated practicals. The practicals have been translated to Spanish by members of the GAHI team.

The next course in Africa is likely to be in Addis Ababa in summer 2014.

The Partnership for Child Development has asked us to deliver a crash version of the course for their 10-day school health training in Accra in May-June 2014. We will prepare a two-hour lecture on the use of GIS in NTD control for PCD to facilitate.



Appendix 1

Course agenda: *Short Course on Modern Tools for Neglected Tropical Disease Control Programmes*, 20 - 24 January 2014.

Monday 20 January		Key Concepts in NTD Mapping		
8:30 - 10	Epidemiology of NTDs and current diagnostics tools	Simon Brooker	Lecture	
10 - 10:30	Opening ceremony	Director of Public Health		
11 - 12:30	Principles of surveys and mapping & uses of GPS in data collection	Jenny Smith	Lecture	
13:30 - 14:30	NTD Mapping Tool	Simon Brooker	Lecture	
14:30 - 17:30	GIS Practical 1: Becoming familiar with QuantumGIS	Jorge Cano Ortega	Computer workshop	
Tuesday 21 January		Data Management for Mapping		
9 - 10:30	GIS Practical 1: Becoming familiar with QuantumGIS	Jorge Cano Ortega	Computer workshop	
11 - 11:45	Sources of GIS data	Simon Brooker	Lecture	
11:45 - 12:30	Obtaining spatial data for Nigeria NTD mapping	Jorge Cano Ortega	Computer workshop	
13:30 - 17:00	GIS Practical 1b: Creating basemap for Nigeria NTD mapping	Jorge Cano Ortega	Computer workshop	
Wednesday 22 January		NTD Mapping		
9 - 10:30	Ensuring data quality	Rachel Pullan	Lecture	
11 - 12:30	Data management for mapping	Jenny Smith	Computer workshop	
13:30 - 17:00	GIS Practical 2: Managing spatial data sets	Jenny Smith	Computer workshop	
Thursday 23 January		Spatial Tools for NTD Control		
9 - 12:30	GIS Practical 2b: Managing spatial data sets for Nigeria NTD mapping	Jenny Smith	Computer workshop	
13:30 - 17:00	GIS Practical 3: Analysing spatial data sets			
Friday 24 January		Completing the Mapping of Nigeria NTD Programme		
9 - 12:00	GIS Practical 3b: Analysing data collected in Nigeria and mapping NTDs within QGIS framework	Jorge Cano Ortega	Computer workshop	
14 - 14:30	Evaluation session	Nina Cromeyer Dieke		
14:30 - 15:30	Reaching 2020 targets in Nigeria	Obiageli Nebe		
15:30 - 16:30	Closing ceremony			

Appendix 2

Course participants: *Short Course on Modern Tools for Neglected Tropical Disease Control Programmes*, 20-24 January 2014.

DESIGNATION	ORGANIZATION	NAME
Director Public Health	FMOH	Dr. Bridget Okoeguale
NTD Coordinator	FMOH	Dr. Uwaezuoke Onyebuchi
National Coordinator, Schisto/STH	FMOH	Dr. Obiageli J. Nebe
Head, Coordinating Unit, Department of Public Health	FMOH	Dr. Suleiman Jibrin
Data Managers and Technical Officers		
	FMOH	Mr. Adeleke Balogun
	FMOH	Mrs. Veronica S. Augustine
	FMOH	Mr. Ikenna A. Nwoye
	FMOH	Mr. Solomon M. Jacob
	FMOH	Dr. Nickolas Olobio
	FMOH	Dr. Uzoma Nwankwo
	FMOH	Mrs. Zaiya Umar
	National Bureau of Statistics	Mr. S.I. Salihu
NGDOs		
	Sightsavers	Mr. Adamani E. William
	Sightsavers	Mr. Christian O. Nwosu
	CBM	Mrs. T. Oguntimehin
	HKI	Mr. Victor Osatogbe
	MITOSATH	Mr. O. Olamiju
Researchers		
	University of Lagos	Dr. Grace O. Adeoye
	Nasarawa State University Keffi.	Dr. Gideon A. Amuga
	University of Jos	Prof. Anthony A. Dakul
	Federal University of Technology Yola	Prof Oladele B. Akogun
	Independent Consultant	Dr. Ngozi A. Njebuome
	University of Portharcourt	Prof. Florence Nduka
	University of Ibadan	Dr. Patricia N. Okorie

Appendix 3

Course feedback questionnaire results: *Short Course on Modern Tools for Neglected Tropical Disease Control Programmes*, 20-24 January 2014.

