

PacMOSSI Annual Meeting 2024

Apia, Samoa | 4-5 June 2024

MEETING REPORT



Meeting objectives

The annual meeting objectives were to:

1. Review progress, strategic objectives, and key activities for the PacMOSSI consortium;
2. Enable interaction and sharing of experiences, challenges, and solutions for conducting vector surveillance and control by representatives of Pacific Island Countries and areas (PICs) and regional partner institutions; and
3. Identify future PacMOSSI activities to enhance preparedness and response for mosquito-borne disease (MBD) outbreaks across the Pacific.

Format

The meeting was held from 4 to 5 June 2024 at Lava Hotel in Apia, Samoa. Sessions included the welcome and opening, plenary presentations, panel discussions and working group discussions. The agenda is included as Annex 1.

Attendees

The annual meeting was attended by 48 people from 19 countries, of which 52% identified as women. The attendees represented ministries or departments of health from 15 PICs (19), core PacMOSSI partner institutions (13), other technical and donor partners (15). The full list of participants is included as Annex 2. A post-meeting survey was conducted to document the experiences of participants, with results presented after the proceedings.

Proceedings



The following provides an overview of proceedings from the 2-day annual meeting. Powerpoint presentations or videos for individual sessions are available on the PacMOSSI website at www.pacmossi.org. Summaries and links are provided below.


Day 1 – Tuesday 4 June 2024

Note: Links are provided to most presentation files. Videos are available for selected presentations, as indicated in grey highlights. Videos can also be accessed via the [PacMOSSI YouTube 2024 Annual Meeting playlist](#).




| Topic | Speaker | Summary |
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| Welcome and opening | Glenn Fatupaito, MOH Samoa | The Deputy Director-General of the Samoan Ministry of Health opened the meeting on behalf of the Minister of Health, Honourable Valasi Luapitofanua Toogamaga Tafito Selesele. All attendees were provided with a warm welcome to the Paradise of the Pacific and Talofa lava to Pacific neighbours. The Deputy DG then spoke about the importance of preparedness for mosquito-borne disease outbreaks, drawing on experiences from the ongoing dengue outbreak in Samoa. He reiterated the need for capacity building and experience sharing, and outlined milestones achieved in Samoa such as development the first <i>National Strategic Plan for the Control of Mosquitoes and Mosquito Borne Diseases</i> . PacMOSSI support was noted as allowing Samoa to expand mosquito surveillance and monitoring operations, strengthen training of staff, and enable operational research to refine operations and ensure the collection of robust local data to inform outbreak response. The Deputy DG offered all attendees a fruitful and enjoyable meeting. An opening prayer was then given by Professor Vaitusi Nofoaiga of the Malua Theological College, Samoa. |
| Session 1. PacMOSSI program design | | |
| Overview of PacMOSSI consortium | Tom Burkot & Tanya Russell, JCU | Tom and Tanya provided an overview of the aims of PacMOSSI, which are to strengthen vector surveillance and control to prevent, contain and control mosquito-borne diseases and to improve the health and wellbeing of communities in PICs. Notable PacMOSSI achievements included launching the online training platform, hosting face-to-face workshops, supporting operational research, citizen science, data management and updating of country strategic plans. PacMOSSI has achieved a lot since its inception in 2020 and it was highlighted that one of the greatest outcomes has been the formation of a network of upskilled vector control officers across the region. The invaluable support from our partners, stakeholders, funders and the dedicated efforts of the PacMOSSI team were recognised. PacMOSSI is now transiting to a new phase with renewed Australian Government Department of Foreign Affairs and Trade (DFAT) support and complementary funding awarded to The Pacific Community (SPC) from the European Union (EU), French Development Agency (ADF) and the New Zealand Ministry of Foreign Affairs and Trade (NZ MFAT). Moving forward, the PacMOSSI consortium will build on its strong foundation and strengthen the activities undertaken to date emphasising strengthened vector control approaches that ensure community engagement and gender equality, disability and social inclusion (GEDSI) so that prevention and control tools are available to all at risk. |


