Pacific Health Security Scoping Mission

SAMOA COUNTRY REPORT
following consultations in Apia, 22–23 March 2018

Please note: This country report draws on findings during the visit to Samoa and de-briefing with DFAT in Apia. It may be updated after further discussion with counterparts in Samoa and at the regional level.

Background

1. **The Australian Government's Health Security Initiative for the Indo-Pacific region** ('the Initiative') **aims to strengthen country and regional capacity for prevention, preparedness, timely detection and response to new and emerging infectious diseases** (EID). Concurrently, existing and re-emerging infections like malaria, tuberculosis (TB) and dengue fever, childhood diarrhoea and acute respiratory infection continue to contribute significantly to the burden of disease in many Pacific Island countries (PIC) alongside an evolving non-communicable diseases (NCD) crisis. The region is also experiencing a growing problem of antimicrobial resistance (AMR), including in TB (MDR-TB). The link between NCDs and infectious diseases like TB and AMR bacterial infections is increasingly recognised. Strengthened national health system capacity to comply with the International Health Regulations (IHR) will help countries to combat this range of new and endemic health threats.

2. **An independent, high level scoping team visited Apia, Samoa on 22-23 March 2018** on behalf of the Indo-Pacific Centre for Health Security (CHS), the area within Australia's Department of Foreign Affairs and Trade (DFAT) tasked with implementing the Initiative. [1] The purpose of the visit was to: consult with senior Government of Samoa (GOS) officials and health program managers to: share information about the Initiative; assess Samoa's health security priorities and its capacity to address them; and identify options for Australian support through potential multi-country and regional activities. The team's terms of reference (Annex 1) were summarised in an information sheet provided to key informants (Annex 2); consultations and other activities in Apia are shown at Annex 3.

3. **The visit to Samoa is part of a series of scoping studies that will guide the implementation of the Initiative in the Pacific.** Interim assessments have been undertaken in Kiribati and Tuvalu, and another is under way in Nauru. Further consultations will be undertaken progressively during March and April 2018 in the Solomon Islands, Papua New Guinea (PNG) and Fiji and in conjunction with the Pacific Heads of Health (HOH) Meeting in Nadi on 18-19 April.

4. **The team thanks the GOS for supporting the visit and meeting arrangements, for very productive discussions, and for the opportunity to visit and observe activities in the Tupua Tamasese Meaole Hospital** (TTMH) **and laboratories in Apia.** Special thanks to the Minister of Health, the Director General (DG) of the Ministry of Health (MOH), the General Manager of the National Health Service (NHS), heads of department, non-Government and development partners, and officials of other GOS ministries who met the team during the country visit.

[1] The team included Dr Jimmie Rodgers (Team Leader), Dr Allison Imrie (Laboratory Scientist) and Dr Rob Condon (Public Health Physician). They were accompanied by Ms Madeleine Moss and Ms Emeline Cammack from the CHS, DFAT Canberra.

Principal findings and observations

Specific health security threats and vulnerability in Samoa

5. **Samoa has recent experience of outbreaks of infectious diseases.** An outbreak of 3,204 reported cases dengue type 2 peaked in November 2017; two-thirds of cases were in children aged 1-14 years, and cases of dengue shock syndrome and haemorrhagic fever requiring intensive care were recorded. Pandemic influenza virus and Zika virus infection was detected in 2009-10 and 2016, respectively, and clusters of typhoid and an outbreak of rubella have also been documented.

6. **Samoa is also vulnerable to cyclones, and climate change and climate variability are likely to increase the frequency and severity of extreme weather events.** Cyclones may have direct impact on health through physical injury and damage to or destruction of health facilities; they are commonly also associated with indirect health effects such as outbreaks of climate-sensitive infectious diseases and the results of population displacement (e.g. interruption of treatment and care for people with chronic diseases or disability, risk of sexual or gender-based violence).

7. **Clinical and laboratory staff report an alarming increase in the incidence of AMR organisms in human infections in recent years.** This is thought to be driven by: over-prescribing of antibiotics in clinical settings; poor patient compliance with treatment, accompanied by doctor-shopping and patient-driven re-prescribing of multiple antibiotics when response to treatment is perceived to be slow; poor infection prevention and control (IPC) in health care settings, exacerbated by challenges in the physical layout of parts of TTM Hospital; and a high prevalence of diabetes, with compromised tissue penetration of antibiotics in cases of diabetic foot sepsis (DFS). **The laboratory was unable to provide data to allow the team to independently verify this observation** (see also paragraphs 15 and 24-25).

8. **The risk of any further outbreaks of vaccine preventable diseases of childhood is declining as immunisation coverage improves.** The most recently available (2014) estimates of vaccination coverage range from just above 90% for three doses of diphtheria-tetanus-pertussis (DTP), oral poliomyelitis (OPV) vaccine and the first dose of measles-rubella (MR) vaccine down to 78% for a second dose of MR. Samoa has introduced *Haemophilus influenzae* type b and inactivated poliomyelitis (IPV) vaccines. A multi-country Asian Development Bank project, in which Samoa is included, will commence in the Pacific in mid-2018 and will include support for the introduction of rotavirus, pneumococcal conjugate and human papillomavirus vaccines and strengthening of cold chain infrastructure.

Public Health Emergency Preparedness

9. **Samoa conducts annual self-assessment of its core capacity to implement the requirements of the IHRs** under the IHR State Parties' monitoring and evaluation framework. The most recent available results, summarised at Annex 4, show consistent strong coordination but some volatility in capacity and performance in other criteria (especially human resources, laboratory capacity and zoonoses) and limited capacity to address chemical and radio-nuclear events. The DG of Health is currently acting as IHR Focal Point. There is some misunderstanding of the difference in the purpose of the IHRs and the Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies (APSED III) and the rationale for conducting a Joint External Evaluation (JEE) of IHR-related capabilities.

10. **A National Security Policy** (NSP) **is currently under development and is due for completion by mid-year.** The NSP will address border security and transnational crime, national disaster

management, a broad framework for **health security**, cyber-security and some aspects of human security.

11. **A Disaster Advisory Committee** (DAC) **and a detailed national multi-sectoral Disaster Management Plan** (DMP) **are in place.** The DAC, which meets monthly, includes all GOS Ministries plus private sector and civil society representatives. The sector most affected by a disaster leads the response on behalf of the DAC. There is no dedicated line item within the health budget for responding to outbreaks, public health emergencies or the health consequences of environmental disasters; the Ministry of Finance sits on the DAC and would mobilise domestic resources needed for the response, as well as coordinate any donor funds received.

12. **An 'all-hazards' Public Health Emergency Preparedness and Response Plan** (PHEPRP) **is not yet in place.** The PHEPRP would define specific health security aspects of the NSP and DMP, but it is a priority to complete development of the NSP first. The PHEPRP would then guide Samoa's approach to strengthening specific core IHR capacities and improving the quality and regularity of its self-assessments. While there are no plans to conduct a JEE in the foreseeable future, the opportunity for selected public health officials to observe and participate in a JEE in another country would enhance understanding of IHR- and APSED-related needs.

Surveillance, risk assessment and response

13. **National surveillance systems are approaching a point of transition with the installation of an electronic health information system** (referred to as *e-Health*). The first stage will establish an electronic medical records management system. The future evolution of *e-Health* to include a full electronic health records system and an interface with public health surveillance (e.g. through modules for notifiable communicable diseases) has not yet been defined or planned.

14. **Weekly syndromic surveillance through sentinel sites is linked to the regional Pacific Public Health Surveillance Network** (PPHSN) and Pacific Regional Syndromic Surveillance. Outer islands report events of possible public health importance directly to the acting Public Health Physician. There was not time for the team to conduct a full assessment of national surveillance systems.

15. **The TTMH laboratory does not conduct systematic surveillance and reporting of AMR or sterile site surveillance data to guide clinical management of bacterial infections.** Cross-sectional surveys and retrospective analytic studies of laboratory or hospital records to further define the spectrum of AMR pathogens and to guide prospective surveillance has also not been conducted.

16. **Point of entry** (POE) **health and quarantine security procedures need to be strengthened to take advantage of improved facilities in the new airport terminal building.**

a) **Improved air links** mean that Samoa is no longer shielded from emerging regional and global health threats by its location and geography. Samoa has direct flights to and from Fiji, Australia, New Zealand and Hawaii, with onward connections to other PICs, Asia and the continental United States; direct flights between Apia and southern China were reported to be under consideration.

b) **It is now possible to travel from Asia to Samoa within the incubation period of many infectious diseases** of international public health concern. Direct air links between southern China and Apia are also reported to be under consideration.

c) **Construction of the new airport terminal building is nearing completion**. The Departures area includes a medical room where passengers can be assessed for health risks (see paragraph 24d for details of inclusions). The team did not have access to the Arrivals area (which is not yet open), but it is reported to have a similar room for arriving passengers in need of assessment

or segregation; information on arriving passenger flow and direct external access to an ambulance bay was not available.

d) **There is limited routine inter-sectoral dialogue** between the MOH and other partners responsible for POE screening.

17. **Samoa's strong civil society and women's networks and non-Government organisations** (NGO) **can be mobilised readily to support the response to a health threat, public health emergency or natural disaster.** Civil society, NGOs and the private sector are represented on the DAC. Available time did not allow for a detailed review of risk communication strategies.

18. **Workers from Samoa are able to access Australia's and New Zealand's Pacific labour mobility schemes** for low- and semi-skilled workers.

a) Up to 1,500 Samoan workers are accepted to New Zealand each year, and up to 400 to Australia.

b) A medical examination by a designated medical practitioner is required prior to acceptance, but no reciprocal medical clearance is required on return. Asymptomatic NCDs constitute the greatest health risk to workers on posting overseas – particularly when undertaking physically demanding manual work in hot conditions.

c) Laboratory and radiological examinations required for these workers exert added pressure on already stretched hospital laboratory and X-ray facilities, further affecting their capacity to perform their core business of supporting patient care effectively. Absence of a public health laboratory that would normally cater for such examinations worsens the problem.

Laboratories

19. **Regular training of laboratory staff in microbiology is needed.** Training in medical laboratory science is offered at the TTMH laboratory by the New Zealand-based Pacific Paramedical Training Centre (PPTC), which offers modules in Medical Microbiology, Haematology and Blood Cell Morphology, Transfusion Science, Clinical Biochemistry, Laboratory Management, and Laboratory Quality Management; not all modules are offered each year. TTMH staff occasionally attend PPTC trainings offered in New Zealand. Staff have attended training opportunities offered sporadically by other organisations; in the absence of needs-based and well-defined learning outcomes useful knowledge has not necessarily been transferred back to TTMH.

20. **A structured professional development pathway for laboratory staff that allows progression through the ranks and would serve as a mechanism to retain existing staff does not exist.** The TTMH laboratory staff includes 5 scientists (with a Bachelor of Medical Laboratory Science; BMLS), 20 technicians (with a Bachelor degree in general sciences), and 4 laboratory assistants (who are high school graduates). The BMLS, required for appointment at the scientist level, is no longer offered at National University of Samoa (NUS). PPTC offers a Diploma in Medical Laboratory Science (DMLS), an online distance learning program delivered through Pacific Open Learning Health Net (POLHN), in which modules are assigned credit value. However, the DMLS is not recognised by Pacific institutions which offer degrees in Medical Laboratory Science.

21. **There is no full-time Pathologist on staff at TTMH.** Histology samples are referred to New Zealand and results may not be available for weeks or months. A visiting pathologist who will be available for 1 week every 2 months was recently appointed; however, this arrangement may not be sustainable for the longer term. A resident pathologist would also provide consultations concerning interpretation of laboratory tests and initiate new diagnostic methodologies and

technologies – capacities identified by TTMH and MOH that should be enhanced. The TTMH laboratory participates in an external quality assurance program also offered by PPTC that is part of a 5-year accreditation program; lack of a staff pathologist prevents accreditation.

22. **Problems with the procurement process directly impact supply of laboratory reagents.** Delivery of test components and consumables, including antimicrobial susceptibility discs and petri dishes, has often been significantly delayed because suppliers have not been paid and large debts have accrued. Antimicrobial susceptibility testing to inform the correct and timely management of infected patients therefore cannot be conducted as a direct consequence of these delays.

23. **Significant delays between submission of patient samples to reference laboratories and receipt of test results** has occurred in previous outbreaks and there has been some confusion regarding test interpretation. Test results for serum samples shipped to the *Institut Louis-Malardé* (ILM), a WHO- and PPHSN-accredited reference laboratory in French Polynesia, for confirmation of Zika virus (ZIKV) infection in 2016 were not available for many (>10) weeks. The same samples were also sent to the ESR (Institute of Environmental Science and Research) laboratories in New Zealand. Results from the two labs were considered to be disparate (the team did not sight the test data), decreasing confidence in the capability of these reference laboratories. A resident pathologist would have been able to interpret test results and offer clinical advice.

Infection prevention and control in health care settings

24. **There is limited infection control capacity, equipment and infrastructure at TTMH.**

a) **Infection Prevention and Control Policy and Guidelines** – A draft IPC policy and guidelines have been developed but are yet to be formally operationalised through an Action Plan.

b) **IPC Committee** – An IPC Committee has been formed and is keen to come to terms with the AMR challenges. Intermittent technical assistance is provided from New Zealand.[2]

c) **Laboratory surveillance** – The TTMH Laboratory undertakes bacterial culture but does not yet conduct systematic surveillance or reporting for AMR in common pathogens (see paragraph 15, above).

d) **Personal protective equipment** (PPE) – Gloves and operating theatre masks are the only PPE that is readily available in front line clinical areas of the Hospital. The available PPE stock (including overalls, full length gowns and N95 masks) appears to have been pre-positioned at the new Airport (paragraph 16c); it is not clear why the entire stock is held there and none is available at the TTMH.

e) **Isolation wards** – The children's and adult medical and surgical wards each have three two-bed isolation rooms and the ICU has one. The design of all isolation areas is inappropriate for managing risks to staff associated with highly infectious patients, with inadequate hand-washing and ante room facilities and no separate laundry disposal or patient bathrooms. The door closure on the ICU isolation room allows air to flow out into the general ICU area. The isolation rooms on the wards are often used for private patients, with infectious patients displaced to the general ward area.

f) **Patient flow** – Stretcher access to all of the isolation rooms is through the main hospital.

[2] A clinical microbiologist from the Nelson-Marlborough Health Board in New Zealand is reported to have been visiting Samoa to assist with AMR detection and response. Further details are still pending at the time of writing.

g) **Operating theatre** – Only two of the four operating theatres (OT) have segregated scrubbing and gowning-up areas, and instrument set-up takes place inside the OT. Pre-operative and post-operative patient movement is through the same doors. There is one dedicated septic theatre but it is inside the main OT complex and therefore a potential source of contamination in what should be a sterile area.

25. **There is ongoing – and probably increasing – risk of importation of AMR pathogens through offshore medical referral** (OMR). Samoa sends patients with complex medical conditions to Fiji, India and occasionally New Zealand for tertiary care. Treatment generally includes surgical and other invasive procedures with lengthy duration of hospitalisation. This risk can be managed through re-negotiation of agreements with tertiary referral hospitals overseas to include **screening and certification of AMR-free status on discharge**, and routine screening for AMR pathogens by the TTM Hospital laboratory if patients are readmitted on return to Samoa.

Zoonoses

26. **An Animal Health Response Plan and National Border Control Committee are in place** – the latter in partnership with MOH. X-ray examination and manual inspection are in place at airports with mandatory quarantine of domestic animal imports. Animal husbandry breeding stock and domestic pig and poultry meal are imported exclusively from Fiji, New Zealand and Australia; Samoa's quarantine requirements are observed prior to shipping from the source country. Maritime arrivals are subject to manual inspection only. Formal domestic animal health surveillance is limited.

