The WIN Initiative: A Global Network to Combat Insecticide Resistance in Arbovirus Vectors



Vincent Corbel & Claire Durot – MIVEGEC Unit (IRD, Montpellier, France), Jean-Philippe David – LECA Unit (CNRS, Grenoble, France)

The WIN brings together 19 internationally recognized institutions in entomology research for tracking and combating insecticide resistance in mosquito vectors of arboviruses.



Membership organization based on 5 colleges

Founding members (college A)

Academic & public organizations (college B)

Not-for profit organizations (college C)

10 RESEARCH CENTERS

2 PUBLIC AGENCIES

organizations (college D)

International

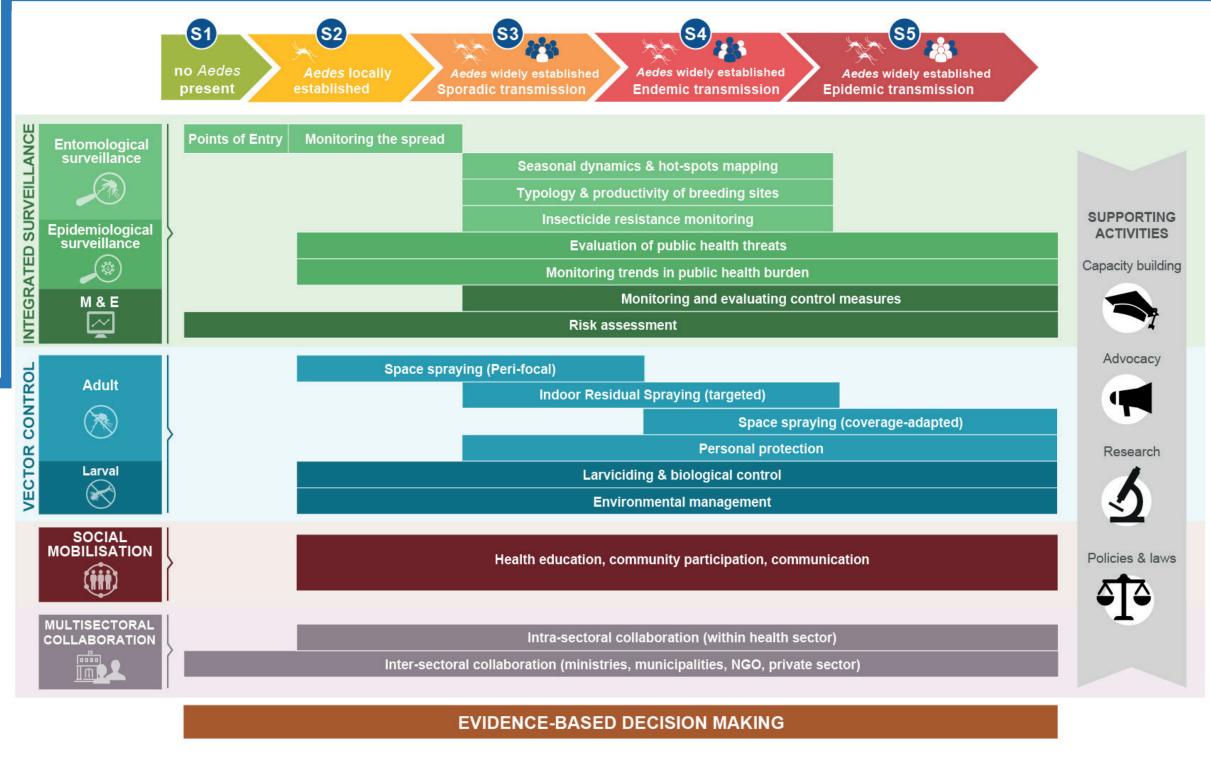
companies (college E)

"Each college contributes to WIN activities and has specific role & benefits."

CORE PILLARS NETWORKING RESEARCH ✓ Gather & **₫** Support disseminate collaborative information to research projects scientific community Organize biennial foster innovation in international conference vector control Q Maintain an up to Build countries' date database on capacities on IRM insecticide resistance Contribute to Guide e-learning stakeholders in course decision-making **EDUCATION & EXPERTISE TRAINING**