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| <p>MBD epidemiology and SPC support</p> | <p>Kelera Oli, The Pacific Community (SPC)</p> | <p>Kelera provided an update on SPC’s vector surveillance and control activities, including efforts through the Regional Epidemic Intelligence System to document dengue serotypes since 2012. Current arboviral outbreaks include dengue serotype 1 and 2 in French Polynesia, and unspecified serotypes Fiji and Samoa. A Zika outbreak was reported in the Solomon Islands in 2023 and the last chikungunya outbreak was in 2015. Other vector-borne diseases (VBDs) recorded included malaria and Ross River fever. SPC’s focus is on enhancing surveillance, building capacity and ensuring outbreak preparedness, advocating a One Health response.</p> <p>Key SPC collaborations noted were:</p> <ol style="list-style-type: none"> 1. With WHO, developed and launched the <i>Manual on Surveillance and Control of Aedes Vectors in the Pacific</i> in 2022. 2. Collaborated with PacMOSSI on online entomology training and workshops. 3. Conducted a seroprevalence survey and medical entomology training with Institut Pasteur of New-Caledonia (IPNC) in New Caledonia and Vanuatu, with ongoing mosquito surveys in Wallis and Futuna. 4. Developed a web-app Early Warning System (EWS) for dengue in New Caledonia and Fiji with Institut de Recherche pour le Développement (IRD) Noumea. 5. Supported the launch of the Pacific Vector Network (PVN) through the Pacific Public Health Surveillance Network (PPHSN) in 2023, alongside PIHOA (focal point) and WHO. <p>Lastly, Kelera acknowledged all 22 PICTs for their support, and funders such as ADF, DFAT, EU and notably NZ MFAT who supported participation of 6 countries in the 2024 annual PacMOSSI meeting.</p> |
| <p>Vector control needs assessments (VCNAs) in PICs</p> | <p>Amanda Murphy, JCU</p> | <p>Amanda described the rationale and methods used to develop and deploy PacMOSSI’s VCNAs, as well as some preliminary comparisons between the survey results from 2021 and 2024. Since 2021, improvements were noted in:</p> <ul style="list-style-type: none"> ○ No. of Pacific countries with a national strategic plan for control of disease vectors; ○ No. countries measuring vector surveillance indicators for <i>Aedes</i> vectors; and ○ No. of staff competent to train other staff in key areas of mosquito surveillance and control programs. <p>Next steps and planned outcomes were outlined to ensure country needs inform the tailoring of PacMOSSI activities.</p> |

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| Equity, inclusiveness and vector-borne disease programs | Maxine Whittaker, JCU | <p>Maxine defined Gender Equity, Disability and Social Inclusiveness (GEDSI) in vector borne disease control programs. Differences in vulnerability, awareness, prevention, access to services, and treatment completion were discussed. Preliminary findings from a 2024 GEDSI survey showed that while countries have policies supporting GEDSI, they often do not address barriers explicitly, partly due to limited capacities and budgets. Examples of practical activities to address GEDSI include:</p> <ul style="list-style-type: none"> ○ Improving condition or access (e.g. timing of meetings, ensuring access to training equitably, spraying women’s menstrual huts) ○ Enhancing service locations, operating times, staff attitudes, and female staff security. <p>Strategic (transformative) activities include: ensuring equity in decision making representation, fair recruitment and promotion processes, promoting women in leadership positions, advocacy for gender inclusiveness, and safeguarding policy to protect female workers. Maxine offered support and mentorship to PICs for implementing GEDSI in their mosquito-borne disease (MBD) programs.</p> |
| PacMOSSI communications strategy | Tessa Knox, JCU | <p>Tessa introduced the new PacMOSSI Communication Strategy, which has been designed to ensure that PacMOSSI initiatives, activities and outputs are communicated in an accessible, actionable, credible, relevant, timely and understandable manner. In particular, feedback from the stakeholder survey (with 37 respondents) was presented along with actions to be taken, including streamlined internal communications, enhanced visibility and content, a refreshed website and improved coordination. PacMOSSI will continue to remain adaptive based on arising needs and priorities, and countries and consortium partners are encouraged to remain engaged to ensure PacMOSSI communications are fit-for-purpose.</p> |
| Session 2. Situation update – dengue outbreaks in PICs | | |
| Dengue outbreak response: PIC experiences: Samoa, French Polynesia, Fiji | Fata Paulo Pemita Seuseu, MoH Samoa | <p>Fata described the epidemiology of Samoa’s recent dengue outbreak, and the different committees leading public health responses including vector control, risk communication and community engagement, environmental assessments and clean up campaigns. He outlined challenges including accessing funding, staffing limitations, and challenges accessing case information in a timely manner.</p> <p> Watch video</p> |
| | Ambre Van Cam, MoH French Polynesia | <p>Ambre outlined the history of arboviral outbreaks in French Polynesia, and the epidemiology of the 2024 dengue outbreak. She explained how the structure of the Ministry of Health and partners who support vector control, combined with the existence of a technical guide for mosquito control in French Polynesia, enabled coordination of their recent outbreak response. She also described the key response activities, including focal and peri-focal ULV spraying around dengue cases. Challenges were the amount of time and resources responses activities took (activities ceased after resources were exhausted) and upcoming high-risk events e.g. Olympic Games 2024.</p> <p> Watch video</p> |


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| | Rama Vineshwaran, MoH Fiji | <p>Rama described the historic and recent trends in dengue outbreaks in Fiji, where dengue is endemic and the circulation of at least three serotypes. Human movement is a factor in spreading the cases between different islands. The Environmental Health Unit includes 130 Environmental Health Officers (EHOs) who are all given basic vector control training. There are SOPs on this for the EHOs, and a Mosquito Control Strategic Plan being developed in consultation with PacMOSSI. Some key vector surveillance and control and community engagement actions (including larval control and ‘kava sessions’) were also described. Future plans include expansion of citizen science approaches, piloting of residual spraying and establishing adult mosquito surveillance.</p> <p> Watch video</p> |
| <p>Support available for PIC outbreak preparedness & response: panel discussion</p> | <ul style="list-style-type: none"> • Fiona Mulhearn, Australian Government-DFAT • Audrey Lenhart, US CDC • Amandeep Singh, WHO Vanuatu • Kelera Oli, SPC <p>Facilitator: Tessa Knox, JCU</p> | <p>Fiona highlighted DFAT-supported vector control partners, including PacMOSSI, Burnett Institute (STRIVE), Integrated Vector Control Committee (IVCC), and field epidemiology programs through Australian National University (ANU) and SPC. DFAT also supports malarious countries via the Global Fund and some WHO staff positions. She encouraged countries to seek technical advice from PacMOSSI and submit official requests to local posts for further support. DFAT is supportive of a regional mechanism or stockpile for outbreak response.</p> <p>Audrey described CDC's support mechanisms in the Pacific: domestic funding for US-affiliated Pacific countries and a global program supporting public health entomology networks. They support the Asia-Pacific Malaria Elimination Network (APMEN) and the Pacific Vector Network (PVN), offering technical advice but not procuring commodities. Their focus is on preparedness, technical assistance, and facilitating responses.</p> <p>Amandeep explained the role of WHO in establishing technical guidance and providing direct support through country or sub-regional offices. WHO maintains a small stockpile of vector control supplies in Fiji, recently aiding Samoa, Tuvalu, Cook Islands, and Vanuatu. He advocated for the use of the PVN as a mechanism for communication and coordination across the region.</p> <p>Kelera stated that SPC supports disease diagnosis for PPHSN priority diseases, provides data collection supplies, and assists with risk communication. Requests should be submitted through Ministries, and SPC can facilitate links with other partners when they cannot support directly. A recent example of support includes data tablets and mosquito traps, assists with risk communication to Tonga. SPC is not well placed to support insecticide procurement.</p> |

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| | | <p>Tessa noted that PacMOSSI focuses on preparedness, training, and filling information gaps but is not equipped for outbreak response or insecticide procurement.</p> <p>The group discussion raised points on supporting new technologies like Wolbachia and Sterile Insect Technique (SIT). DFAT funds the World Mosquito Program in Kiribati, Indonesia, and Timor Leste, with Kiribati chosen for their interest in the technology. Further operational research is possible in the Pacific due to its unique island geography.</p> |
| <p>Session 3. Use of data for decision-making</p> | | |
| Session overview | Tanya Russell, JCU | Tanya explained the reasons why effective data collection and management are important, and the need to consider moving to electronic data collection and storage approaches. |
| Data management tools and approaches | Georgia Muliaga, Beyond Essential Systems (BES) | <p>Georgia provided an overview of the multitude of reasons why digital health projects will fail and/or succeed. There are four key reasons why we see digital health projects fail, and why they succeed. 1) Perfection is the enemy of good - users are being asked to use a multitude of systems rather than one or two that do the job. 2) The first hurdle for users is not addressed - a lack of support for users will ultimately result in them reverting to paper or old systems. 3) Inadequate resourcing - there is a lot that goes on behind the scenes and a good digital health implementation needs to make sure that enough resourcing is going into all the things that happens behind the scenes. 4) Not bring end users into the planning - if a project isn't bringing in the people it's designed to serve, it will fail. So the question posed is; what can Tupaia or PacMOSSI be doing to support countries to ensure they succeed?</p> |
| Data collection and use during PacMOSSI operational research studies | Adam Craig, University of Queensland (UQ) | <p>Adam outlined the knowledge generation activities supported by PacMOSSI, focusing on the results of a six-country operational research experiment comparing the performance of various mosquito trapping methods. Across the 6 PICs, BS-Sentinel outperformed GAT and sweep netting methods ($p < 0.001$). The performance of GAT and sweep netting was comparable. Results vary across countries. Sweep netting conducted at dawn and dusk trapped significantly more <i>Ae. aegypti</i> mosquitoes than if done 1 or 2 hours later or earlier; the opposite was found for the collection of <i>Ae. albopictus</i>. Interviews found that BG-Sentinel and sweep netting methods posed logistical barriers that limited the feasibility of their use for routine surveillance in most settings.</p> |