CATEGORIES	Mark your response				
	Strongly disagree			Strongly agree	
	1	2	3	4	5
Organisation					
The course was well organized.		15%	5%	55%	25%
I was given enough information to prepare for the training.	10%	10%	30%	25%	25%
My hotel and transport were satisfactory.			15%	30%	55%
Communication from the organizers was clear and informative.			15%	40%	45%
Any problems I faced were quickly resolved by course staff.		5%	5%	10%	80%
Prior to this course, I was familiar with the Global Atlas of Helminth Infections.	5%	25%	15%	15%	40%
Prior to this course, I was familiar with Sightsavers.	5%	5%	20%	15%	55%
Prior to this course, I was familiar with the London Centre for Neglected Tropical Disease Research.	5%	30%	25%	20%	20%
Prior to this course, I was familiar with the Children's Investment Fund Foundation.		15%	30%	15%	50%
Content delivery					
The goals of the training were clearly defined.			5%	15%	80%
The topics covered were relevant to my work.	0		5%	20%	75%
The materials for the training were helpful (the USB drive, the presentation handouts and the practicals.)	5%				95%
There was sufficient opportunity for participation.	5%		5%	45%	45%
I got most of my questions answered during the training.			5%	65%	30%
The schedule for the training provided sufficient time to cover all of the proposed activities.	25%	10%	35%	20%	10%
In terms of content, the course covered the topics I expected it would.		10%	20%	30%	40%
In terms of quality of teaching and skills learned, the course lived up to my expectations.		5%	5%	40%	50%
Monday - Key Concepts in NTD Mapping					
Each session stated the objectives clearly.			10%	15%	75%

CATEGORIES	Mark your response				
	Strongly disagree			Strongly agree	
	1	2	3	4	5
The sessions were too technical and difficult to understand.	25%	20%	5%	50%	
I am clear about how to apply these skills to my work.		15%	20%	50%	15%
Tuesday - Data Management for Mapping					
Each session stated the objectives clearly.	10%			30%	60%
The sessions were too technical and difficult to understand.	35%	25%	5%	30%	5%
I am clear about how to apply these skills to my work.			35%	35%	30%
Wednesday - NTD Mapping					
Each session stated the objectives clearly.	5%			15%	70%
The sessions were too technical and difficult to understand.	35%	20%	5%	15%	15%
I am clear about how to apply these skills to my work.		10%	10%	50%	30%
Thursday - Spatial Tools for NTD Control					
Each session stated the objectives clearly.	5%		5%	20%	70%
The sessions were too technical and difficult to understand.	45%	25%	20%		
I am clear about how to apply these skills to my work.		10%	25%	35%	30%
Friday - Completing the mapping of Nigeria's NTD Programme					
The session had clear objectives.	5%			25%	60%
The session was too technical and difficult to understand.	20%	40%	5%	20%	5%
I am clear about how to apply these skills to my work.		5%	25%	40%	20%
Facilitator					
The facilitators were knowledgeable about the topic.	5%			25%	65%
The facilitators encouraged active participation.		5%	5%	15%	70%
The facilitators answered questions in a complete and clear manner.		5%	5%	35%	50%
The facilitators were respectful of the different skills and values presented by the participants.		5%		35%	65%
The methodology used for the training was quite appropriate.	5%		10%	65%	25%
The facilitators were easy to approach.		5%		5%	90%

CATEGORIES	Mark your response				
	Strongly disagree			Strongly agree	
	1	2	3	4	5
Facility					
The Bolton White Hotel facilities were well equipped to host the course.		5%	5%	25%	60%
The meeting room and related facilities provided a comfortable setting for the training.		5%	5%	35%	60%
The location for the training was convenient for me.		5%	5%	30%	60%
General Satisfaction					
The goals of the training have been met.		10%		40%	50%
I am satisfied with my increased understanding of the topic: mapping tools and their use in NTD control.			5%	45%	50%
I am generally very satisfied with all aspects of this training event.		5%		75%	15%
I plan to keep in contact with the participants and facilitators I met at the training.	5%			30%	65%
I plan to share the information I received during the training with other workers in my agency.		5%		20%	75%
If possible, I would recommend the course to colleagues or others working in NTD control.		5%		20%	70%
I would want to take another course organized by the same parties.	5%			5%	85%

In summary, what were the strong points of the course?

Very useful, very relevant and adequate. The course was well-organised and I am particularly impressed with the method of teaching employed by the facilitators. Hope this will lead to future participation and collaboration in mapping diseases in Nigeria.

