

# Our *Wolbachia* Method



## World Mosquito Program

The World Mosquito Program (WMP) is a not-for-profit initiative working to protect the global community from mosquito-borne diseases such as dengue, Zika, yellow fever and chikungunya.

We have partnered with governments and communities to deploy our *Wolbachia* method in 14 countries in Latin America and Asia-Pacific since 2011, protecting more than 11 million people.

### THE CHALLENGE

The **global burden of mosquito-borne disease** is increasing, driven by climate change, globalization and urbanization.

### OUR UNIQUE SOLUTION

WMP's *Wolbachia* method is an evidence-based, safe, one-time intervention that uses naturally-occurring bacteria to reduce the ability of mosquitoes to transmit viruses to humans.

### THE CHALLENGE



Up to 400 million dengue infections each year



More than half the world's population is at risk of contracting dengue, projected to increase to 5.5 billion by 2050



Outbreaks of Zika, chikungunya and yellow fever have re-emerged globally in the past decade

### OUR UNIQUE SOLUTION



*Wolbachia* is found naturally in many insect species, including biting insects



When *Wolbachia* is introduced into mosquito populations, it reduces their ability to transmit viruses to humans



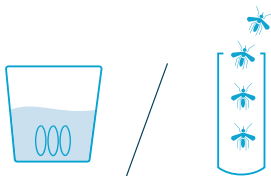
*Wolbachia* is passed on when mosquitoes breed, so it spreads through the mosquito population, is self-sustaining and provides long-lasting protection against mosquito-borne diseases

June 2024

## How it works

1

*Wolbachia* mosquitoes are released for 3-6 months



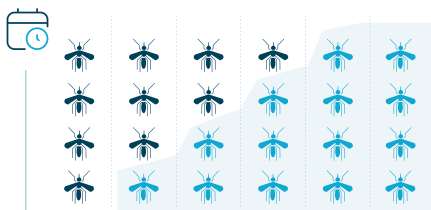
2

They mate with wild mosquitoes, passing on *Wolbachia*



3

*Wolbachia* spreads to nearly all mosquitoes and remains in the local mosquito population once releases end



4

The community is protected from disease long-term without the need for more releases



Mosquitoes with *Wolbachia*



Wild mosquitoes

# Global impact



## Proven efficacy

In a randomized controlled trial in Yogyakarta, Indonesia, dengue incidence was reduced by 77% and dengue hospitalisations by 86% in *Wolbachia* treated areas compared with untreated areas. Efficacy was equivalent for all four dengue virus serotypes.

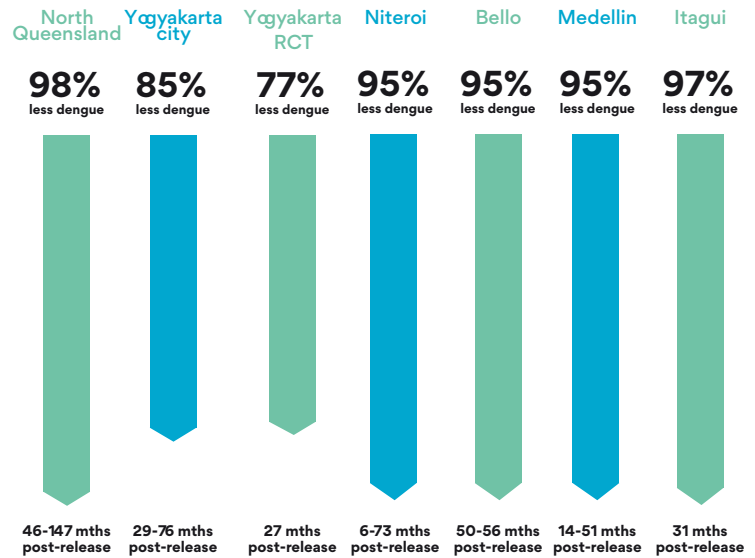
## Effective at scale

Large-scale *Wolbachia* deployments in Australia, Asia, and the Americas (up to 1-3 million people) have consistently led to large and sustained reductions in the incidence of dengue and, in Brazil, also chikungunya and Zika.



## Cost-effective

Independent cost-benefit analyses show that *Wolbachia* deployment in high-density urban communities can pay for itself over time, through savings in healthcare costs and a healthier population.



## Real-world impact

We estimate that 715,000 dengue cases including 50,000 hospitalizations had been prevented by WMP's *Wolbachia* method by December 2023.

# Mosquito production and supply

Innovation in the production of *Wolbachia*-carrying *Aedes aegypti* mosquitoes meets cutting-edge technology. Our global production facility network, fitted out with standardised equipment and using standardised processes, has the capacity to generate approximately 100 million high-quality eggs per week and more capability is being developed to double this capacity.

We have expanded our presence to ship *Wolbachia* eggs to various countries and cities and are currently supplying eggs to Santa Ana, El Salvador, the 6-city program in Brazil, the 5-city program in Indonesia, and we are expanding this in 2024 to supply also to Cali in Colombia, as well as Vientiane in Laos.



# Working with communities



Successful implementation of WMP's *Wolbachia* method relies on acceptance, support and participation from the communities with whom we work. Before we release a single mosquito, we spend many months engaging with communities to explain our method and provide a platform for questions or concerns.

We partner closely with community groups and local health officials to help build capacity and foster ownership of the method in local neighbourhoods and towns. We encourage community members to become actively involved in our research by rearing mosquitoes in their own backyards and by hosting traps to collect mosquitoes for analysis. We only undertake release activities with community support.

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A collaboration between:

