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## INDO-PACIFIC CENTRE FOR HEALTH SECURITY CONSULTATIVE DESIGN WORKSHOPS

### Summary

The Indo-Pacific Centre for Health Security (CHS), which is part of the Department of Foreign Affairs and Trade (DFAT), convened a series of domestic consultative workshops between October and December 2018.

There were 34 invited organisations represented at these workshops, including experts from universities, government, non-government organisations (NGOs) and the private sector. There were between three and 20 non-DFAT representatives at each.

The aim of these workshops was to inform the design of future health security assistance programs and to strengthen networks between key Australian experts in health security.

### Workshops overview

DFAT convened six consultative design workshops between October and December 2018. Workshops were convened in Sydney, Melbourne, Canberra and Cairns.

Between three and 20 people attended each workshop in addition to DFAT staff. Most workshops had some participants who participated or presented remotely using Zoom, including participants who were located overseas. There were 33 organisations represented at these workshops in addition to DFAT, comprising 10 government agencies, two NGOs, five private sector organisations and at least 16 university institutes or research units ([Annex](#)).

### Workshop aims

The aim of these workshops was to inform the design of future health security assistance programs and to strengthen networks between key Australian experts in health security.

CHS has far-reaching connections and relationships with researchers in health security domestically and internationally. Encouraging the strengthening of relationships and partnerships between these experts can lead to fruitful collaborations independent of any funding arrangements. Groups brought together during the workshops included recipients of CHS's 2017 Stronger Systems for Health Security grant round, CSIRO, the Centre for Research Excellence on Policy Relevant Infectious disease simulation and mathematical modelling (PRISM<sup>2</sup>), members of the Public Health Laboratory Network Australia (PHLN) and the National Centre for Immunisation Research and Surveillance (NCIRS) ([Annex](#)).

CHS is currently designing investments in a range of thematic areas including workforce development, laboratory strengthening, infection prevention and control, surveillance and information systems, immunisation and vector control. The workshops were valuable in exploring whether there were feasible activities in any of these areas that could be developed through an open call for proposals or other means.



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*Table: Consultative workshops by date, title location and number of attendees*

Date	Workshop title	Workshop location	Number of non-DFAT attendees
10 October 2018	Prioritising infectious disease <b>modelling</b> projects for the Indo-Pacific region	Doherty Institute, Melbourne	17 (4 remotely through Zoom)
22 October 2018	Strengthening <b>laboratory capacity</b> in the Indo-Pacific region through twinning projects	Department of Health, Canberra	18 (2 remotely)
24 October 2018	Strategic involvement in <b>immunisation</b> activities in the Indo-Pacific	National Centre for Immunisation Research and Surveillance, Sydney	12 (1 remotely)
23 November 2018	<b>Vector control</b> and surveillance in the Indo-Pacific	James Cook University, Cairns	17 (1 remotely)
27 November 2018	Opportunities for strengthening <b>public health surveillance</b> in the Indo-Pacific	Burnet Institute, Melbourne	20 (4 remotely)
17 December 2018	<b>Infection Prevention and Control</b> and antimicrobial resistance workshop	Centre for Health Security, Canberra	3

## Key workshop discussions

### *Modelling*

Modelling for emerging infectious diseases and vector-borne diseases, in order to provide information to decision makers, is a high priority for the Centre. Key questions that modelling could address for a vector-borne disease include determining benefits of focused spatially-targeted interventions e.g. drug administration and vector control. There is also potential to explore impacts of a new ‘game changing’ strategy where optimal delivery is uncertain e.g. Tafenoquine, MDA .

Modelling may be a useful decision-making support tool for Emergency Operations Centres. The best way to enable developing countries to access modelling expertise (whether by training people in-country or continuing to provide external support) was discussed.

Refer to [Attachment A](#) for further information.

### *Laboratory capacity*

Australian reference laboratories are already involved in a large number of laboratory twinning and other strengthening projects in the region. There may be an opportunity to better co-ordinate these and take a more strategic approach.



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While national level laboratories may be of a good standard, those serving local clinics are often inadequate and with very limited capabilities. Procurement challenges, a lack of leadership and staffing challenges are common. Establishing a culture of continuous quality improvement is essential.

Refer to [Attachment B](#) for further information.

#### *Immunisation*

While immunisation coverage rates in WPRO overall are reported as being high, this is influenced by the high immunisation rates in China. Immunisation rates in Papua New Guinea are on the whole very low. This is the biggest gap and should be the highest priority.

Australia can have a role in strengthening immunisation programs and providing high quality advice for in-country personnel to establish or strengthen immunisation programs, including logistics and surveillance. An enabling mechanism for advice provision is needed, and existing and possible models were considered.

Refer to [Attachment C](#) for further information.

#### *Surveillance*

The need to support fragile surveillance systems in the Pacific Islands and not inadvertently overwhelm them with complex enhancements is acknowledged. Current syndromic surveillance systems in the Pacific can only detect large outbreaks.

Regional organisations to support and co-ordinate surveillance are valuable, but country-level ownership is vital. It is recognised that a lot of what will work to strengthen surveillance is very simple, and it is important not to introduce new and different systems in different places.

Refer to [Attachment D](#) for further information.

#### *Vector surveillance and control*

Succession planning in the medical entomology workforce in the region is lacking, with no-one to follow the older cohort who dominate the current workforce. Integrating entomologists better with other parts of the public health workforce would be beneficial. Encouraging leaders to think about entomology and see the benefits would be helpful.

A clearer mechanism and evidence threshold for products to enter into regulatory pathways would be helpful.

Refer to [Attachment E](#) for further information.

#### *Infection prevention and control*

Chronic disease, offshore medical referrals and anti-microbial resistance are inextricably linked in the Pacific, and Pacific island countries are well aware of the risks. Barrier to IPC are in the type and design of hospitals (which may be uncleanable or without the possibility of setting up isolation wards). Procurement pathways need improvement to ensure adequate PPE and pharmaceutical supplies and prevent re-use of single use equipment. Strong infection control committees and better leadership are key to improving IPC.



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A range of possible project areas were considered for further investigation, including distance learning and mentoring, reinvigorating the Secretariat of the Pacific Committee's PICNET and a course run by an Australian university or universities with a regional partner.

Refer to [Attachment F](#) for further information.

## Outcomes

- An open call for proposals and some targeted pieces are planned for early next year, but the structure and timing are to be determined.
- The Centre will be commissioning a report on the state of health security in the region in 2019.
- Workshop participants were encouraged to continue to collaborate and seek opportunities to work together. This might include maximising grant opportunities through other organisations such as the UK's Fleming Fund or Bill and Melinda Gates Foundation.

## ANNEX: REPRESENTATION AT WORKSHOPS BY SECTOR AND WORKSHOPS

Sector	Name of organisation	Modelling	Lab strengthening	Immunisation	Vector control and surveillance	Surveillance	Infection prevention and control
Government	Department of Health		✓	✓	✓	✓	
Government	NT Centre for Disease Control					✓	
Government	CSIRO	✓	✓		✓		
Government	Hunter New England Area Health Service			✓		✓	
Government	Australian Defence Force MIDI				✓		
Government	Pacific Paramedical Training Centre NZ		✓				
Government	NSW Health Pathology		✓				
Government	Institute of Environmental Science and Research Limited						
Government	South Australia Pathology		✓				
Government	The Institute of Environmental Science and Research		✓				
NGO	Australian Red Cross					✓	
NGO	WHO WPRO		✓				
Private	Beyond essential systems (Tupaia)	✓	✓			✓	
Private	Yes We Can Digital					✓	
Private	Atlas of Environmental Health				✓	✓	
Private	Seqirus	✓					
Private	World Mosquito Program				✓		
University	Menzies Institute	✓			✓	✓	
University	University of Sydney/NCRIS/Westmead			✓		✓	
University	Griffith University					✓	✓
University	Australian National University	✓		✓		✓	
University	University of New South Wales	✓				✓	
University	University of Melbourne/Burnet Institute	✓			✓	✓	
University	University of Melbourne/Doherty Institute	✓	✓				
University	University of Melbourne/Murdoch Children's Research Institute			✓			
University	Walter and Eliza Hall Institute	✓			✓		
University	University of Adelaide	✓					
University	James Cook University	✓			✓		
University	University of Queensland				✓		
University	Queensland Institute of Medical Research				✓		
University	University of Western Australia		✓				
University	Monash			✓			
University	University of the Sunshine Coast						✓



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## ATTACHMENT A - MODELLING WORKSHOP - OUTCOMES

### Workshop title

Prioritising infectious disease modelling projects for the Indo-Pacific region.

### Workshop date and venue

10 October 2018. The venue was kindly provided by the Doherty Institute, Melbourne

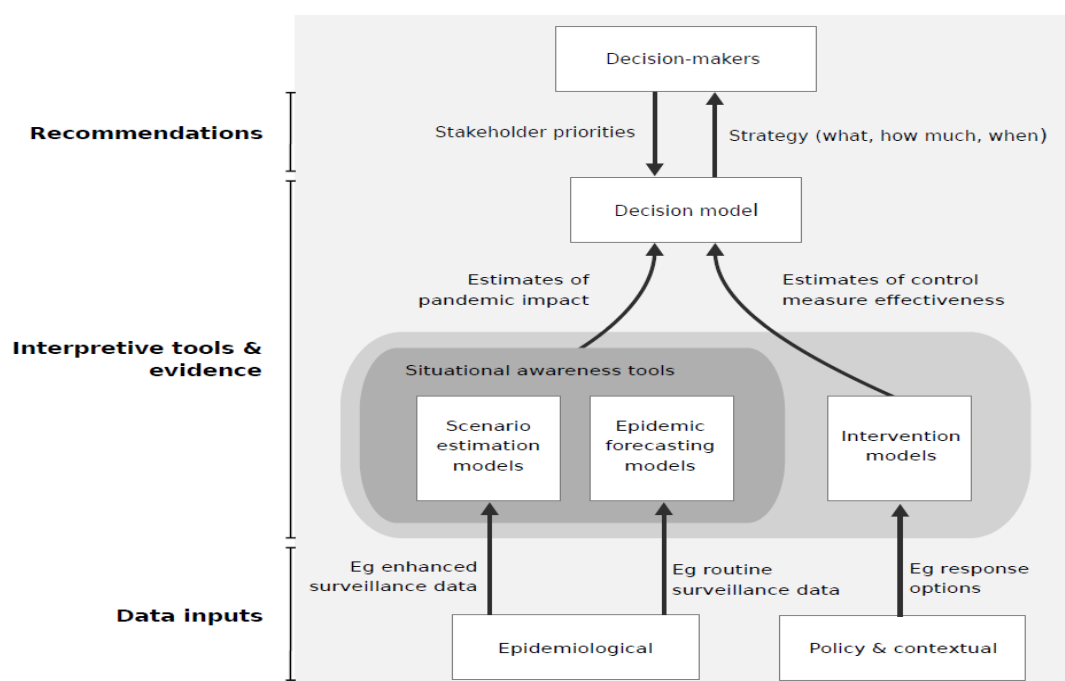
### Workshop aims

1. Discuss and prioritise possible new infectious disease modelling projects for the Indo-Pacific region, particularly related to risk assessment, interventions and decision making for an emerging or endemic infectious disease. Vectorborne diseases were a particular focus.
2. Discuss the mechanism by which CHS could be involved in a future iteration of the PRISM CRE.

### Key discussions

*What is the process of developing a mathematical model?*

- The modelling process is a cycle, from comparing and adjusting hypotheses, to model refinement, peer review and approval, model execution. The model can then lead to comparison and adjustment of hypotheses, which starts the cycle again.
- Mathematical models exist on a spectrum of complexity. Simple models include the basic ingredients for example for describing malaria transmission. Sophisticated models allow for a more realistic description of malaria transmission, but require more assumptions to be made.





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Figure: Decision support tool framework (from a presentation by Freya Shearer, Post-doctoral Fellow, University of Melbourne).

### *How can mathematical models be applied to improve health security?*

- Models are useful for:
  - Decision support and situational awareness (e.g. estimating true outbreak size). Slower moving situations might be more of interest than fast moving ones.
  - Identifying optimal strategies for allocation of limited resources, such as novel treatment drugs targeted at malaria elimination e.g. Tafenoquine.
  - Determining benefit of focused spatially-targeted interventions e.g. drug administration and vector control.
- Some key questions that modelling can help answer about a vectorborne disease include:
  - Is there ongoing transmission?
  - Where would hotspots be predicted to occur?
  - What level of prevalence indicates further mass drug administration or other treatment is required?
  - How should surveys be designed to best measure prevalence?
  - How influential is immigration from another particular area, or generally?
  - Requirement to begin/continue investment in a known intervention strategy
  - Potential for a new 'game changing' strategy where optimal delivery is uncertain e.g. Tafenoquine, MDA
- Key questions that could be answered about a respiratory disease include:
  - Understanding how effective a vaccine is
  - Helping to determine where the hotspots for tuberculosis might be predicted to be based climatic and spatial factors.

### *How can the benefits of Australian modelling research be extended to strengthen health security in the Indo-Pacific region?*

- Modelling may possibly be something that experts in Australia should do as a service in the region or people in-country could be trained. There may be an argument for some level of capability within the countries.
- Models should be able to be widely used or adapted, ideally an off-the shelf tool for people to use, and open-source coding.
- Priorities for infectious diseases modelling could include a gap in the evidence. There would need to be a recognised burden of disease, and an anticipation that risk may be changing.
- In order to determine whether a model is what's needed:
  - Is there available information that would enable model development?
  - If not – get some data first OR consider 'data free' modelling to make the case (value of information)
  - Model type/method - Gradation of approaches to context in preparedness and response, particularly when information is poor
  - Is there one that has been prepared earlier (or can a cut and paste a combination of tools and methods be used)?





