

New initiatives in vector surveillance and control in the Pacific Island region

As this edition of *Inform'ACTION* proves extensively, vector-borne diseases (VBDs) – especially dengue – are a growing concern in the Pacific Island region. One of the factors contributing to VBD outbreaks is insufficient capacity for vector surveillance and control (VSC), that is, roughly, to detect and distinguish different types of mosquitoes, gather knowledge about their local distribution and behaviour, identify increased risks of local transmission and reduce these risks in the most appropriate way, and prevent the spread of vectors to areas where they are not yet established. Increased capacity in VSC would enable Pacific Island countries and territories (PICTs) to target problematic vector populations more selectively, thus avoiding indiscriminate spraying and minimising negative impacts on other organisms, including humans.

Enhanced VSC also includes stronger regional cooperation, and sharing of data about vectors and VBD outbreaks and of related expertise. Last but not least, it includes stronger community mobilisation and the participation of every house, garden or flowerpot owner in a concerted effort to deprive mosquitoes of their breeding places, wherever this effort is likely to contribute significantly to reducing the risk of local transmission.

At the request of PPHSN core members, SPC's Public Health Surveillance & Communicable Disease Control Section, the Pasteur Institute of New Caledonia (IPNC) and the Institut Louis Malardé (ILM) of French Polynesia have developed an integrated approach to strengthen VSC capacity in the region. Both IPNC and ILM have extensive experience in VSC in their respective territories.

Earlier this year, two project proposals were submitted for funding. The smaller one, a pilot project submitted to the French Pacific Fund (FPF), has already been approved and its implementation has started; the larger one, covering a period of five years from 2008, has attracted the interest of the French Agency for Development (AFD) and is currently being fine-tuned in collaboration with the likely donors. It may be integrated with a similar project of the Global Fund, targeting mainly malaria.

The pilot project has three components:

1. development of a web-based atlas: a geographically referenced database with (a) general information about the distribution of mosquito vectors in the Pacific region and about their attributes that the public will be able to consult, and (b) a restricted forum inviting scientists and public health officials to exchange more specific information generated through enhanced vector surveillance;
2. testing of training activities for in-country capacity building for enhanced VSC, and promoting the integration of vector surveillance and VBD surveillance data at the national level; and
3. development of successful community mobilisation strategies.

The training activities will culminate in a workshop in the Cook Islands in September, involving health inspectors and other public health staff from Rarotonga and outer islands. The workshop will draw on experience gained in a series of workshops that were made possible through locally organised funds in Guam in 2005,¹ Northern Mariana Islands and Federated States of Micronesia in 2006,² and Wallis and Futuna in 2007.

The larger project will broaden all these activities and successively extend them to all concerned PICTs. It will result in:

1. a regularly updated inventory of vector mosquitoes for the Pacific Island region;
2. more PICTs engaging in state-of-the-art VSC – not only in response to outbreaks, but also preventively; and
3. better knowledge of communication strategies that can mobilise communities in the Pacific.

A component allowing operational studies of genetic characterisation and gene flow of the local vector populations is planned to complement the integrated approach, once dedicated funding for the necessary IPNC laboratory upgrades has been obtained.

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References

1. Guillaumot, L. 2005. Guam training workshop on identification and surveillance of vector mosquitoes, 26–28 July 2005. Inform'ACTION 21:30–31.
2. Guillaumot, L. 2006. Vector mosquitoes surveillance and identification: Training workshop in Commonwealth of the Northern Mariana Islands (CNMI), 28 August–1 September 2006. Inform'ACTION 24:27–28.