

**Terms of reference**

**INDIVIDUAL CONSULTANT**

**Geospatial modeller**

Date: 24/03/2023

**Organisational** **background**

Established in 2003, Malaria Consortium is one of the world’s leading non-profit organisations specialising in the comprehensive prevention, control and treatment of malaria and other communicable diseases among vulnerable and under privileged populations. We increasingly find our work on malaria can be effectively integrated with other similar public health interventions for greater impact and therefore expanded our remit to include child health and neglected tropical disease interventions.

**Background**

Use of geospatial modelling by malaria control programmes can inform decisions about where resources should be directed and infer epidemiological conditions in areas that may be lacking in high quality routine case data. The use of geospatial models has become increasingly important in recent times as resources and funding for malaria control have reduced, making it imperative to use what resources we have available most efficiently and effectively. Malaria Consortium recognises the importance of these methods and wants to increase the use of these approaches to inform its own programmes.

**Purpose**

The consultant will work closely with the Senior Technical Advisor – Surveillance and Response and the Malaria Consortium Cambodia country team to analyse data from the Global Fund RAI grant in relation to mobile malaria outreach activities and malaria hotspots. The aim is to use these data to highlight gaps in coverage and inform optimal placement of mobile malaria workers (MMWs) and mobilisation of resources.

**Main responsibilities**

1. Map catchment areas of MMWs using outreach geolocation data.
2. Collate geospatial data on malaria cases and hotspots and use this to model malaria transmission risk across Cambodia
3. Combine data to identify underserved areas and optimal deployment of MMWs and malaria testing effort
4. Establish pipeline through which these models can be easily updated to monitor changing trends and redeployment as required.

**Indicative Schedule**

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| Tasks/activities | Number of TA days |
| 1. Receive briefing from MC staff. | 1 |
| 1. Mapping of MMW catchment areas. | 1 |
| 1. Collation of relevant data relating to malaria cases and hotpots (both Pf and Pv) | 1 |
| 1. Model estimated transmission risk across Cambodia based on available data | 7 |
| 1. Identify gaps in MMW coverage in relation to high risk transmission zones to inform strategic deployment of resources | 2 |
| 1. Establish pipeline so that model can be updated with latest information and trends monitored over time | 3 |
| 1. Write final report with approach and findings | 3 |
| 1. TBC – lead/contribute to draft manuscript for publication | 4 |
| Total | 18/22 |

**Outputs**

* Final report detailing approach taken and results
* Pipeline able to be updated for regular monitoring of changing geospatial trends
* Depending on findings – potential to draft manuscript for journal publication

**Required qualifications, experience and skills**

* Educated at a Masters level in relevant discipline or equivalent professional experience
* Significant experience in geospatial modelling and analysis
* Analytical rigor and attention to detail
* Ability to work and collaborate remotely
* Able to work seamlessly across countries, cultures, and organisational units
* Written and spoken fluency in English

**Conditions**

Place of work: Desk-based

Travel: None

Type of contract: Short-term consultancy

Duration: 18 days, starting as soon as possible (potential to extend to 22 days)

Fees: Professional fees

Insurance: Professional indemnity insurance is a pre-requisite

Equipment: Should have own computing and broadband facilities for remote collaborations as well as access to relevant geo-analysis software

**How to apply:**

Interested candidates are requested to submit cover letter and their CV to Terri Cronk (t.cronk.79@malariaconsortium.org)