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- Areas in which mechanistic understanding of the disease is currently lacking will limit the usefulness of models for decision making
- Risk assessment for emerging diseases, need for improved One Health approaches
- Vastly different drivers of AMR across human and animal populations in the region – more research needed to inform determinants, interventions
- Models may be highly desirable, but will they be useful in the short term?

## Outcomes and next steps

The Centre would like to sponsor a report on the state of health security in the region, and the report should include some modelling of possible scenarios.

The Centre wants to assist modellers to link in to countries to transfer research outcomes.

The Centre is exploring opportunities to strengthen Emergency Operations Centres (EOCs) in the Mekong, Vietnam and Cambodia – assisting them to use modelling for decision support seems an obvious next step.

There are two options for future work, either a call for proposals, or working with the modelling community to develop a piece of work. Given the small size of the community, it probably makes sense to develop a proposal co-operatively.







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## Participants

In-person attendees	Remote participants
Michelle Baker (CSIRO/CHS)	Ivo Mueller (Walter & Eliza Hall Institute)
Allen Bollands (Sequirus)	Sam Lovick (consultant to Sequirus)
Trish Campbell (University of Melbourne)	Moreno Di Marco (CSIRO)
Robert Cope (University of Adelaide)	
Robin Davies (Centre for Health Security)	
Katie Glass (ANU)	
Raja Jurdak (CSIRO)	
Kat Knope (Centre for Health Security)	
Emma McBryde (James Cook Uni)	
Jodie McVernon (Uni Melbourne)	
James McCaw (Uni Melbourne)	
George Milne (UWA)	
Rob Moss (University of Melbourne)	
Dean Pains (CSIRO)	
Freya Shearer (University of Melbourne)	
James Wood (UNSW)	



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## Meeting Agenda

9.00am - 4.30pm, 10 October 2018

Burnet Room, Level 10 Doherty Centre

792 Elizabeth Street, Melbourne

Remote participation: see Zoom details below

Agenda item	Time	Title	Presenters
	9.00	Participant registration	
1	9.30	Welcome and introductions	Robin Davies, Head, Indo-Pacific Centre for Health Security
2	9.35	Australia's Aid Program and the Health Security Initiative	Robin Davies
3	9.45	Researcher presentations on emerging and vectorborne disease modelling projects and proposals (each 15 mins +5 mins questions)	
	9:45	<i>Early epidemic situational analysis and epidemic forecasting</i>	Rob Moss (Uni Melb)
	10:05	<i>Global risk mapping of emerging infectious diseases importation</i>	Professor Emma McBryde (JCU)
	10:25	<i>Applied modelling approaches to disease challenges</i>	Associate Professor Katie Glass (ANU)
	10.45	Morning Tea Break (15 mins)	
4	11.00	Researcher presentations on emerging and vectorborne disease modelling projects and proposals cont.	
	11:00	<i>Updates from UNSW</i>	Dr James Wood (UNSW)
	11:20	<i>Malaria modelling initiative</i>	Professor George Milne (UWA)



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	11:40	<i>Modelling of the impact of expanding levels of malaria control interventions on Plasmodium vivax</i>	Dr Ivo Mueller (WEHI - via Zoom)
	12:00	<i>Predicting Dengue Importations and National Spreading Dynamics</i>	Dr Raja Jurdak (CSIRO)
5	12.15	Group discussion How could existing infectious disease models be adapted to help decision makers in our region? Are radically different approaches to vectorborne and respiratory diseases needed? How can existing models be adapted? Which are highest priority?	Kat Knope, Indo-Pacific Centre for Health Security
	1.00	Lunch (45 mins)	
6	1.45	Report back from groups and discussion	All
7	2:15	Researcher presentations on respiratory disease modelling projects and proposals (each 15 mins +5 mins questions)	
	2:15	<i>Seqirus' pandemic modelling work (15 mins+5 mins questions)</i>	Sam Lovick (Seqirus) via Skype
	2:35	<i>TB in the Western Province of Papua New Guinea, modelling different control strategies</i>	Professor Emma McBryde (JCU)
	2:55	<i>Development of a decision support system for pandemic influenza in the Australian context</i>	Freya Shearer (Uni Melbourne)
	3.15	Afternoon Tea (5 mins) – bring something back to the table	
8	3.30	The future of PRISM (15 mins)	Professor Jodie McVernon
9	3.45	Outcomes and next steps	Robin Davies



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		<i>– Noting that some people may need to leave, the meeting closing time has been extended from 4:00 to 4:30 to allow for further discussion of outcomes and the group work</i>	
10	4.30	Meeting close	



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## ATTACHMENT B - LABORATORY WORKSHOP - OUTCOMES

### Workshop title

Opportunities for laboratory strengthening activities in the Indo-Pacific

### Workshop date and venue

22 October 2018.

The venue was kindly provided by the Office of Health Protection, Department of Health.

### Workshop aims

- Identify current public health laboratory strengthening and twinning activities in the Region.
- Create greater linkages between current laboratory projects and partners in the Indo-Pacific.
- Discuss laboratory strengthening activities to increase diagnostic capacity that could potentially be supported by the Centre.

### Key discussions

#### *Current situation, challenges and opportunities for laboratories in the region*

- There are often good national laboratories and very advanced laboratories in capital cities in developing countries in the Indo-Pacific, but labs at the regional level laboratories servicing local clinics are poorly supported and are struggling.
- There is a need to support an ethos of continuous quality improvement.
- Coordination amongst donors is important to avoid duplication and to better identify and fill gaps. Donors must engage with government and ensure programs are aligned with country government priorities.
- There is only one PC2 laboratory in Papua New Guinea (PNG) - situated in Port Moresby – and it is very underutilised. The Head of the Institute of Medical Research (IMR) is keen for it to be better utilised.
- There is a lack of mid- and later-stage career scientists at IMR to further mentor and support doctoral students. There is an opportunity to embed Australian scientists within IMR to be mentors and supervisors to PNG students.
- There is an opportunity to create 'Champions of Change'.
- Pacific laboratories trail Australian and New Zealand laboratories in terms of access to technology, including lack of laboratory information systems by more than a decade.
- Provision of equipment, together with training, helps to reduce send-away costs for samples, noting that without proper support, new equipment may not be used.
- There is a need to develop staff retention mechanisms to encourage country staff trained under twinning and other programs continue to work in country, rather than seek positions elsewhere.
- There is a need to strengthen leadership capability, and lack of management skills is a serious issue across laboratories. Leadership training is needed.