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| Operational research study report: comparison of <i>Aedes</i> collection methods for insecticide resistance testing in Palau | Osiro Lorin, MoH Palau | Osiro gave an overview of the PacMOSSI operational research project completed in Palau to compare different trapping methods to most efficiently collect samples for assessing the insecticide susceptibility status of <i>Aedes</i> mosquitoes. Ovitrap, GAT traps and larval surveys were used for mosquito sampling in Koror, Palau. The mosquito species collected were <i>Ae. aegypti</i> , <i>Ae. hensilli</i> and <i>Ae. scutellaris</i> . The eggs of the first two listed species collected in ovttraps were reared and specimens were used to test for insecticide resistance in CDC bottle assays. <i>Aedes aegypti</i> and <i>Ae. hensilli</i> were both susceptible to bifenthrin, deltamethrin and malathion. It was a challenge to collect and maintain sufficient sample numbers for insecticide resistance testing. The only trap that collected reasonable numbers were the ovttraps.  Watch video |
| Data collection & use for malaria control in the Solomon Islands | Edgar Pollard, Consultant, Solomon Islands | Edgar described the Chasing Malaria Program, led by the Rotary Club of Honiara in collaboration with Honiara City Council (HCC), Ministry of Health and Medical Services (MHMS), WHO, and Rotarians Against Malaria (RAM). The program has been mapping malaria and dengue cases from public and private health clinics in Honiara to better track and respond to the diseases. In November and December, 1,765 cases were mapped, with 54% being <i>Plasmodium vivax</i> , 43% <i>P. falciparum</i> , and 3% mixed infections, primarily indicating local transmission. Key hotspot communities were identified, and response teams conducted indoor residual spraying, collected blood slides, and screened individuals for symptoms. Social media and radio campaigns significantly increased public awareness, with extensive reach and impressions. Follow-up efforts found 33% of <i>P. vivax</i> cases completed treatment, while others were unreachable. Weekly malaria threat maps were distributed within the MHMS network and shared on RAM's Facebook page.  Watch video |
| Session 4. Enhancing mosquito surveillance and control | | |
| Session overview | Amanda Murphy, JCU | Amanda explained that enhancing mosquito surveillance and control is a core PacMOSSI aim, and that in its next phase, the project would increase support to countries to conduct baseline surveys to document the mosquitoes present in Pacific countries, and highlighted that understanding the vector species present, and their behaviours, is critical to inform effective vector control. |
| Mosquito surveillance and control country report: American Samoa | Villa Tafaumu, MoH American Samoa | Villa presented the mosquito surveillance / control efforts undertaken in American Samoa, including steps they have taken for prevention of a dengue outbreak at the time that Samoa had declared a dengue outbreak. Collaboration and networking with local and off-island partners have given Am. Samoa the confidence that an outbreak can be prevented when resources, knowledge and experience are shared. The presentation shared the training and preparedness activities that took place within the previous year which prepared American Samoa vector staff to respond when a dengue outbreak in the neighbouring island was expected.  Watch video |


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| <p>Surveillance and control approaches in the Cook Islands</p> | <p>Hervé Bossin, ILM, French Polynesia and Nelson Ngaiorae, MoH, Cook Islands</p> | <p>Hervé presented an update of the Pacific Islands consortium for the evaluation of <i>Aedes</i> SIT (PAC-SIT) program, with a focus on aspects of relevance for PacMOSSI. PAC-SIT is led by Institut Louis Malardé (ILM) in Tahiti and involves three Pacific Island countries and territories (Cook Islands, Easter Island and French Polynesia) and their communities in a program evaluating the safety, acceptability and efficacy of an integrated vector control strategy combining community mobilization (removal of mosquito breeding sources by residents around their homes) with the release of sterile male mosquitoes (SIT) to drastically reduce <i>Aedes aegypti</i> biting mosquitoes and thus protect island communities against mosquito-borne infectious diseases.</p> <p>Following mass-production scale up, sorting and sterilization protocols (ILM facility, Tahiti), pilot SIT male releases will be undertaken in French Polynesia (Tahiti) and the Cook Islands (Aitutaki), in a culturally-relevant approach. The SIT facility in Tahiti will serve as a training platform for regional partners. The PAC-SIT consortium leverages the expertise of local health and vector control coordinators, community leaders, international scientists, as well as stakeholders from the luxury hotel resort industry in a trans-sectorial approach designed to strengthen the sustainability of the SIT at larger intervention scales.</p> <p>Nelson Ngaiorae then provided an update on the recent work undertaken in collaboration with ILM and its outcomes.</p> |
| <p>Mosquito surveillance and control country report: Solomon Islands</p> | <p>Charles Butafa, MoH Solomon Islands</p> | <p>Charles outlined vector control in the Solomon Islands for the malaria vector <i>An. farauti</i> and dengue vectors <i>Ae. aegypti</i> and <i>Ae. albopictus</i>. Surveillance for <i>An. farauti</i> includes larval surveys and night-time Human Landing Collections (HLC). To sample <i>Aedes</i> mosquitoes, larval surveys and Gravid <i>Aedes</i> Traps (GATs) are used, as BG traps are impractical due to high electricity costs.</p> <p>Malaria control involves distributing Long-Lasting Insecticidal Nets (LLINs) and selective Indoor Residual Spraying (IRS). Dengue control includes fogging, ULV space-spraying during outbreaks, and public clean-ups. Challenges include increasing malaria transmission despite LLIN and IRS use, suggesting a need for larval/pupal stage interventions. Dengue control is hindered by delayed information from health facilities and limited insecticide access. Making dengue a notifiable disease could help reduce transmission.</p> <p> Watch video</p> |
| <p>VCNA & GEDSI workshop</p> | <p>Facilitated by the PacMOSSI team</p> | <p>A general discussion was held, including question and answer session and troubleshooting assistance for any countries not yet able to complete their VCNA and/or GEDSI surveys. Those who had completed were given the opportunity to review their responses, and make any clarifications needed.</p> |