An enabling tool has been put at programme disposal. With this good skill-transfer, this would complement the use of all data being collected over the years, particularly during the mapping exercises of 2013-2015. The WHO database in Nigeria would find a complementary link in the QGIS at all levels in Nigeria.

Detailed organisation; varied methods of teaching applied; detailed course manual; easy and accessible disposition of the facilitation team; time management

The strong point of the course is the analysis of data collected in Nigeria and mapping NTD data with QGIS framework

Study of epidemiology; age patterns of infection and other heterogeneities; NTD control; organising and manipulating data layers; using symbology; managing layer attributes; map projections; map production; downloading spatial data; creating basemaps

Practical sessions were a very strong point of the course.

The QGIS training requires a lot of time and concentration. Most of the time I was out of track due to other issues I was attending to in the training hall. But nevertheless I have added to my career. It was quite interesting and I really wish I can repeat this training.

Developing NTD maps of Nigeria using the QGIS tool; control of NTDs in Nigeria using the lessons of other countries; developing linkages with partners in NTD control

The course is apt for NTD programming in Nigeria; facilitators are well grounded on the topic; participants were friendly and eager to help each other; the working documents were made available although it would have helped if they were received prior to the workshop.

The summaries we had every morning to refresh our memories for the previous day's work

Practical work (developing maps)

Availability of materials which explain the step by step in producing the maps

It exposed me to what mapping is all about.

The course is a very valuable one that will enable programme managers to plan, design and implement effective NTD control programmes. It will also enable programme managers to manage and analyse data.

Active participation; clear knowledge; professional help; daily improvement of skills

Clarity of objectives for every day's work

Course development and preparation; user-friendly/simple course practical material; excellent facilitators

Clarity of presentations and commitment of organisers

What could be improved?

More time for practice.

Duration of the workshop to allow more time on the practicals while the team of participants are still together. (?? Cost - implications in terms of finance and facilitators availability).

The course manual needs to be edited to improve on the page numbering. Some procedures or sets as regards to certain functions were omitted.

The course should be separated into modules and more time allocated to each unit module.

The data provided for use especially in the Nigeria mapping folder; the printed manual would be better in colour to better view and a bit bigger

The practical sessions need to be moduled to cover for at least a period of 10 days with each session having an agreed stop point for every participant. The practical data for a session or country could be used for training.

The speed of delivery of practical demonstration; the duration of the course.

The manual can be more user-friendly if pagination is consistent; some of the instructions are not very useful and could be deleted; the time/duration of the workshop could be revised to six days or some areas reduced.

The length of days for the training

The methodology used for the training could be improved. For future training, facilitators should always have one-to-one time with all the participants.

The number of facilitators should be improved on and should be made to be at least 1 facilitator for each four trainees

The duration of the course could be improved to two weeks and made fully residential for all participants.

Method of knowledge delivery; improving the language of the practical; handbook to be clearer without ambiguity

The facilitators need to demonstrate the programme as trainee follows.

Making the training completely in-house would have helped participants more

Clarity of the teaching manual and length of time

Time allotted could be increased

Introduction to the course

What additional training related to this topic would you like to have in the future?

Further opportunity for application of the techniques for disease control.

Data cleaning and statistical softwares relevant.

Course should be split and extended over two weeks.

Advanced training on aggregation of layers and chloropleths

It will be good to have some more form of data analysis training including using one statistical software.

Basic introduction to QGIS; basic concepts of epidemiology

Revisions course

Overlaying risk maps for various NTDs

I would want to be able to play with this particular tool before I move on to the next phase of advanced QGIS

Geoprocessing tools

Training of data analysis as it relates to mapping results

Advanced aspects of what we covered

How important is it that the course materials be available online? (They are all free to download at www.thiswormyworld.org)

Very important.

Very important! Extremely useful means of distance learning.

Very important and useful. I would also encourage updating the manual when necessary.

Very important

It is vital since you download it free from any part of the world wherever you need the reference or get stuck.

Very important. Especially for ICT specialists

Can be easily accessed by my colleagues who were not present at the training

Very important because I'm going to go back and look at all.

This will greatly help in sharing knowledge with others

Additional Comments

Course was very useful and appreciated.

A very good training!

It will be nice to state the recommended computer systems for the programme. Also consider stating the minimum computer literacy level required for this form of training.

The training was satisfactory

The number of days should be increased from 5 days to at least 14 working days and should be residential

The course should be organised at national and sub-national levels in Nigeria

To include more hands on approach