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- Procurement can be a challenge and it is not always within the control of the laboratory. Procurement responsibility might be embedded in the Department of Finance, for example, who have no understanding of the critical needs for laboratories and other health facilities.
- A fast track procurement system for essential supplies would be useful.
- Some Australian institutions are already engaged in twinning arrangements but there is an opportunity to better co-ordinate these and to have an overall strategy.
- Senior points of contact are critical in a twinning arrangement to ensure that it is an effective, sustained relationship. There needs to be a clear aim and explicit objective to the twinning, with bi-directional benefit and long-term sustainability.
- Specific objectives of twinning/mentoring could include development of standard operating procedures (SOPs), Internal Quality Control (IQC), and participation in External Quality Assurance (EQA) programs.
- The interface with clinicians is important to ensure the correct interpretation of results.
- There is a need for emphasis on capacity building using programs designed to assist local staff to build up and improve the standard of laboratory services.

## Outcomes and next steps

- The Centre for Health Security may be able to assist organisations and institutions in taking a more strategic approach in supporting laboratory twinning and other capacity building initiatives.
- An open call for laboratory strengthening proposals is planned for 2019. Noting that while competition can inspire new ideas, the Centre wants to avoid creating unhelpful competition amongst laboratories for participation in such initiatives. The establishment of consortia for proposals under the open call is encouraged.
- There are varying ways of achieving change, whether it be twinning, in-country training, mentoring, volunteers, fly-in fly-out etc. It may be useful to question under what context these modes are optimal, or if there are alternative approaches that may be worth trying.
- The Centre is considering how best to support WHO, OIE and FAO. Governance is obviously a key area of interest, but the Centre is looking at different areas too.
- The Centre is keen to support efforts to leverage other funding, whether it be from new funders such as the Fleming Fund, and to connect existing funding initiatives such as the Gates Foundation and the CDC.





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## Participants

In person participants	Remote participation
Dr Michelle Baker (CSIRO/DFAT CHS)	Dr Ivan Bastian (SA Pathology)
Ms Amy Black (OHP Health)	Ms Angela Brounts (ESR NZ)
Dr Mike Catton (Doherty Institute/VIDRL)	
Mr Russell Cole (Pacific Paramedical Training Centre)	
Mr Robin Davies (DFAT CHS)	
Adjunct Assoc Prof Heidi Drummer (Burnet Institute)	
Mr Damian Facciolo (DFAT CHS)	
Dr Joshua Francis (Menzie)	
Dr Nick Harris (DFAT CHS)	
Dr Paul Horwood (JCU)	
Prof Ben Howden (Doherty Institute)	
Assoc Prof Allison Imrie (UWA)	
Assoc Prof Tim Inglis (UWA)	
Ms Kat Knope (DFAT CHS)	
Dr Gary Lum (Health OHP)	
Prof John Mackenzie (Pathwest)	
Mr Edwin Monk-Fromont (Tupaia)	
Dr Karen Nahapetyan (WHO WPRO)	
Dr Matthew O'Sullivan (NSW Health Pathology)	
Dr Leanne Robinson (Burnet Institute)	
Dr Katrina Roper (DFAT CHS)	
Prof David W Smith (UWA)	



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## Meeting Agenda

9.30am - 4.00pm, Monday 22 October 2018  
Conference Rooms 3 & 4, Level 1, Scarborough House  
1 Atlantic Street, Woden, Canberra

Agenda item	Time	Title	Presenters
	9.30	<b>Participant registration</b> – please meet at the Security Desk of Scarborough House to be signed in and escorted to the meeting room (see information on last page for directions)  Tea and coffee available upon arrival	
1	10:00	Welcome and introductions (10 mins)	Robin Davies, Head, Indo-Pacific Centre for Health Security
2	10.10	Australia's Aid Program and the Health Security Initiative (10 mins)	Robin Davies
3	10:20	<b>Presentations from an international perspective</b>	
	10:20	<i>Strengthening public health laboratory systems in the Western Pacific: WHO perspective</i> (15 mins + 5 mins)	Karen Nahapetyan, WPRO
	10:40	<i>Raising the Bar in Pacific Island Medical Laboratories</i> (15 mins + 5 mins)	Russell Cole, PPTC
	11:00	Morning tea break (20 mins)	
4	11:00	<b>Presentations on current Australian laboratory activities</b> <b>(5 min presentations with discussion)</b>  <i>Doherty Institute activities in regional engagement and capacity building</i>  <i>Laboratory twinning projects of Westmead</i>  <i>Why Pathwest decided to engage in twinning arrangements and what the benefits were for Pathwest and for the twin</i>  <i>Experiences and lessons learned in delivering twinning</i>	Ben Howden & Mike Catton  Matthew O'Sullivan  David Smith  Tim Inglis



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		<p><i>What the Pacific laboratories want from twinning arrangements</i></p> <p><i>Building laboratory capacity in Timor Leste – the STRONG TL project</i></p> <p><i>Partnering with PNGIMR on strengthening laboratory capacity in PNG</i></p>	<p>Allison Imrie</p> <p>Josh Francis</p> <p>Paul Horwood &amp; Leanne Robinson</p>
5	12:15	<p><b>Group discussion (45 minutes)</b></p> <ul style="list-style-type: none"> <li>What are the challenges facing laboratories in low resource settings?</li> <li>Twinning mechanisms – what are the pros and cons, and what are possible alternative mechanisms?</li> <li>How can animal and human health laboratories better work together in One Health mode?</li> <li>Training needs: what are the highest priorities for intensive training of professionals from Asia-Pacific?</li> <li></li> </ul>	All
	1:00	Lunch break (45 mins)	
6	1:45	<b>Debrief from discussion</b> (45 minutes)	All
7	2:30	<p><b>Presentation</b> (15 mins + 5 mins)</p> <p><i>Enabling decision making through Tupaia, a regional health data platform</i></p>	Edwin Monk-Fromont, Beyond Essentials
	2:50	Afternoon tea break (10 mins)	
	3:00	<p><b>Final discussions (45 mins)</b></p> <ul style="list-style-type: none"> <li>What can Australian/NZ laboratories do/provide to support laboratories in the region in an effective and sustainable fashion when not in intervention mode?</li> <li>Which laboratories could be reference laboratories for their country? What further support is needed to ensure this?</li> <li>Mobile laboratories – what is the capacity for outbreak support?</li> </ul>	All
9	3:45	Outcomes and next steps (15 minutes)	Robin Davies/Katrina Roper
10	16.00	Meeting close	



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## ATTACHMENT C - IMMUNISATION WORKSHOP - OUTCOMES

### Workshop title

Strategic involvement in immunisation activities in the Indo-Pacific

### Workshop date and venue

24 October 2018.

The venue was kindly provided by the National Centre for Immunisation Research and Surveillance (NCIRS), Sydney.

### Workshop aims

To plan strategic involvement in extraordinary immunisation activities in the Indo-Pacific.

### Key discussions

#### *Immunisation in the Indo-Pacific Centre's portfolio*

- The Centre sees immunisation in our portfolio as being immunisation in an emergency context. Where there are very severe situations, there is an obligation to respond. This is part of the community-level work stream along with the vector work.