Day 2 – Wednesday 5 June 2024

| Topic | Speaker | Summary |
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| Session 5. Key considerations in MBD control | | |
| Day 2 was opened with Daniel Jack from Commonwealth of the Northern Mariana Islands (CNMI) providing his reflections on sessions from Day 1. In particular, it was highlighted that the meeting is an excellent opportunity for countries to share how their programs work and what they are doing. The issue of treatment of tyres for control of <i>Aedes</i> was raised. In CNMI they work with the Bureau of Environmental Protection in the UK – as part of work on illegal dumping – and have established a recycling program to reuse old tyres as part of road construction materials. They also work with US CDC on tracking dengue vectors in wastewater. | | |
| Session overview | Tessa Knox, JCU | Tessa opened the first session for the day and reiterated that the session provided a chance to hear from partners working to support vector surveillance and control in PICs in addition to the work of PacMOSSI. |
| Mosquito surveillance and control projects in Papua New Guinea | Lincoln Timinao, PNG Institute for Medical Research (PNGIMR) | Lincoln's presentation outlined some of the vector control work being done in Papua New Guinea (PNG), focusing on the Newly Adapted Tools Network Against mosquito borne disease Transmission (NATNAT) project and its objectives, which included: enhancing laboratory, semi-field, and field capacities for testing new vector control tools (such as residual spraying, larviciding and the use of spatial emanators); and strengthening the National Malaria Control Program, through training, networking and advocacy for vector control investments. Additional activities described included establishing a lab colony of <i>Aedes</i> mosquitoes, and implementing local quality management systems.  Watch video |
| Practical considerations for enhanced vector surveillance and control | Greg Devine, QIMR Berghofer Medical Research Institute (QIMRB) | Greg provided a brief discussion of the surveillance activities that should be implemented by national vector control programs. Pragmatic approaches to morphological taxonomy and insecticide resistance testing were discussed. The objectives of vector control programs regarding their impacts on larvae (source reduction, larviciding) and adults (indoor and outdoor insecticide delivery), and their limitations and relative impacts on transmission were introduced. The fact that there are few evidence-based options for dengue vector control was acknowledged. Although <i>Wolbachia</i> -mediated control tools, irradiated mosquitoes, and GM mosquitoes (e.g., Oxitec) have some potential, there are few options for use during outbreak responses. |
| Climate change and MBDs | Kelera Oli, SPC | Kelera explained that continuing with 'business as usual' will worsen climate change impacts, increasing health risks, including mosquito-borne diseases. Natural hazards like floods, droughts, and tropical cyclones will become more frequent. Innovative, climate-resilient prevention and control methods are needed for health systems and mosquito surveillance programs. Effective adaptation requires urgent mitigation to keep global temperatures below critical thresholds. Mitigation strategies for mosquito-borne disease control |

