

STAKEHOLDER ENGAGEMENT: VIETNAM PILOT

WHAT?

- Vietnam's existing dengue surveillance system is passive and relies on clinical cases reported by patients seeking healthcare.
- Key Vietnamese stakeholders expressed the need for an operational system to allow them to forecast dengue outbreaks as many months in advance as possible, allowing public health officials and communities to proactively plan in advance and widen their range of feasible responses. D-MOSS has helped to fill this gap.

WHEN?

- In June 2017, meetings were held in Vietnam to ensure key stakeholders were involved in the co-production of D-MOSS and that the community needs for a forecasting tool were captured.
- D-MOSS has been producing dengue forecasts for the whole of Vietnam since 2019 and is also being piloted in four high-risk provinces.

WHERE?

- Four pilot provinces were selected by the Vietnamese Ministry of Health based on their varied geographical, climatic, demographic and epidemiological characteristics: Hanoi, Khanh Hoa, Dak Lak and Dong Nai.

DAK LAK

 Population: 2.13 million

 Average annual number of dengue cases over past 10 years: 5,416

- Lowest population density of all pilot areas (160 per km²).
- Lowest temperatures of all pilot areas- dengue outbreaks associated with high temperatures.

DONG NAI

 Population: 3.10 million

 Average annual number of dengue cases over past 10 years: 6,833

- High temperatures year-round- optimum for dengue transmission.
- Suffers regular dengue outbreaks.
- In 2019, 20,000 cases were recorded, three times the 10 year average number of cases for the province.



HANOI

 Population: 8.05 million

 Average annual number of dengue cases over past 10 years: 9,000

- Highest population density of all pilot areas (2,400 per km²).
- More active surveillance, easy access to healthcare system & increased public awareness compared to other pilot areas.
- Large intermittent dengue outbreaks every few years.

KHANH HOA

 Population: 1.34 million

 Average annual number of dengue cases over past 10 years: 5,731

- In 2019, Khanh Hoa province recorded almost 12,000 dengue cases, almost twice the average number of cases recorded over the past 10 years

During the prototype field trials, the project team has engaged with key stakeholders from the four pilot provinces, and with national-level stakeholders including the following:

WHO?

- Dengue prevention and control officials from the Centres of Disease Control (CDC) in the four provinces.
- Officials from the Provincial Departments of Health of the four provinces.
- World Health Organisation (WHO).
- National Institute of Hygiene and Epidemiology (NIHE), responsible for dengue control in the North of Vietnam.
- Pasteur Institute Ho Chi Minh City (PIHCMC), responsible for dengue control in the South of Vietnam.
- Pasteur Institute Nha Trang (PINT), responsible for dengue control in Central Vietnam.
- Tay Nguyen Institute of Hygiene and Epidemiology (TIHE), responsible for dengue control in the Central Highlands of Vietnam.
- The General Department of Preventive Medicine (GDPM) of the Ministry of Health.

How does D-MOSS help to control dengue fever?

“ It helps us to proactively develop action plans, provide specific and accurate advice to local authorities and implement preventative measures. **”**

- CDC Dak Lak

“ We use the D-MOSS forecasts to identify areas that need to be prioritised and take action to reduce the number of cases and prevent outbreaks. D-MOSS forecasts help us not waste resources for provinces with low predicted cases. **”**

- National Institute of Hygiene and Epidemiology

“ D-MOSS provides scientific information to inform our dengue prevention control plans and budget estimates, so these plans can become more practical and feasible. Upon receiving the forecast we study the predicted number of cases and send warnings to relevant areas so that they can proactively develop plans, including mosquito control plans and surveillance plans. **”**

We can now predict and compare the number of dengue cases across provinces, proactively strengthen our surveillance activities and prepare resources. **”**

- Pasteur Institute Nha Trang

“ It provides us with more information to advise disease prevention and control committees at various levels. It also informs our annual disease prevention and control plans. **”**

- CDC Hanoi