#### *Immunisation challenges in the region*

- The introduction of vaccines that are not fully and rigorously assessed for safety can undermine confidence in the vaccine program generally and the system of regulatory approval is vital (e.g. Dengvaxia in the Philippines).
- Regulators need to be stronger in developing countries to enable developing country drug companies help manage the shortage of supply.
- Where a new vaccine is rolled out, basic vaccine delivery and surveillance of vaccine preventable diseases need to be strengthened. Surveillance for adverse events must be in place or developed.
- Regional immunisation rates in WPRO can be reported as being high, largely because most of the population is in China where immunisation rates are high. If examined by country, more than half of the countries do not achieve target immunisation rates. There is weak surveillance and coverage at sub-national levels in a number of countries.
- Measles is a barometer of the Expanded Programme on Immunization (EPI) strength. Measles finds the pockets of unimmunised people just due to the force of infection.
- Measles occurs in the Philippines as the high birth rates creates a large pool of susceptible children very quickly. Timing of supplementary immunisation activities has been in response to outbreaks, which is probably too late.
- Coverage in Laos is very poor in some areas. Cross border areas are of particular concern.



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- PNG immunisation coverage is very poor in some provinces, and was just over 50% nationwide in 2017 according to official country estimates.<sup>1</sup>
- In the 90s, southern African countries focussed on managing the field operations. Training would focus in the middle manager who is back at the office.
- Vaccine acceptance is very high in developing countries in the region, and consequently there is no need to convince people to vaccinate their kids. However, families don't demand that their kids be vaccinated.

#### *How can these challenges be addressed?*

- Australia can help inform and strengthen regulatory programs.
- Immunisation rates in Indonesia are probably a lot better than in neighbouring countries. They manufacture all their own vaccines. Their surveillance across multiple sites is established. Australia has the opportunity to work with them and have good impact.
- If you can work in a better performing province in PNG and use it as a demonstration site, and this might create demand from others for better services.
- In Fiji there has been lots of involvement from DFAT and the vaccination program is now very strong and has personnel who can support in the region.
- Novel analytical approaches can be required to get good information about impact of vaccines from poor data, and Australia has expertise in this.
- NCIRS strategic plan under development for 2019-2023, with increased regional engagement planned. Many staff have international deployment experience and will welcome the chance for increased involvement in the region, noting that there is a need to balance any international work with domestic contracts and responsibilities.
- A regional training course – competitive selection process based on an African model (VaxAO/VaxIP). Focus areas vaccine preventable disease (VPD) epidemiology, immunisation policy making.
- Australian experts could help in setting up robust surveillance prior to the implementation of new vaccination programs overseas, e.g. Dengvaxia
- Australians could offer advice and training on increasing uptake, safety, effectiveness, pre- and post- implementation. There are great opportunities for MAE scholars to contribute.
- It is important that during large scale outbreaks, responders leave a permanent and positive legacy in country following the outbreak.

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<sup>1</sup> Gavi vaccine alliance Country Hub page on Papua New Guinea <https://www.gavi.org/country/papua-new-guinea/> accessed 20 December 2018.



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### *What model would be most suitable to enable Australians to contribute?*

- There have been discussions about establishing a STOP program for VPD. STOP is a mechanism for deployment of people who can go in and conduct vaccination activities.
- STOP would recruit, train, deploy. Broader scope, expanded program on immunisation (EPI) system strengthening, VPD surveillance, but questions remain about whether the training could be regionalised and whether our region could supply health professionals.
- The CDC endeavour is enormously ambitious, best to engage with a strong partner in the region. This would be a very big expansion of the program. Also noted is the need to avoid working for CDC and avoid parachuting people in.
- What would a regional hub for deployment, training and advice look like? There is a need to avoid establishing these with high cost consultants, because it won't work and will be very expensive.
- National Immunization Technical Advisory Groups (NITAGs) are an example of something established, but who are under the experts in the committee?
- A virtual centre could be developed to broker requests for advice and assistance to be responded to by whichever expert or organisation is best placed to respond. Potentially jointly run with countries such as Singapore, Malaysia, Korea.
- Other ideas include a regional fund under SAGE that could be drawn on or a WHO collaborating Centre.

### Outcomes and next steps

- If the Centre are supporting action on immunisation, PNG is front and centre.
- The focus should be on hotspots with national or transboundary risks.
- The Centre intends to commission report on the state of regional health security, which will help identify hotspots. This will join together other reports and JEEs and some distilled descriptive report on immunisation.
- Action to address the situation in PNG is required.
- There may be problems with STOP VPD, but CDC aside, there is something attractive about a mechanism for mobilising Australian resources.
- The Centre can also judiciously support NiTAGs by mobilising the organisations represented here today.
- A collaborative network may be a good model, with one institution as the administrator. The experts gathered at the workshop could collaborate to come up with a proposal. This should not be a knowledge hub, rather, this is a group with agreed strategies.





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Meeting participants were asked to collaborate to synthesise and present back to DFAT:

- The group should consider what how the virtual centre is structured and functions, who is involved, what the objectives are, and put forward a collective proposal to DFAT. Be strategic about what to address. Think about communication with these other countries.

## Participants

<u>In-person attendees</u>	<u>Remote participants</u>
Kristine Macartney (NCIRS)	Tom Snelling (Telethon Kids)
Anna Colwell (OHP Health)	Katrina Roper (DFAT)
Kim Mulholland (MCRI)	Masha Somi (OHP Health)
Fiona Russell (MCRI)	
Dave Durrheim (HNE Health)	
Rob Hall (Monash)	
Robin Davies (DFAT)	
Stephanie Williams (DFAT)	
Kat Knope (DFAT)	
Meru Sheel (NCIRS)	
Nick Wood (NCIRS)	
Professor Ross Andrews (ANU/Menzies)	
Professor Julie Bines (MCRI)	



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## Meeting Agenda

9.30am -4.00pm, 24 October 2018

Kids Research Executive Room, Kids Research, The Children's Hospital at Westmead  
Cnr Hawkesbury Rd and Hainsworth St Westmead, NSW 2145

Agenda item	Time	Title	Presenters
	9.30	Participant registration	
1	10.00	Welcome and introductions	Robin Davies, Head, Indo-Pacific Centre for Health Security
2	10.10	Australia's Aid Program and the Health Security Initiative	Robin Davies
3	10.20	<u>Researcher presentations on vaccination research in the region</u> (each 15 mins +5 mins questions)  Murdoch Children's Research Institute (MCRI) - Immunisation research activities in the region  NCIRS strategic approach to immunisation activity involvement in the region	Fiona Russell & Kim Mullholland (MCRI)  Kristine Macartney and Meru Sheel (NCIRS)
	11.00	Morning Tea Break (20 mins)	
4		<u>Presentations on challenges and strategic approaches</u> (each 15 mins +5 mins questions)  11:20 VPD initiative modelled on STOP TB  11:40 Experiences on the TAG and the SAGE.  12:00 Overview of some measles/EPI challenges in the Region	Stephanie Williams (DFAT) Rob Hall (Monash)  Dave Durrheim (HNE Health)



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5	12:20	<u>Group discussion (40 mins)</u> <ul style="list-style-type: none"><li>Defining emergency immunisation activities in which Australia should be involved</li><li>Existing and emerging mechanisms through which Australia could be involved in emergency immunisation activities</li></ul>	Kat Knope, Indo-Pacific Centre for Health Security
	1:00	Lunch (1 hour)	
7	2:00	<u>Report back from groups</u>	
	3.00	Afternoon Tea (15 mins)	
8	3.15		
9	3.30	Outcomes and next steps	Robin Davies
10	4.00	Meeting close	



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## ATTACHMENT D - SURVEILLANCE WORKSHOP - OUTCOMES

### Workshop title

Opportunities for strengthening public health surveillance in the Indo-Pacific

### Workshop date and venue

27 November 2018.

The venue was kindly provided by the Burnet Institute, Melbourne.