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| | | include: health professionals advocating for urgent mitigation, rapid transition from fossil fuels, using environmentally friendly, low-carbon products. |
| Pacific Vector Network (PVN) update | Amandeep Singh, WHO Vanuatu | Amandeep presented an update on Pacific Vector Network (PVN) on behalf of its joint secretariat (WHO, PIHOA and SPC). He shared background on the inception of the network, its governance composition and structure and outlined the progress achieved since the 2023 annual meeting in Hawaii. In terms of immediate priorities, PVN plans to finalise its five-year strategic plan in Q3 2024 and invite three partner institutions from the region to join the network in official capacity for next three years. The second annual PVN meeting in 2024 will take place in Guam during July 15-18 where the priorities and direction of the network for next year cycle will be discussed among PICs. |
| WHO guidance and initiatives for <i>Aedes</i> vector surveillance and control in PICs | Amandeep Singh, WHO Vanuatu | Amandeep provided a situation overview of dengue globally and in the Pacific region in the first five months of 2024. He briefly summarized the type of support WHO has available for <i>Aedes</i> vector surveillance and control in the pacific region, outlining four key areas where WHO provides support and guidance: <ol style="list-style-type: none"> 1. <i>Technical Guidance and Advocacy – Global, Regional and PICs</i>: Illustrative tools, frameworks, technical guidelines and operational manuals; Strategic and Advocacy Initiatives; Normative, Evidence-informed Technical Guidance; and, Operational Manuals 2. <i>Commodity Support for Vector Surveillance and Control</i>: Available via the WHO DPS office in Fiji. Includes insecticides, larvicides and insecticide resistance test kits (provided to Fiji, Samoa, Tonga, Cook Islands and Vanuatu in 2024) 3. <i>Research on Innovative Vector Control Solutions</i>: An ongoing pilot study in French Polynesia where the impact of SIT will be measured for the first time on dengue transmission 4. <i>Capacity Building, Networking and Cross-Learning across the Pacific</i>: For example, the PVN and the annual Singapore International Dengue Workshop (SIDW) |
| US CDC capacity building and global networks for MBDs | Audrey Lenhart, US CDC | Audrey gave an overview of the origins of the VecNet program which was established in 2020 following some initial support to entomology networks provided as part of the global response to Zika virus outbreaks. The mission of VecNet is to support regional public health entomology networks so they can access the tools and resources needed to enable effective vector surveillance and control. These networks provide a platform for entomologists to exchange information and resources. There are currently 6 networks supported globally through VecNet, and those covering the Pacific include the Asia Pacific Malaria Elimination Network and the PVN. Examples of work these networks have supported includes: supporting invasive vector surveillance in Africa and building capacity for insecticide resistance use and management in Central America. |

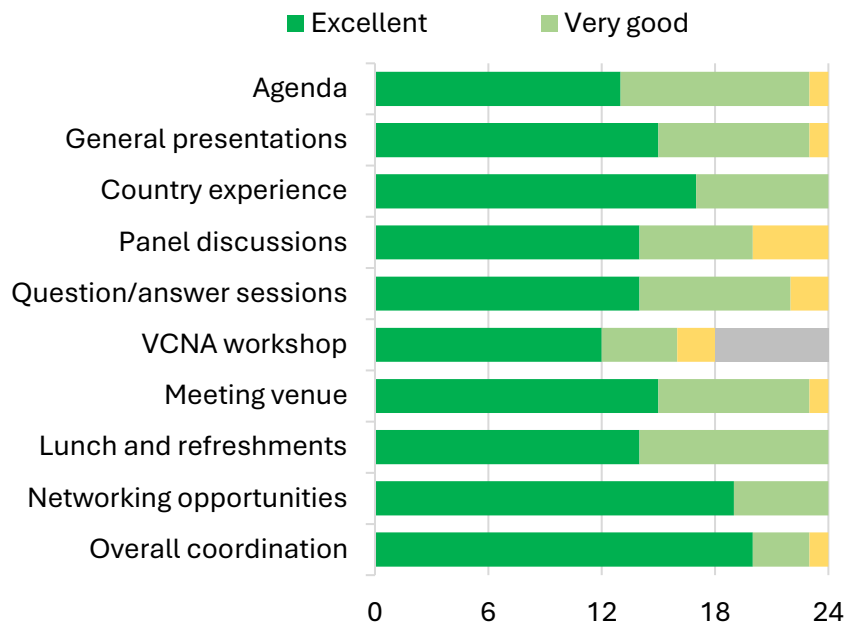
Session 6. Strengthening policy and practice

