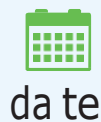


Hands-on Technical **WORKSHOP** | **ArcGIS**

TECHNICAL REPORT



June
6-8
2025



time
8AM- 5AM



YAOUNDÉ, URBAN Space
behind the MINCOM

► Real-time applications in modelling





INTRODUCTION

From Friday, June 6 to Sunday, June 8, 2025, from 8:00 AM to 5:00 PM, a training workshop on cartographic analysis techniques using ArcGIS software was held at the headquarters of URBAN Space, behind the Ministry of Communication in Yaoundé. This workshop, organized by Health Organisation Welfare (HOW) and supported by the AMNET Cameroon Chapter, brought together 17 participants from diverse backgrounds (modelers, researchers, students, physicists, sociologists, geographers, meteorological service staff, etc.), along with a trainer. Due to restricted access to the ArcGIS software, QGIS was used during the workshop.

The main goal of this training was to equip participants with cartographic analysis techniques. Specifically, it aimed to:

- Introduce participants to the use of QGIS.
- Equip them with advanced mapping techniques to present malaria risk zones.
- Use the software to influence public health decision-making.

ACTIVITIES DURING THE TRAINING

Day 1:

- Introduction of HOW and AMNET Cameroon Chapter by the executive director and President, Mr. Isah Mohamed and Mr. Ivan Missonge respectively.

- Introduction of the trainer, Mr. Marcel Woung.
- Introduction of the moderator, Miss Landrine.
- Participant introductions and brief presentations.
- Installation of QGIS and overview of its interface (concepts of layers, vectors, rasters, etc.).



- Introduction to types of data used in cartography and their specificities.
- Overview of indicators used in spatial analysis, their relevance, and selection criteria.
- Discussion on the importance of spatial analysis for decision-making.
- Introduction to shapefiles (importance, sharing, download sources, etc.).
- Explanation of decimal separator issues and software version compatibility.
- Creation of a basic map of Cameroon (division into regions, departments, health areas, background coloring, and borders).
- Use of filtering, symbology, graduation, categorization, class and interval definition.
- Introduction to modeling concepts (case study: malaria).

Day 2:

- Selection and calculation of relevant indicators related to vectors, population, treatment, and the healthcare system.
- Presentation of data types used in modeling (epidemiological and environmental data).

Day 3:

- Overview of geographic coordinate types used in cartography (degree-minute-second, degree-minute, and decimal data).
- Design of a map presenting malaria cases in Nkolbisson in 1975 and 1985, incorporating environmental temperature data.

- Presentation of various types of analyses used in cartography (descriptive, diagnostic, predictive, and prospective analysis).
- Closing remarks from the executive director of HOW and president of the AMMNET Cameroon Chapter.
- Certificate distribution to participants.
- Group photo.
- Participant feedback session to gather impressions of the training.
- Lunch break and official closure of activities.

CONCLUSION

This report summarizes the activities and objectives of the training workshop. The skills acquired by the participants will enable them to apply cartographic analysis techniques in the context of malaria surveillance and other public health-related fields.



RECOMMENDATIONS FOR FUTURE TRAINING

Based on participant feedback the following recommendations are proposed for future workshops:

1. Organize a Separate Training on Python for Data Analysis, given the growing importance of programming in public health and modeling, it is recommended to organize a dedicated training focused on Python.

2. A longer training period (e.g., four to five days) would allow more time for in-depth exercises and practical application of concepts covered during the sessions.
3. Creating a community platform (such as a WhatsApp group or mailing list) would foster collaboration, troubleshooting, and sharing of resources among participants.