### Workshop aims

Create greater linkages between current surveillance projects and consider further opportunities for surveillance strengthening.

### Key discussions

#### *Design of surveillance investments for the Indo-Pacific Centre for Health Security*

- The Centre for Health Security (CHS) would like to explore options for supporting regional surveillance mechanisms, such as the Pacific Public Health Surveillance Network (PPHSN) or the Mekong Basin Disease Surveillance network, but the effectiveness of these networks and the regional investment approach needs further discussion and analysis;
- Expanding on and strengthening existing national level systems which may be disease specific could be of value;
- A key question is how to integrate surveillance and Emergency Operations Centres (EOCs) with Field Epidemiology Training Programs (FETPs).

#### *What are the challenges and opportunities for surveillance systems in the region?*

- A review of the Pacific Public Health Syndromic Surveillance system showed that there were 21 countries in the Pacific participating, with 135 health facilities within these contributing data;
  - The number of sentinel sites is low.
  - While data collection is weekly, it might take 10 days before it is received by the Health Ministry and even longer before anything is done with the data; The system is not meeting the need for outbreak detection, with only large outbreaks likely to be detected.
  - Data quality is uncertain or poor – for example, increases in incidence could be due to a change in behaviour of collectors rather than in true incidence, because data are collected in an ad-hoc way and case definitions are not standardised. The algorithm for outbreak detection is also simplistic.
  - Despite the weaknesses of the syndromic surveillance network, it has had an impact on public health in the Pacific. A decade ago, there were no surveillance units, but this is now different. This is not a WHO system. Pacific Island people are proud of it, and use it



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for decision-making. It has provided the infrastructure on which effective surveillance can be built.

- EWARS in a box is a WHO kit for establishing surveillance following a natural disaster. It can be used to establish syndromic or event-based surveillance quickly, and then become the infrastructure for long-term use.
- During an emergency there can be a rapid upskilling of staff and motivation to establish surveillance. It is important to retain these staff and functions following the emergency, to leave a lasting legacy.
- It is important to prioritise the conditions under surveillance, rather than trying to have comprehensive surveillance for with the same conditions in every country or region.
- Consider linking up existing data sources from research and surveillance projects

#### *What works and doesn't work for strengthening surveillance?*

- National and regional support are both needed, but depends on which disease and which region.
- A regional program can build momentum, with countries being mentors for each other. However, real action and change needs to be delivered at the country level. A national focal point is essential.
- Advisors and mentors could support a group of small Pacific countries.
- Community-based surveillance (such as by Red Cross volunteers) can be very helpful where community taboo or cultural issues can prevent data collection by health authorities.
- Participatory surveillance (where individuals provide data about themselves) can supplement other data, but it may not be helpful for outbreak detection.

#### Outcomes and next steps

- The need to support fragile surveillance systems in the Pacific Islands and not inadvertently overwhelm them with complex enhancements is acknowledged.
- The PPHSN is very valuable, but may need to grow organically and the Mekong Basin Disease Surveillance network will not be pursued at this time.
- An approach that provides similar strengthening initiatives in countries across the region is preferable.
- DFAT is providing support for labs, point of care diagnostics through the product development partnerships. Support for the field epidemiology workforce has been identified as a priority for the workforce design.
- It is recognised that a lot of what will work to strengthen surveillance is very simple.
- It is important not to introduce new and different systems in different places.



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- Opportunities to leverage other funding (such as the Fleming fund) should be considered when planning projects.
- Health emergencies provide a great opportunity for health system strengthening.
- An open call for proposals is planned for early next year, but the structure and timing are to be determined.



## Participants

### In-person attendees

Michael Nunan (Tupaia)

Edwin Monk-Fromont (Tupaia)

Meru Sheel (NCIRS University of Sydney)

Lisa Natoli (Australian Red Cross)

Veronica Bell (Australian Red Cross)

Sara Davies (Griffith University)

Stephanie Williams (DFAT)

Kat Knope (DFAT)

Robin Davies (DFAT)

Michelle Baker (DFAT)

Kate Pennington (Department of Health)

Adam Craig (UNSW)

Craig Dalton (HNE Health NSW)

Ric Price (Menzies)





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Ben Polkinghorne (ANU)

Ross Andrews (ANU)

Mike Toole (Burnet)

Ben Coghlan (Burnet)

Leanne Robinson (Burnet)

Remote participation

Josh Francis (Menzies)

Anthony Draper (NT CDC)

Justin Ho (Yes We Can Digital)

Piers Higgs (Atlas of Environmental Health)



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## Meeting Agenda

9.00am - 4.30pm, 27 November 2018

The Long Room, Burnet Institute, Level 7 Alfred Centre

85 Commercial Road, Prahran, Melbourne

Remote participation: see Zoom details on page 3

Time	Title	Presenters
9.00	Participant registration	
9.30	Welcome and introductions	Robin Davies, Head, Indo-Pacific Centre for Health Security
9.40	Australia's Aid Program and the Health Security Initiative	Robin Davies
9.50	<b><u>Presentations on surveillance capabilities in the Indo-Pacific region</u></b>	
9:50	Benefits and pitfalls of the Pacific syndromic surveillance system	Adam Craig (UNSW)
10:10	Surveillance in emergency response	Meru Sheel (NCIRS)
10:30	Burnet involvement in surveillance strengthening activities in the region	Ben Coghlan (Burnet)
10.50	Morning Tea Break (30 mins)	
11:20	<b><u>Presentations on surveillance projects and capabilities in the region continued</u></b>	
11:20	Burnet involvement in surveillance strengthening activities in the region – malaria & arbovirus surveillance	Leanne Robinson (Burnet)
11:40	Surveillance-related activities of Australian Red Cross/International Federation of Red Cross	Veronica Bell (Australian Red Cross)
12:00	<b><u>Presentations on surveillance information systems that are in use or could have application in the region</u></b>	
12:00	Tupaia	Michael Nunan/Edwin Monk-Fromont (Beyond Essential Systems)
12:20	Event-based surveillance - Intelliriver Source	Justin Ho (Yes We Can Digital) via Zoom
12:40	Atlas of Environmental Health	Piers Higgs (Gaia Resources) via Zoom