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| <p>Session overview</p> | <p>Amanda Murphy, JCU</p> | <p>Amanda introduced the topics to be covered in the session and noted the many learnings in these areas achieved in the first phase of PacMOSSI; however, the consortium aims to continue to build upon these, and to see where we can further develop more innovative approaches and ultimately impact for Pacific countries.</p> |
| <p>Strategic planning overview & PIC experiences: Tonga, Samoa</p> | <p>Maru Castellanos, JCU</p> | <p>Maru presented the rationale for developing a national strategic plan (SP) for mosquito vectors. A plan will usually indicate the why, how, where and by whom strategic objectives can be achieved and for how much. General guidelines on SPs against mosquito-borne diseases were presented, highlighting that plans should be country owned, aligned to existing National Health plans and related documents, evidence-based and tailored to the country setting and context. These should ideally include costs to facilitate resource mobilisation, and should include a monitoring and evaluation framework plus reflect other cross-cutting themes. An update was provided on the work of PacMOSSI to assist PICs with strategic planning, with all countries invited to reach out in the next 6 months if they require further support in this area.</p> |
| | <p>Lesieli Mahe, MoH Tonga and Fata Paulo Pemita Seuseu, MoH Samoa</p> | <p>Lesieli presented on the development of a strategic plan for mosquito surveillance and control in Tonga. The overall vision for the plan is for a Tonga free of mosquito-borne diseases, contributing to the good health and well-being of the population. The objectives include border control, routine mosquito surveillance and control, effective outbreak response, inclusion of mosquito surveillance in case investigations and optimisation of program management. Next steps are to use the plan as a working document across multiple ministries and the community.</p> <p>Fata explained that developing the plan was not an easy job, but it is important for all PICs to have a plan. Samoa achieved the endorsement and launch of our plan through team work – and we worked closely and regularly with the PacMOSSI team. The stable government and MoH frameworks in our country also helped us to streamline the development approvals e.g. we have an Integrated Vector Control Committee (IVCC) that enabled discussions and decision making about the strategies to be included.</p> <p> Watch video</p> |
| <p>PacMOSSI training overview & PIC experiences: Fiji, Cook Islands</p> | <p>Facilitator: Tanya Russell, JCU</p> | <p>Tanya presented an overview of the current online PacMOSSI modules and PacMOSSI led face-to-face training. Other key PacMOSSI resources were also overviewed, including the guide and morphological key for common mosquito vector species in the Pacific and SOPs. The PacMOSSI face-to-face workshops held in Phase 1 were also presented in brief.</p> |
| | <p>Tessa Knox, JCU, Nelson Ngaiorae, MoH Cook Islands</p> | <p>Tessa then presented one example of these workshops: the training-of-trainers (TOT) held in Cairns in October 2023, attended by 18 participants and supported by 15 facilitators. Materials generated to support this TOT and subsequent trainings included a field guide, facilitator’s guide and compiled presentations booklet. These</p> |

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| | and Rama Vineshwaran, MoH Fiji | <p>materials are available online and requests for editable files can be sent to Tessa. Self-reported competence increased between the beginning and end of the TOT, and participants rated the workshop as excellent.</p> <p>Nelson outlined the need to strengthen the skills and capabilities of Health Protection Officers (HPOs) in the Cook Islands. Plans include adding residual spray operator and mosquito collection/identification training to annual in-service training and orientation for new recruits, using PacMOSSI resources and online content. Expected outcomes are improved skills for 25 HPO staff, a strengthened multisectoral approach, and enhanced supporting programs. Challenges include funding, transportation, and human resources.</p> <p>Rama shared Fiji's experience, noting that new EHOs often lack knowledge of mosquito vector surveillance tools, chemicals, and equipment. A robust mosquito surveillance system is needed. Decentralised residual spray training has been conducted at the Divisional Level, including Municipal Council EHOs and new staff, using standardized PacMOSSI materials. Expected outcomes are enhanced mosquito surveillance and control capacity and standardized chemical usage. Challenges include limited transportation options, staff retention, and shifting priorities.</p> <p> Watch video</p> |
| Engaging communities in MBD control | Adam Craig, UQ | Adam introduced the topic and the reasons why engaging communities in MBD control is essential. He then invited each of three panel members to comment on their experience, and the different approaches used to engage communities. |
| Panel discussion: challenges and successes in working with Pacific communities: Kiribati, Samoa, Niue, Guam | <ul style="list-style-type: none"> • Nika Karoua, MoH Kiribati • Andy Manu, MoH Niue • Niel Tirador, MoH Guam <p>Facilitator: Adam Craig, UQ</p> | <p>Nika described how the outer remote islands in Kiribati are reached using radio and two-way dialogue. Have a ‘talanoa’ approach to sit together and discuss issues.</p> <p>Niel outlined different levels of community engagement that Guam Department of Health uses – from the sub-regional Pacific Islands Vector Management Committee (PIVMC) network, plus a mosquito advisory group that engages with the community both at the agency level and via the community. Talanoa not practiced in Guam but they always ensure the community is given the contact information of the MOH office.</p> <p>Andy explained a similar approach to the talanoa used in Niue where stakeholders sit as a group to discuss and find solutions.</p> <p>Finally, Adam asked the panelists if they have any suggestions for ways PacMOSSI can enhance community engagement. Feedback included:</p> <ul style="list-style-type: none"> • Continuing support for PICs to do citizen science or operational research |