OBJECTIVES

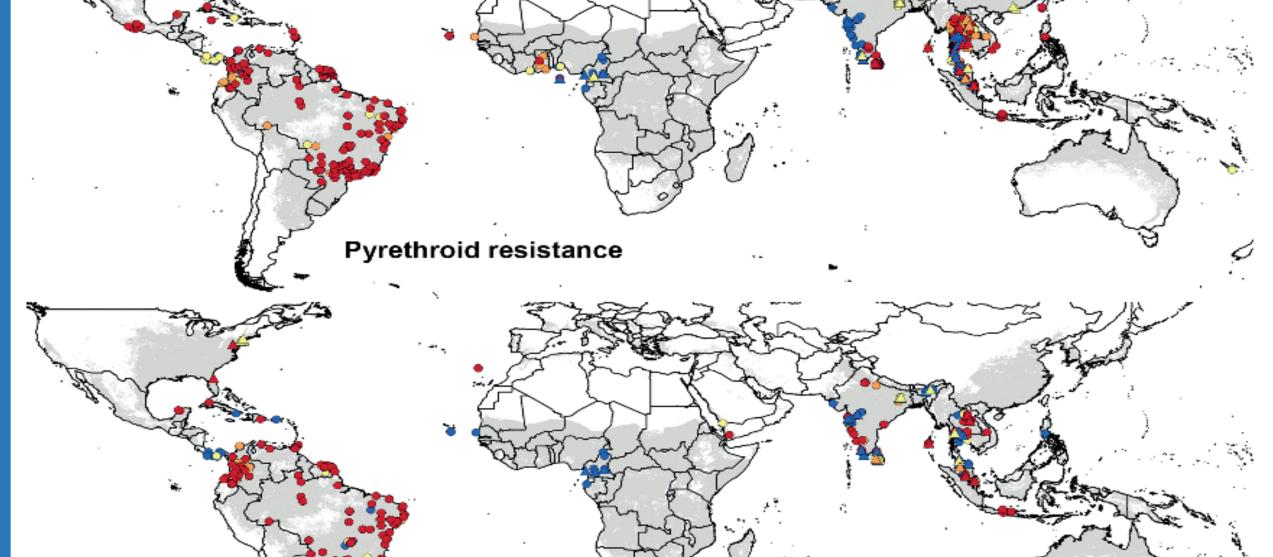
- Establish a global resistance surveillance system for arbovirus vectors,
- Fill knowledge gaps and identify research priorities on insecticide resistance,
- Assist WHO and national authorities in decision-making on insecticide resistance management and deployment of resistance-breaking tools.



Integrated Aedes Management (IAM).

Conceptual framework of Integrated IAM Activities system. tailored to local scenarios of Aedes distribution and virus transmission risk. Source: Roiz et al, PLos

NTD (under review)



EXECUTE KEY RESEARCH ACHIEVEMENTS

distribution of insecticide resistance. Locations of resistance to organophosphates and pyrethroids in *Aedes* mosquitoes, 2006 to 2015. Source: Moyes et al, PLos NTD, July 2017

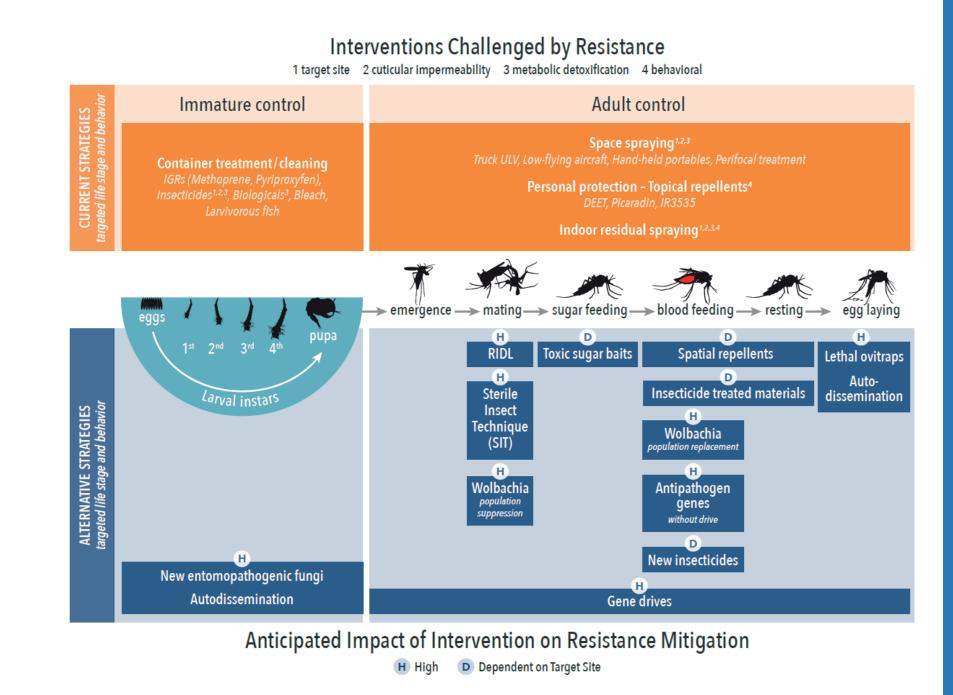
Ae. aegypti population

▲ Ae. albopictus population

Organophosphate resistance

Integration of insecticide resistance monitoring in vector control program Biological assays Continue monitoring LEVEL 2 Monitoring and evaluation of treatment efficacy

Insecticide Resistance Management (IRM). Support decision making of IRM strategy during implementation of a Source: control program. vector Chandre et al, PLos NTD (under review)



Alternative tools for *Aedes* vector control. Current & alternative arbovirus control methods in the context of the anticipated impact on IRM. Source: Achee et al, PLos NTD (under review)



Areas predicted to be suitable

and/or Ae. albopictus populations

for persistance of Ae. aegypti







Interesting in joining the WIN?

Contact us at winprojectoffice@ird.fr

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