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13:00	Lunch (1 hour)	
14:00	Participatory surveillance - Flutracking surveillance options	Craig Dalton (HNE Health NSW)
14:20	Tracking antimalarial drug resistance in the Asia Pacific Region	Ric Price (Menzies)
14:40	Foodborne disease surveillance in the region	Ben Polkinghorne (ANU)
15:00	<b><u>Group discussion</u></b> <ul style="list-style-type: none"><li>• What are the barriers to IHR implementation in the Indo-Pacific?</li><li>• What are the short, medium and long-term opportunities for surveillance strengthening projects in the Indo Pacific? And what are the barriers and how might these be overcome?</li></ul>	Kat Knope, Indo-Pacific Centre for Health Security
15:30	Afternoon Tea (20 mins)	
15:50	Report back on group discussion topics	All groups
16:10	Outcomes and next steps	Robin Davies
16:30	Meeting close	



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## ATTACHMENT E - VECTOR WORKSHOP - OUTCOMES

### Workshop title

Prioritising future vector control activities and projects for the Indo-Pacific

### Workshop date and venue

23 November, 2018. The venue was kindly provided by the James Cook University, Cairns.

### Workshop aims

- Identifying and prioritising future vector surveillance and control activities and projects for the Indo-Pacific
- To create greater linkages between current projects in the Indo-Pacific.

### Key discussions

#### *Review of vector control work currently being done in the region*

- N. Anstey (Menzies): zoonosis particularly a study of malaria *Plasmodium knowlesi* in monkeys and humans
- D. Williams (CSIRO): Japanese Encephalitis, Murray Valley, Ross River and West Nile viruses in PNG and Australia – evaluating current methods and establishing linkages especially with the STRIVE project (PNGIMR)
- G. Devine (QIMR Berghofer): mosquito repellents and confusants, and how to develop new projects and bring them to market
- N. Beebe (University of Queensland): mapping mosquito populations in the Pacific including spatial, climate and environmental modelling on a number of mosquito species
- B. Trewin (CSIRO): *Wolbachia* project, using a sterile insect to suppress the mosquito population
- P. Higgs (Atlas of Environmental Health): online tool for collecting environmental data, including medical entomology e.g. adult mosquito monitoring, larval monitoring
- T. Burkot (JCU): Vector surveillance worldwide – Asia Pacific is roughly comparable to except for identifying vector species where they are much worse, and monitoring resistance mechanisms where they are doing much better
- T. Russell (JCU): Field-based research in the Pacific particularly Solomon Islands – malaria, dengue and Zika reduction, particularly due to bednet usage
- C. Simmons (World Mosquito Program): *Wolbachia* mosquito project releases mosquitoes with reduced ability to transmit pathogens with the aim to eliminate dengue – randomised control trials running in Indonesia
- S. Karl (PNGIMR): overview of research currently being undertaken at PNGIMR including intervention monitoring, malaria epidemiology and non-malarial arboviral studies



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### *What are the challenges and opportunities for vector control systems in the region?*

- Training and capacity development in environmental health, entomology and vector surveillance is needed due to a missing generation – an intervention focussing on training is needed – for example could build a cohort of experts, similar to an Australian Fellowship cohort.
- Another option would be to encourage entomologists to try to influence Field Epidemiology Training Programs in countries that have one, to encourage them to accept entomologists/ environmental health workers etc. and encourage these people to apply.
- It can be difficult for people to bring training back to their workplaces, since the resources they are working with can be vastly different and they may not have the power to make change in their workplace.
- There is often no career structure for entomologists, the roles are not very prestigious so their opinion often may not be influential when key decisions need to be made – even if the decisions are about vector-borne diseases.
- Ministries are often siloed, meaning that entomologists are not able to communicate with other parts of the Ministry of Health. In order for programs to be effective, there is a need to have these silos begin talking to each other, especially at the executive levels.
- Key people in health departments can be fostered and strengthened, given scope to do projects and get involved in decision making.
- Another option for implementing change would be to get the decision makers to become interested in entomology.
- Countries may not be very receptive to new techniques, and a continued reliance on established methods and techniques. Critical thinking by decision makers should be encouraged.
- In larger countries (e.g. Indonesia) there needs to be advocacy for a strategy of nationally coordinated malaria control instead of a range of approaches that differ between the provinces.
- Care needs to be taken to make sure that interventions you ask people to do are effective and sustainable – e.g. can't expect communities to do larval control by themselves for no pay.
- There is a pessimism in anything that requires sustained behaviour change.
- There is a need to prioritise the gathering of evidence before implementing novel vector control programs or products and to clarify and strengthen regulatory pathways to get new products approved.
- Public health decision-making processes should include entomologists where relevant.

### *Outcomes and next steps*

- CHS plans to conduct consultations with vector control programs – e.g. to encourage APMEN to engage with governments
- CHS has a goal of revitalising APMEN.
- CHS is proposing to create a “State of region’s health security report” - terms of reference will be circulated. Next steps in this process are to appoint a coordinator and create table of contents.
- Workforce - there is clearly a need to network both field and lab entomologists with other parts of the health sector.
- Australian Awards fellowship style intervention - could put out call for proposals for institutions.



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- Vector control activities – could advocate for IVCC to bring a range of trial and regulatory interventions, particularly in the region.







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## Participants

<u>In-person attendees</u>	<u>Remote participants</u>
Nick Anstey (Menzies)	Piers Higgs (Atlas of Environmental health)
Alison Auliff (ADF Midi/DFAT CHS)	
Nigel Beebe (University of Queensland)	
Tom Burkot (JCU)	
Robin Davies (DFAT, CHS)	
Greg Devine (QIMR)	
Stephen Doggett (USyd)	
Susan Gavin (Department of Health)	
Patricia Graves (JCU)	
Mica Hartley (DFAT, CHS)	
Stephan Karl (PNGIMR/ WEHI)	
Dagmar Meyer Steiger (JCU)	
Prasad Paradakar (CSIRO)	
Leanne Robinson (Burnet)	
Katrina Roper (DFAT, CHS)	
Tanya Russell (JCU)	
Cameron Simmons (World Mosquito Program)	
Kyran Staunton (JCU)	
Brendan Trewin (CSIRO)	
David Williams (CSIRO)	



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## Meeting Agenda

8.15am -3.00pm AEST (7.15 -2.00 Canberra time), 23 November 2018

JCU AITHM building (E5, room 101)

