



Call for Expressions of Interest and Proposal

VN#15 – An agency to evaluate *Anopheles* and *Aedes* vectors in co-prevalent communes of malaria and dengue fever in Central Highlands region

1. Background:

Malaria and dengue share an overlapping epidemic pattern with most cases reported from tropical regions of the world including Vietnam. Several studies have been published reports co-circulation of Malaria and Dengue. The cumulative burden of these infections has increased in recent times with frequent outbreak of Dengue being reported from several parts of the world. Global travel and rapid urbanisation are important factors that have contributed to expansion of disease.

Over the past 20 years Viet Nam has been successful in reducing their *malaria burden in all malaria endemic areas, especially in the northern part of the country*. Despite these gains, malaria remains a significant public health issue, especially in the Central Highlands. However for Dengue fever, the number of dengue cases continues to increase sharply in many localities across the country. According to the Ministry of Health has assessed that the southern, central and Central Highlands regions continue to record high numbers of cases and deaths. Alone in 2022, the country has recorded above 360,000 cases of *dengue fever* and 133 deaths.

Previously, dengue has mostly concentrated in urban and semi-urban areas, where high population density. However, now has spread to rural and mountainous areas where malaria is more common, such as Krong Pa district of Gia Lai province and Khanh Vinh district of Khanh Hoa province. These are also high malaria endemic districts in these provinces.

In Vietnam, especially in Central Highlands region, there are three main malaria vectors: *An. minimus*, *An. dirus* and *An. epiroticus*, and some other secondary vectors. Currently in the prevention of malaria with measures of indoor residual spraying in the walls of the house, the insecticide used to spray is Alphacypermethrin (Fendona 10SC) at dosage 30 mg of active ingredient/m². But now, some malaria vectors were resistant to pyrethroid insecticides, such as *An. epiroticus*, *An. maculatus*.

Dengue vectors prevention, the space spray is using two methods of hot spray and ULV spraying with pyrethroid group. But the main vectors of *Ae. aegypti* and *Ae. albopictus* have also developed resistance to pyrethroides in some places, including Central Highlands of Vietnam.

Nowadays, malaria and dengue are co-endemic in many communes of Central Highlands, Vietnam, increasing the burden of the diseases. *Anopheles* and *Aedes* vectors control based on insecticides that increasing the risk of insecticides resistance mosquitoes. Therefore, assessing the distribution of vectors and status of insecticides resistance of *Anopheles* and *Aedes* in communes with co-endemic malaria and dengue fever are essential in the currently strategies in the Central Highlands of Viet Nam.

Specific Objectives

- Determination of composition and density of malaria and dengue vectors in Khanh Hoa and Gia Lai provinces.



**World Health
Organization**

Viet Nam

- Evaluation of insecticide resistance status of malaria and dengue vectors in the endemic areas of malaria and dengue.

2. Planned timeline:

From 1 May to 20 December 2023

3. Specific requirements

- Investigators must have a bachelor's degrees or general doctor and working in the field of entomology
- Investigators must have the minimum 5 years of experience for sampling collection in the field as well as in the laboratory.
- All investigators have the knowledge and experience for identification and sampling collection of malaria and dengue vectors in the field. They have participated many scientific research projects and activities related to vector borne diseases.

4. Place of assignment

Khanh Hoa and Gia Lai provinces

Agencies who are interested can contact our focal person before/by **31 March 2023**

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Subject: Application for VN#15 (To evaluate Anopheles and Aedes vectors in co-prevalent communes of malaria and dengue fever in Central Highlands region)