# APPLIED MALARIA MODELING NETWORK (AMMNET) GRANT OPPORTUNITY: REGIONAL AMMNET EVENTS

## EVENT GRANT PROPOSAL

### A. Event Organizer:

| Names | Affiliated Organizations | Address |
|---|---|---|
| **Misonge Kapnang Ivan** | Health Organisation Welfare , Center for Research in Infectious Diseases (CRID) | Carriere, Yaoundé-Cameroon |

### B. AMMnet Cameroon Chapter Steering Activities Committee:

| Names | Affiliated Organizations | Address |
|---|---|---|
| **Antonio Nkondjio Christophe** | Organisation de coordination et de coopération pour la lutte contre les grandes endémies en Afrique Centrale - OCEAC | Messa – Yaounde, Cameroon |
| **Akindeh Mbuh Nji** | Laboratory for Public Health Biotechnology, University of Yaounde I | Nkolbission, Yaounde, Cameroon |
| **Isah Mohamed** | Health Organisation Welfare - HOW | Carriere, Yaoundé-Cameroon |
| **Carmène Sandra NGADJEU** | Organisation de coordination et de coopération pour la lutte contre les grandes endémies en Afrique Centrale - OCEAC | Messa – Yaounde, Cameroon |

09 AVRIL 2024
REGIONAL AMMNET EVENT
Yaoundé - Cameroon

# BOOTCAMP TRAINING ON R - PACKAGE FOR DATA ANALYSIS AND STATISTICAL MODELING

## 1. Introductory information :

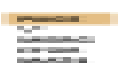
The regional AMMnet Cameroon community is a very wide with diversified members from different backgrounds and expertise. For the last grant events obtained by this chapter we focused more on creating awareness and promoting modeling research outputs. We have been getting feedbacks from all our events and members and many are eager and willing to start a training on modeling. To this demands from the members Cameroon chapter wishes to organize an intensive boot camp training on the R-package for data analysis and statistical modeling that will take place in Yaoundé on the on the 17th of July 2024 for three days' duration targeting 35 participants including event organizers and support team. The targeted audience will be: university students, postdocs, Researchers, health centers, NMCP, CBOs, local NGOs with interest to this topic. Priority will be given to already registered local chapter members.

Gender equality will be a key elements taken into account and women will be encourage to apply for this training opportunity and transport support will be provided to those in need. The objective of this training is to provide high quality skills to participants to master the R-package for data analysis and statistical modeling in the context of operational and implementation research inline to malaria. This will help contribute to advancing AMMnet mission, career development and capacity building at both local and international levels as it ties with the global objective of global AMMnet. It will go-a-long way strengthen the technical and communication skills among early career researchers interested in modelling and equally enhances participants interest in modelling.

We are working as next step through this training to make all participants operational in their respective affiliations to respond quickly and efficiently to data management and analysis for decision making in an evolving context of innovation, prevention and treatment for malaria. After this training equally participants will be followed through online meetings to solve issues and ensure impact. This training will be provided by an independent consultant with over 10years in accompanying public health and private institutions in data analysis.

## 2. Event information

Below shows the training program for the 3 days' boot camp training tailored for beginners, intermediate and advance on R-Package. Sample of datasets and codes will be provided to participants to ease practical and immerse them in real contextual analysis. This program will run from 9am – 5pm CAT each day. This will be a hands on training on data analytics and statistical modelling where participants will get direct skills through experience and practices. Data set will be provided by the trainer to all participants that will be used during the sessions. Group work are also planned to engage the participants to work on a real life data set to analyse, interpret and make recommendations inline to the public health challenge. Group work manuscripts will be submitted, corrections for the exercise provided



and discussed with participants. The database from the trainer will be most utilize on the second and third day for exercises on participants understanding of the training received.

| Day 1 (hands-on) | Day 2 (hands on) | Day 3 (hands on) |
|---|---|---|
| **Morning session**<br>• General orientation and introduction to statistics<br>• Vectors<br>• Matrices<br>• Dataframes<br>**Afternoon Session**<br>• Installing packages<br>• setting working directory and Importing data into R (xls, csv etc)<br>• Data visualization (base plots) | **Morning session**<br>• Data wrangling/data cleaning<br>• Missing data<br>• One sample t.test and Two sample t.test<br>**Afternoon session**<br>• One sample and two sample Test of proportion<br>• Chi-square test<br>• Odds ratio, and confidence interval<br>• Pearson Correlation<br>**Group project** – exercise on real life data with propose engaging solutions from participants | **Morning session**<br>• Linear regression models (simple One way Anova<br>• Two way Anova<br>• and multiple)<br>• Logistic regression model<br>**Afternoon session**<br>• Poisson regression model<br>• Survival analysis<br>• Non-parametric tests (Sign test, Wilcoxon Rank Test, KruskalWallis test, Friedman test)<br>**Group project** – exercise on real life data with propose engaging solutions from participants |

Selection to participate to this boot camp will be done through an open application system targeting local AMMnet Cameroon chapter members and non-members, with priority on non-members to increase chapter numbers and visibility. People of non-analytical background will equally be considered. All applicants will be requested to submit their CV, motivational letter and how they will use this knowledge learned to advance their career.

## 3. Some Targeted Institutions for Participants

- ❖ University of Yaoundé 1
- ❖ University of Dschang
- ❖ Univerisity of Maroua
- ❖ University of Ebolowa
- ❖ University of Buea



- University of Douala
- University of Health and Allied Sciences
- Cameroon Baptist convention Health Service
- National Parasitology Reference Lab
- Organisation de coordination et de coopération pour la lutte contre les grandes endémies en Afrique Centrale - OCEAC
- Catholic University of Central Africa
- Health Research Foundation
- Chaire International de Physique Mathématique et Application
- École Nationale supérieure polytechnique de Yaoundé 1
- Centre for Vector Borne Diseases Research
- Civil society for malaria elimination (CS4ME)
- NMCP – Cameroon

## 3. Measures of effectiveness

To assess the achievement of our boot camp objectives we will use anonymous participant's questionnaires to collect impression of each participants and what we could do to improve the next session. We will also use list of participants to assess if the expected number of participants has been reached; conference photos and number of enrolled persons or those willing to enrolled as member of local AMMnet chapter.

The AMMnet Cameroon chapter has put on a steering committee to monitor grant success to all individuals in Cameroon that get a grant from AMMnet. It comprises of the Executive bureau and volunteer chapter members that could provide direct feedback to AMMnet to report key issues.

## 4. Budget estimation :

1 dollar = 650 FCFA

| **Designations** | **Nber of units** | **Unit cost** | **Total cost - FCFA** | **Total cost – in Dollars** |
|---|---|---|---|---|
| Venue - hall | 1*3days | 200 000 | 600 000 | 923.07 |
| Conference Material | 35 | 200 000 | 200 000 | 307.69 |
| Refreshment | 35*3days | 550 000 | 550 000 | 846.15 |
| Secretary | - | 105 000 | 105 000 | 161.53 |
| communication | - | 100 000 | 100 000 | 153.84 |
| Trainer Per-diem | 1*3days | 100 000 | 300 000 | 461.53 |
| Transport participants | 5 | 50 000 | 50 000 | 76.92 |
| **Total** | - | | **1 955 000** | ***$3000*** |

## 5. Budget Narrative :

**Venue hall (US $ 923.07)** will be used for the rentage of a hall with an Air conditioner for the event for 3 days. **Conference material (US $ 307.69)** *for badges, notebooks, and pens at a combine price of 5.714 fcfa *35 = 200.000Fcfa/307.69 US$).* **Refreshment (US$ 846.15)**

*for coffee break, lunch, water at a combine price for each day at 183.333 fcfa * 3days= 550.000Fcfa/ 846.15$)*, **Secretary US $161.53** (The amount requested will be used for the printing of documents, video projector + internet). T**rainer perdiem (US$ 461.53)**, a modest perdiem will be given to the training consultant (100.000 fcfa/day*3days = 300000 fcfa (US 461.53). **Transportation(US$76.92)** will be given to 5 participants (women) to pay for their transport and attendance to the training (5*10000Fcfa = 50.000/76.92 $).

**NB - At equal experiences and qualifications, preferences will be given to WOMEN. If we realise more than five women presents the need for assistance to the training, we remain flexible to readjust the budget and bring up the assistance to 10 women.**

## 6. Others:

Health organisation Welfare wishes to take charge of the bank charges and variances in case of variation due to currency exchanges which might affects the budget line as if was the case with past grant obtained. The equally opt to take care of any facilitation or administrative cost associated to the implementation of this activities.