1/14-88 McGregor Road

Smithfield QLD 4870 AUSTRALIA

Agenda item	Time	Title	Presenters
	8.15	Participant registration, with tea and coffee	
1	8.30	Welcome and introductions	Robin Davies Head, Indo-Pacific Centre for Health Security
2	8.40	Australia's Aid Program and the Health Security Initiative	Robin Davies
3	8.50	<u>Researcher presentations vectorborne disease</u> (each 15 mins +5 mins questions)  <i>Zoonotic malaria – unique challenges to surveillance and control</i>	Nick Anstey Senior Principal Research Fellow and Professor of Global Health Menzies School of Health Research
	9:10	<i>A one health approach to establish surveillance strategies for Japanese encephalitis and zoonotic arboviruses in Papua New Guinea</i>	David Williams Group Leader of Emergency Disease Laboratory Diagnosis, CSIRO
4	9.30	<u>Researcher presentations on vector surveillance and control</u> <i>Current research: control, surveillance and biosecurity</i>	Greg Devine Group Leader, Mosquito Control Laboratory QIMR Berghofer
	9:50	Morning Tea Break (15 mins)	
	10:05	<i>Regional vectors of malaria and arboviruses: current tools for surveillance and control</i>	Nigel Beebe Associate Professor University of Queensland and CSIRO
	10:25	<i>Suppressing arbovirus vectors via novel tools and an integrative approach: current results and future directions</i>	Brendan Trewin Postdoctoral Fellow CSIRO
	10:45	<i>Atlas of Environmental Health</i>	Piers Higgs Chief Executive Officer Gaia Resources
	11:05	<i>Malaria Vector Surveillance and Capacity in Asia and the Pacific</i>	Tom Burkot



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			Australian Institute of Tropical Health and Medicine, James Cook University
	11:25	<i>Vector Borne Disease Control in the Pacific: Opportunities for controlling multiple human diseases by attacking the same vectors</i>	Tanya Russell Principal Research Officer, James Cook University
	11.45	Lunch (45 mins)	
	12:30	<i>World Mosquito Program and sustainable biocontrol of arboviral diseases</i>	Cameron Simmons Director, Institute of Vector-Borne Disease, Monash University; Director, Oceania hub, World Mosquito Program; Director, Impact Assessment, World Mosquito Program
	12:50	<i>Overview of vector surveillance and research projects in Papua New Guinea Institute of Medical Research</i>	Stephan Karl Laboratory Head, Entomology Section, PNG Institute of Medical Research
5	1:10	<u>Group discussions</u> <i>Future vector surveillance and control activities and projects for the Indo-Pacific</i>	Katrina Roper Senior Advisor Indo-Pacific Centre for Health Security
6	1:40	Feedback from groups	
	2.15	Afternoon Tea (15 mins)	
7	2:30	Outcomes and next steps	Robin Davies
	3:00	Meeting close	



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## ATTACHMENT F - INFECTION PREVENTION AND CONTROL WORKSHOP - OUTCOMES

### Workshop title

Infection prevention and control (IPC) projects and antimicrobial resistance in the Indo-Pacific

### Workshop date and venue

27 November 2018.

The venue was the Indo-Pacific Centre for Health Security, Canberra.

### Workshop aims

The aims were to:

- Identify current issues with IPC and AMR in the Pacific.
- Identify and prioritise future infection prevention and control activities and projects for the Indo-Pacific.
- Create greater linkages between current activities in the Indo-Pacific.

### Key discussions

*What are the challenges and opportunities for IPC in the region?*

- Large aid programs can distort modest health budgets, leading to concerning large percentage increases which are clearly not sustainable.
- Chronic disease and off-shore referrals are now inextricably linked in Pacific countries. The choice of country for referrals can be influenced by marketing by healthcare providers and may not be based on quality.
- Pacific countries are very cognisant of the health security threats and the danger of importation of pathogens including antimicrobial resistant organisms from Asia. Specific health security challenges are outdated legislation, human resource limitations and surveillance system limitations.
- Hospital wards in many cases are either old and uncleanable (made of materials such as plywood), or new and poorly designed to facilitate infection control.
- Functional infection control committee control committees exist in some countries (e.g. Fiji) but not in others.
- PICNET (under the Secretariat of the Pacific Committee) was once a valuable and strong network for infection control in the Pacific, and has left a lasting legacy of improvement, but is now largely inactive and may be a great target for revitalising.
- Projects with PICNET as a partner could include developing a relevant training course for nurses, develop a way of managing overseas referred patients on their return to the country, updates to the PICNET guidelines.



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- Constrained resources and procurement delays combined with a real desire to ensure that all patients will receive care can lead to practices of improvising, re-using single use equipment and keeping opened single use vials.
- The Pacific Open Learning Health Network (POLHN) is an online learning portal that is actually being used by Pacific people. It includes infection control modules.
- An evaluation of multiple hospitals within a single country at two time points showed that hospitals can improve their IPC, particularly where there is strong leadership from the hospital executive and good buy-in by a core group of technical experts in the infection control department.

#### *Where are the opportunities for improving IPC?*

- Functioning IPC committees are critical. Gathering and synthesising evidence about the economic benefits of effective IPC over the longer term may be helpful.
- Setting up surveillance for AMR should be structured. It must have a minimum dataset, standardised definitions and collect the data that are important in that country or region, not just all data. Analysis and reporting should be built into any surveillance system.
- Areas for further works include development of standard operating procedures, affordable training for IPC staff, competency standards and position descriptions, engagement with undergraduate and post graduate training programs to include IPC, and the critical importance of leadership.
- Remote mentoring and peer networking
- Subsidised membership of the Australasian College of Infection Prevention and Control (ACIPC)

#### Outcomes and next steps

- The GOARN stipends initiative under the Centre's workforce design was considered particularly relevant for facilitating the deployment of IPC practitioners.
- A number of options and ideas were worth pursuing further:
  - Distance learning options
  - Mentoring initiatives
  - Reinvigorating PICNET is an option to consider – perhaps through the low and middle-income country (LMIC) special interest group of ACIPC. Need to have a dialogue with SPC.
  - Work with SPC to update the regional guidelines
  - Course run by Griffith University in partnership with SPC



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## Participants

In-person attendees
Rob Condon (Consultant)
Robin Davies (DFAT, CHS)
Matthew Mason (University of the Sunshine Coast)
Katrina Roper (DFAT, CHS)
Peta-Anne Zimmerman (Griffith University)
Kat Knope (DFAT, CHS)



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## Meeting Agenda

12:30am – 4:30 pm AEST, 17 December 2018

**Location:** Centre for Health Security, RG Casey Building, Sydney Avenue, Barton, Canberra (see over page)

Agenda item	Time	Title	Presenters
	12.00	Participant registration	
1	12.30	Welcome and introductions	Robin Davies Head, Indo-Pacific Centre for Health Security
2	12.40	Australia's Aid Program and the Health Security Initiative	Robin Davies
3	12.50	Participant presentations <i>Debrief on the scoping mission: country situation on IPC and AMR</i>	Rob Condon Consultant
	1:10	<i>Regional IPC issues: General findings from recent WHO deployments.</i>	Peta-Anne Zimmerman Griffith University
	1.30	<i>Remote mentoring in IPC.</i>	Matthew Mason University of the Sunshine Coast
	2.30	Afternoon Tea (30 mins)	
4	3:00	<u>Discussion</u> <i>Future infection prevention and control activities and projects for the Indo-Pacific</i>	All Discussion facilitated by Rob Condon
5	4:00	Outcomes and next steps	Robin Davies
	4:30	Meeting close	