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| | | <ul style="list-style-type: none"> • Continuing advocacy and capacity building for human resource support and training • Ongoing provision of vector control equipment – these are much appreciated |
| Session 7. Reflections and next steps | | |
| Reflections and future directions for PacMOSSI: group discussion | Tom Burkot, JCU | Tom led a general group discussion, which centred on four questions. The first concerned the human resources for vector surveillance and control, specifically the challenges of recruitment, retention and career structure for vector officers and the finances to support these positions. The second question was the role of legislation to enforce mosquito control: its inclusion in national plans and the evidence for its impact. The third question concerned interventions used in PICs for which the evidence base is weak and gauging the interest in undertaking operation research to acquire data to document its value. The final question concerned environmental health, specifically the challenges of how to responsibly dispose of containers and expired insecticides. |
| Closing | Tanya Russell, JCU | Tanya thanked all the contributors to the meeting, and noted the great quality of presentations and interactions over the past 2 days. She reflected on the achievements of PacMOSSI to date, particularly highlighting the strength of the network connecting the vector control officers across the region. She then took the opportunity to give thanks and acknowledgement to Prof. Tom Burkot, who will soon retire. Tanya highlighted his many contributions to vector surveillance and control in the Pacific, and to the first four years of PacMOSSI. A farewell video was played for Tom after which Tom gave some final words of gratitude and wisdom. |
| End of meeting | | |

Participant feedback



An anonymous survey was issued to participants in the final session on Day 2. Responses were received from participants from ministries/departments of health (15), core PacMOSSI partners (2) or other partners (7).

All respondents (24) indicated that the meeting was very useful to support their work, and most (22) indicated that the objectives of the meeting were fully achieved.

Ratings for individual aspects of the meeting ranged from excellent through to good, with no respondents rating any aspects of the meeting as fair or poor. The VCNA workshop was attended by a limited number of participants only.

Responses from MOH representatives were particularly positive, with 75% of responses across all meeting aspects indicating 'excellent'.

Additional written feedback in response to questions on the most enjoyable sessions, areas for improvement or topics to be included in future meetings included:

- Panel discussions and question-and-answer sessions were appreciated by participants and the topics covered were highly informative. In future, more time could be allocated to these modes rather than formal presentations.
- The sharing of country experiences was very useful, especially the sessions on outbreak response, practical considerations for enhancing vector surveillance and control, and use of data for decision-making.
- More interactive sessions or workshops could be integrated and the time of the meeting extended, to ensure optimal engagement and participation of all.
- Time management could be improved, as well as administrative aspects such as timely disbursement of per diems and varied food options.

- Suggested topics to consider for presentation at later meetings included: comparison of different interventions (evidence-base, pros and cons, country experiences in their use); more content on surveillance and control of *Anopheles*; management of vectors in waste water; insecticide management, disposal and impact on environment (and linkage with SPREP); status update for mosquito vectors in the Pacific; training opportunities in conjunction with Pacific teaching institutes; and, country progress and achievements (including evaluation of the impact of PacMOSSI support).

All respondents are thanked for their feedback, which will be considered when designing future PacMOSSI activities and meetings.

Acknowledgements

PacMOSSI is a consortium supporting Pacific Island Countries and areas to combat mosquito-borne diseases through strengthened mosquito surveillance and control. It is coordinated by James Cook University in collaboration with The Pacific Community and other international partners. PacMOSSI is supported by the Australian Government through Partnerships for a Healthy Region, the French Government, the New Zealand Government and the European Union. PacMOSSI is supported by a Steering Committee comprised of representatives from DFAT, US CDC, ILM, and Solomon Islands National University (SINU). The Steering Committee met after the close of the meeting and reviewed progress to date. The feedback from the Steering Committee was positive and supporting of the upcoming activity plans.

For more information, see: www.pacmossi.org

Annex 1. PacMOSSI 2024 annual meeting agenda

| DATE | TIME | SESSION |
|-------------------------------------|------------------|--|
| Day 1 Tuesday 4 June | 9:00am – 1:00pm | Welcome and meeting opening PacMOSSI program design: <ul style="list-style-type: none"> ○ Overview of PacMOSSI consortium & key areas of work Situation update: dengue outbreaks in PICs Use of data for decision making |
| | 2:00pm – 5:00pm | Enhancing mosquito surveillance and control: <ul style="list-style-type: none"> ○ PIC experiences ○ Vector control needs assessment workshop |
| Day 2 Wednesday 5 June | 9:00am – 12:40pm | Key considerations in MBD control: <ul style="list-style-type: none"> ○ Climate change and MBDs in the Pacific ○ WHO guidance and support for MBDs ○ US CDC capacity building and global networks ○ Pacific Vector Network update Strengthening policy and practice <ul style="list-style-type: none"> ○ Strategic planning for MBD control ○ Vector control workforce development and training ○ Engaging communities in MBD control |
| | 1:40pm – 3:00pm | Reflections and future directions for PacMOSSI <ul style="list-style-type: none"> ○ Group discussion and next steps ○ Closing comments |
| | 3:00pm | Meeting close |
| | 4:00pm – 5:00pm | Closed session: PacMOSSI Strategic Advisory Group (SAG) meeting |
| | 6:30pm | Evening event: PacMOSSI dinner, Tanoa Hotel |

Annex 2. List of participants

| NAME | INSTITUTION | COUNTRY | EMAIL ADDRESS |
|--|---|--|------------------------------------|
| PIC Ministries or Departments of Health | | | |
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