27. **Aviation and maritime waste are transferred from air- and sea-ports to the biosecurity incinerators in Apia** in an open tip-truck. The incinerators are reported to be in need of upgrading, but were not inspected.

28. **Basic animal health laboratory functions are in place** for specimen preparation and shipment. Technical support is provided by the ESR in New Zealand. Additional animal health functions may be available in the proposed Public Health Laboratory (PHL; paragraph 29b).

Critical health system constraints in addressing health security risks

29. **Several areas of health system capacity also compromise Samoa's ability to respond to acute public health events.** They include:

a) **Human resources and training** – The NHS estimates that it needs an additional 60 doctors and 300 nurses to provide effective service delivery throughout the health system; this would also provide capacity to prepare for and respond to EIDs and endemic communicable disease threats. Resource constraints have resulted in the NUS suspending its Bachelor of Health Sciences in Medical Laboratory and Bachelor of Health Sciences in Environmental Health programs – with these programs now only available outside the country, mostly in Fiji. The NUS School of Nursing and School of Medicine continue to provide their respective undergraduate programs, and in nursing a Postgraduate Diploma in Midwifery. Varying degrees of expertise and experience needed at different levels within each service area (such as laboratory services) calls for innovative capacity building approaches that incorporate in-service training programs delivered in-country in conjunction with recognised overseas training centres (such as PPTC) and in partnership with overseas training institutions (such as the FNU) that lead to recognised, accredited postgraduate qualifications.

b) **Public Health Laboratory –** The MOH intends to establish a Public Health Laboratory, which would take on the following roles: water and food testing; quality testing of selected drugs and medicines in association with designated partner institutions outside the country; screening tests for viral and bacterial pathogens during outbreak investigations; laboratory examinations required under labour mobility programs; and possibly quality assurance for drug sensitivity testing in relation to AMR. The establishment of a PHL will allow the hospital laboratory to focus on its core clinical functions of patient care support, including drug sensitivity testing and ongoing surveillance of AMR.

c) **Procurement and supply management (PSM)** – A new national pharmaceutical stores is in place. PSM processes are being put in place to ensure effective inventory control, management, distribution and monitoring of pharmaceutical supplies throughout the NHS. An electronic pharmaceutical inventory and PSM system that is compatible with the anticipated installation of *e-Health* (see paragraph 13) is being implemented. Current challenges relating to 'stock outs' of important specialised items such as reagents needed by the laboratory is expected to improve with the implementation of the electronic pharmaceutical inventory and PSM system.

d) **Legislation and regulation –** The *Public Health Act* and the *Biosecurity Act* are both under review. It was, however, emphasised that the real challenges rest with implementation which is usually undermined by resource constraints.

Options for Australian support

30. The scoping mission identified a number of partner government and other stakeholder priorities for Samoa, including possible areas for Australian investment. They include:

a) A small number of activities for **possible immediate support** at relatively modest cost – potentially using resources from Australia's bilateral aid program or through the CHS.

b) Other technical areas are likely to benefit from continuing regional or multi-country modalities of support; however, these would need **further assessment following consultation with other countries or at the Pacific HOH Meeting later in April.**

c) A small number of areas require **additional information or inputs** in order to be assessed accurately.

Areas for possible immediate support where Australia could help to address immediate priorities

31. The following areas of technical assistance are likely to respond immediately to areas of priority identified in discussion with Samoan counterparts:

a) **Technical assistance to help the GOS to complete the health component of its National Security Policy –** this would potentially provide a framework for the PHEPRP, which would be finalised with additional TA from WHO and SPC through the Pacific Health Security (PaHSec) Working Group.

b) **Technical assistance** from a hospital epidemiologist or laboratory scientist with quantitative data analysis skills to conduct a **retrospective review of antimicrobial sensitivity** of organisms cultured in the TTMH microbiology laboratory.

c) Subject to the outcomes of the AMR review, the recommendation of the national IPC Committee and receipt of a formal request from the GOS, **provision of hospital design TA to assess options for the re-design and remodelling** of the **Operating Theatre** scrub areas and patient movement and the **isolation facilities** on the paediatric, adult medical, adult surgical and intensive care wards – initial support would be through an experienced health facility

architectural and quantity surveying contractor, familiar with the Pacific operating environment and the principles of IPC in hospital settings, to provide advice and quality assurance for the design of the remodelled facilities.

d) Support for an **IHR focal point to attend or participate in a JEE** elsewhere in the region to gain experience insight into the JEE purpose and process – this support could be extended to include subsequent participation in a national workshop to develop a PHEPRP.

Potential medium- to longer-term Australian health security investments

32. The following technical assistance and support would potentially contribute meaningfully to health security and related capacity in Samoa over the medium to longer term. They will be further assessed in relation to the findings of the scoping mission in other PICs.

a) **Laboratory** – fund or co-fund a **pathologist** to: provide leadership in **AMR surveillance** and **antimicrobial stewardship;** provide consultations concerning interpretation of laboratory tests; and initiate new diagnostic methodologies and technologies as appropriate, including diagnostics for new and re-emerging pathogens.

b) **Laboratory (ongoing training and capacity development)** – identify a public health laboratory in Australia or elsewhere that will partner with the TTMH laboratory and a future Samoa PHL to offer ongoing training in laboratory medicine, diagnostic technologies, quality assurance, and ethics.[3]

c) **Workforce development** – including improved links between the NUS and the World Bank team providing technical and analytic support for the revitalisation of District and primary health care services; this could include support for NUS capacity to reactivate its Bachelor of Medical Laboratory Science and Bachelor of Science in Environmental Health courses.

d) **IPC and AMR – technical links** with the Australasian College of Infection Prevention and Control or clinical institutions; support for **postgraduate training** in **IPC** for nurses through an Australian or New Zealand institution or in Fiji (to be further explored during the mission to Fiji); and continuing **technical guidance and capacity development for the TTMH IPC Committee** to oversee implementation of the IPC policy and guidelines and strengthen IPC practices in health care settings.

e) **Surveillance and HIS** – broadening access to epidemiology and data for decision-making training beyond the public health team to include laboratory workers and clinicians

f) **Procurement and supply management** – in particular, linking laboratory PSM with the strengthening of PSM systems currently being undertaken with Australian support in the Central Medical Stores.

g) **POE screening for international arrivals** (including for labour mobility program participants) – Police and medical reports are prerequisites for issuance of long-term visas and work permits. However, short-term visas such as those issued to tourists and business visitors do not have the same requirement. Returning nationals (including students studying in countries exposed to novel viruses), patients returning from overseas institutions after treatment, and those participating in labour mobility programs do not go through screening on their return to the country. More thinking needs to be done in relation to the application / implementation of screening on all incoming travellers to PICs, including Samoa. **Further discussion with WHO is**

[3] The exact nature of this relationship, the associated form of aid and the funding required would be guided by a more detailed analysis of technical needs, the short-, medium- and longer-term objectives of the relationship and careful consideration of how to ensure sustainability of outcomes.

also needed to explore ways of implementing more effective screening of incoming travellers to PICs, and the thresholds that would activate such action – in particular, from countries that may be at high risk of novel or re-emerging pathogens; this could be undertaken in partnership with Australian or New Zealand border control authorities.

Next steps

33. Some **follow-up discussions** with key informants will be pursued by email and telephone before the regional report is finalised, and with relevant regional partners at the HOH meeting and in Suva.

34. Where medium- to longer-term country-specific observations and recommendations show strong **commonality with other PICs**, they will be absorbed into the final regional report and recommendations to DFAT.

Annex 1 – Terms of Reference -

TERMS OF REFERENCE

HIGH LEVEL SCOPING STUDY for DESIGN of MULTI COUNTRY PARTNERSHIPS PROGRAM to STRENGTHEN HEALTH SYSTEMS FOR HEALTH SECURITY

PACIFIC TEAM

This Terms of Reference (TOR) specifically addresses Australia's investments through partnerships to strengthen health systems and improve health security in the Pacific region. One of the challenges facing Australia is how to maximise the effectiveness of investments in terms of their being fit for purpose, effective at both a national and regional level (making an individual country safer as well as contributing to the region's safety) and coherent (so that each activity contributes to a whole greater than the sum of its parts). A rigorous evidence-based investigation of options and clear-sighted analysis will reduce the potential for investments to be scattered, fragmented and low-impact.

This investigation will be a DFAT-led process, managed by the Indo-Pacific Centre for Health Security (CHS). The first phase will comprise a preliminary desk study (described briefly below but to be managed under a separate TOR), and scoping study. The first phase will be followed by a more technical design process, and the development of an M&E framework (both of which are described briefly below but to be managed under separate TOR).

- **Preliminary desk study:** Collation of existing information on health security capacity in target countries; information from posts; existing health program information, provision of key documents, briefing and background papers to consultants (eg JEE reports or IHR self assessments, relevant DFAT evaluations or quality reporting, other studies identified through literature review).

- **Scoping Study:** High-level visit to the Pacific led by a senior consultant with high-level networks of contacts and access to senior members of Government in partner countries. This study is anticipated to include visits to up to four countries. It will culminate in a report and a presentation in Canberra with a broad group of staff from different areas to be invited, presenting recommendations for investment.

- **Design Process:** This will be a more detailed exercise designed to generate activities and annual plans, based on the Scoping Study Report. The design team will consist of technical experts from relevant thematic areas, and preferably include one person from the scoping study team to enhance continuity.

- **M&E and Performance Framework:** This should be addressed by the design team and linked to the overall Health Security Initiative (HSI) Performance Framework.

A) Background

The Indo-Pacific region includes many recognised hotspots for rapidly spreading and dangerous emerging infectious diseases, 75 per cent of which originate in animals. A major disease outbreak will have severe health and economic implications for our region - costing lives, disrupting regional trade, tourism, and development. In addition, the region is experiencing growing antimicrobial resistance including in tuberculosis and malaria, which threatens to undo decades of medical advancements in treatment of these high burden diseases.

In June 2016, the Australian Government made a pre-election policy commitment to invest in regional health security to safeguard the health and development of Australia and our region. DFAT's Indo-Pacific Centre for Regional Health Security in Australia is delivering on this commitment under the Indo-Pacific Health Security Initiative (the Initiative) announced by the Foreign Minister on 8 October 2017. This Initiative contributes to the avoidance and containment of infectious disease threats with the potential to cause social and economic harms on a national, regional or global scale.

With funding of A$300 million over five years its investments will:

- Promote global and regional cooperation
- Catalyse international responses to countries' identified needs
- Apply Australia's unique strengths in health security
- Accelerate access to new and effective tools.

The Initiative builds on Australia's Health for Development Strategy, 2015-2020, which emphasises the role of strong health systems in improving health security[4]. It aligns with the direction of the Government's new White Paper in positioning Australia to take an active and ambitious role in responding to regional and global challenges. The Initiative specifically addresses Sustainable Development Goal Target 3.d: to "strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks". The indicator for this target is countries' status in relation to the International Health Regulations (IHR) capacity and health emergency preparedness index - measured by self-assessment or through a WHO-led voluntary Joint External Evaluation (JEE). A similar index has been established by the World Organization for Animal Health (OIE) to evaluate the Performance of Veterinary Services (PVS).

The Initiative aims to inform evidence-based planning, help prevent avoidable epidemics, strengthen early detection capacity, and support rapid, effective national and international outbreak responses. It does this by accelerating research on new drugs and diagnostics, expanding partnerships at the national, regional and global level to strengthen human and animal health systems, and deepening people-to-people linkages that build national and regional health security capacity. Funding for the initiative is drawn from Australia's international development assistance program and will be applied to activities eligible to be classified as Official Development Assistance.

In 2017 DFAT's Office of Development Effectiveness commissioned an evaluation of Australia's investments in combatting pandemics and emerging infectious diseases, over the previous decade, with a focus on health systems impact – in both human and animal health. Previous programs have worked bilaterally and regionally. The evaluation found the best outcomes for animal health were: the establishment of a regional disease control model for foot and mouth disease (FMD) in South East Asia; and, the establishment of a digital surveillance program (i-sikhnas) for the use of farmers in Indonesia. Attempts to use a One Health approach (linking human and animal health) presented challenges in working across jurisdictions. Areas with the best results were public health issues with common ground such as rabies, avian influenza and antimicrobial resistance.

[4] Questions used in the H4D Strategy to identify Health System Strengthening Activities were:
- Do the interventions have cross-cutting benefits beyond a single disease?
- Do the interventions address policy and organizational constraints or strengthen relationships between the different system areas?
- Will the interventions produce permanent systemic impact beyond the term of the project?
- Are the interventions tailored to country-specific constraints and opportunities, with clearly defined roles for country institutions?

Governments in the Indo-Pacific have shown a strong interest in health security with all ten ASEAN member countries having undertaken, committed to or formally expressed interest in undergoing a JEE of their capacities to meet the legally binding International Health Regulations 2005 (IHR) requirements. Pacific leaders have also agreed to develop a new Pacific Health Security Coordination Plan (PAHSEC) to assess and develop their IHR capacities.

B) Objectives of the Assignment

To investigate the articulated needs of countries and make recommendations for targeted responses that would:

- provide a clear value add in a crowded global context
- add up to a whole greater than the sum of parts
- have a regional impact as well as a national one
- build on existing, effective DFAT programs where relevant
- have appeal to partner governments, and our own
- are evidence-based and can demonstrate development outcomes (ie health security institutions and systems improvements)
- leverage resources where possible

C) Scope of the assignment

i) The Scoping Team

The scoping team will have senior representation and are expected to operate at a strategic level, consulting and communicating with senior government officials in selected countries to promote Australia's new Health Security Initiative, identify the partner country's view of national priorities in this area, and secure the partner country's commitment to participating in potential regional multi-country and whole of region activities.

The scoping team will also meet with country representatives of multilateral organisations, senior DFAT staff at post and where relevant, non-Government and private sector organisations.

ii) The Scoping Missions

The mission will comprise a period of approximately 34 days (19 travel days and 15 other working days).
The mission will comprise the following:

- Pre-departure work: document review and finalisation of methodology and planning (estimated 2 days), and pre-departure meetings in Canberra (estimated 3 days).
- Visits to four countries (estimated 19 days, indicatively three separate trips between 18 March and end of April
- Post-visits report drafting, workshops and presentation of findings to DFAT in Canberra (estimated 10 days = 3 days for country level reports and 7 days for the final report/workshop)

iii) Consultations for each mission team

Expected Canberra consultations (individual meetings and roundtables)

- Health Policy Branch
- Indo-Pacific Centre for Health Security

- Humanitarian
- Gender, Climate Change, Disability Branches
- Relevant DFAT country desks
- Multilaterals, Banks and Funds
- NGOs & Volunteers Branch
- Scholarships
- Select whole of government partners

In-country consultations

- Meet and brief Australian High Commissioner on arrival
- Consult with High Commission/Embassy staff
- Meet with partner government Ministries – Health, Finance/Treasury, Agriculture, Planning
- Meet with in-country multilaterals (WHO, OIE, FAO, ADB, WB)
- Meet with key bilateral donors
- Meet with relevant NGOs and/or contractors

iv) Reporting

The team will be responsible for preparing and delivering a consolidated regional report drawing on findings from in-country missions and the country reports, the team's technical experience, DFAT's strategic direction, Australia's comparative advantage, and a review of the literature.

The report is likely to take the form of a rapid situation analysis supported by recommendations identifying a limited number of options for Australian multi-country, country-led, and regional investment.

The final report will be around 15-20 pages long and will be delivered before the presentation.

The scoping study report should identify partner government and other stakeholder priorities, as well as establish where health security sits in their resourcing priorities; significant political economy issues, country needs and capacities, review possible investment areas, and identify areas that require additional inputs or information.

The report should include consideration of key issues/decisions, including:

- Priority areas
- Potential partners for implementation
- Options for resourcing/leverage
- Indicative funding

v) Recommendations

Within the scoping study report, the recommendations should address the following:

a) **Options for country-led or regional interventions**: identifying evidence-based activities to strengthen health security systems to enable improved prevention, detection and response to communicable disease outbreaks; with a focus on IHR (2005) and OIE/PVS core capacities.
   - **Value for money:** 'best buy' interventions, based on evidence of impact and cost
   - **Achievable and sustainable outcomes:** an assessment of time and effort required to achieve results, and of likely sustainability after program ends.

- **Potential partners:** including national government departments, multilateral organisations (see below), regional bodies, non-Government organisations, private sector organisations, other donors and academic institutions.

b) **Potential entry points for Australian co-financed health security investments** in target countries through partnerships that could include:
   - key multilateral partners including WHO, World Bank, ADB, Global Fund, Gavi, and identifying entry points in existing processes (e.g. costed JEE plan implementation, relevant regional implementation plan for health security [e.g WHO PahSEC]; financing assessment and support with World Bank); and
   - potential opportunities for collaboration and co-financing from other donors, particularly the US (USAID, USCDC), and possibly China, Korea and Japan.

D) Team composition, duration and phasing

Team composition

Up to three team members comprised of:

- Strategic Lead
- Technical specialist – epidemiologist/public health
- Technical specialist – public health/laboratory specialist

As well as:

- DFAT lead – Head, Centre for Health Security/Ambassador for Health Security/other senior DFAT officer
- DFAT Secretariat support

Duration and Phasing

Date	Activity
19 and 20 March 2018	Consultations in Canberra; pre-departure meetings (HPB, CHS, PSS, desks, etc) Draft Methodology/ approach /plan
21-29 March 2018	Field work –Samoa (22-24 March) and Solomon Islands (26-29 March)
9-19 April 2018	Field work – Papua New Guinea (9-14 April) and Fiji (15-21 April)
23-27 April	Team workshops and drafting mission aide memoire for DFAT
4 May	Report finalisation

Annex 2 – Information Sheet provided to key informants

Australian Government

INDO-PACIFIC CENTRE FOR HEALTH SECURITY

PNG-Pacific Scoping Mission

Our Mission

Advance global and regional efforts towards the avoidance and containment of infectious disease threats in the Indo-Pacific region with the potential to cause social and economic harms on a national, regional or global scale.

Our Purpose

This scoping mission is the first of two separate high-level scoping missions to visit key partner countries in PNG and the Pacific and, separately, Southeast Asia. Each will make recommendations to DFAT on investment priorities, including recommendations for joint action with partner countries, other Australian government agencies, key aid donors, international organisations and private foundations.

Background

Australia is committed to building capacity and strengthening regional health systems, focussing our efforts on enhancing capabilities, and on being an advocate for our region in health security forums around the world.

The Australian Government's Health Security Initiative for the Indo-Pacific region, launched by the Minister for Foreign Affairs and Trade on 8 October 2017.

With funding of A$300 million over five years (2017-2022), the Health Security Initiative aims to inform evidence-based planning, help prevent avoidable epidemics, strengthen early detection capacity, and support rapid, effective national and international outbreak responses.

A significant proportion of the Initiative's resources will be allocated to country- and regional-level programs in Asia and the Pacific.

Itinerary

Samoa	22-23 March
Solomon Islands	26-28 March
Papua New Guinea	9-14 April
Fiji	16-20 April

Team

Dr Jimmie Rodgers

Lead

Dr Rodgers comes from the Western Province of Solomon Islands. He is the former Director General of the Pacific Community and is now a board member of the Asia Pacific Leaders Malaria Alliance.

Dr Rob Condon

Technical Specialist (public health)

Dr Rob Condon is a Public Health Physician with additional qualifications in Tropical Medicine, Applied Epidemiology and Aviation Medicine.

Dr Allison Imrie

Technical Specialist (laboratory)

Dr Allison Imrie is an Associate Professor of Pathology and Laboratory Medicine.

Madeleine Moss

Deputy Head of Centre, Indo-Pacific Centre for Health Security

Emeline Cammack

Assistant Director (Country Partnerships), Indo-Pacific Centre for Health Security

Annex 3 – Principal activities and meetings during the Samoa mission

Summary of main objectives and outputs of the mission:

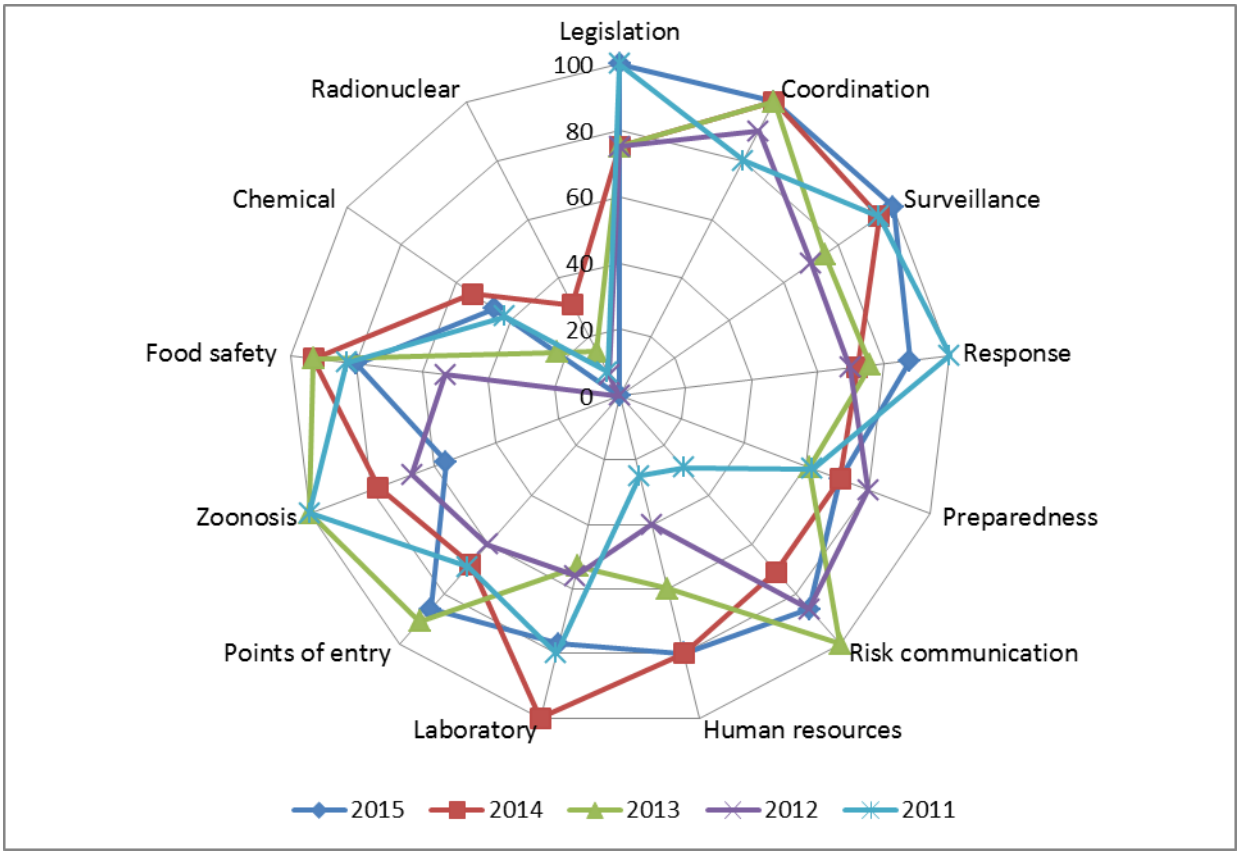
1) To provide an overview of the Australia's Health Security Initiative for the Indo-Pacific
2) To explore partner governments' and other stakeholders' views on priorities to strengthen health systems for health security in the region
3) To determine interest in participating in activities that could be country-specific, multi-country or region-wide.

Program of meetings and other activities:

Date	Time	Meeting or Activity	Venue
Thursday 22 March	9:10 – 9:45am	**Briefing with DFAT Apia Post** High Commissioner Sara Moriarty & Deputy High Commissioner, Amanda Jewell	Australian High Commission, Apia
	10:15 – 11:00am	**National Pharmaceutical Warehouse site visit**	National Health Service, Motootua
	11:00 – 11:30am	**Laboratory site visit** Mira Netav, Principal Officer Biochemistry and Haematology	National Health Service, Motootua
	12:00 – 1:00pm	**Roundtable with Development Partners (including DFAT, MFAT-WB, WHO, FAO, ADB, UNFPA)**	Australian High Commission, Apia
	1:30 – 2:30pm	**Director General for Health, Ministry of Health (also acting Public Health Physician and Chair of the Communicable Disease Surveillance Committee)** Leausa Dr Take Naseri	Ministry of Health, Motootua
	2:45 – 4:00pm	**Round table discussion with Heads of Laboratory, Pharmacy, Accident, Emergency and Outpatients and Clinical Services, National Health Service**	National Health Service, Motootua
	4:30 – 5:30pm	**Director, Red Cross Samoa** Namulauulu Tautala	Red Cross, Togaimato
	7:00 – 7:30pm	**Hon. Minister of Health**	Australian High Commissioner's

Date	Time	Meeting or Activity	Venue
		Tuitama Leao Dr. Talalelei Tuitama	residence
Friday 23 March	9:00 – 9:30am	**CEO Ministry of Finance** Lavea Iulai Lavea	Ministry of Finance, Central Bank Level 6
	10:00 – 11:00am	**General Manager, National Health Service; Director of Primary Health Care; IPC focal points from TTMH** Palanitina Tupuimatagi Toelupe; Tile Ann Ah-Leong Lui	National Health Service, Motootua
	11:00 – 12:00noon	**Roundtable meeting with Acting CEO, Heads of Disaster Management, Water and Sanitation, Environment and Water Resource Management**	Ministry of Natural Resources and Environment, TATTE Government Building, Level 3
	12.30 – 1.30pm	**Head of Faculty of Health Sciences, National University of Samoa** Maatasesa Matthes	National University of Samoa, Papagalagala
	2:30 – 3:30pm	**CEO Ministry Agriculture and Fisheries (Quarantine Authority)** Tilafono David Hunter	Ministry of Agriculture and Fisheries, TATTE Government Building
	4:00 – 5:00pm	**CEO Ministry Commerce Industry and Labor (Focal Point Labor Mobility)**	MCIL, ACB Building Level 2
	5:30 – 6:00pm	**CEO Ministry of the Prime Minister and Cabinet (Immigration)** Agafili Shem Leo	FMFM Government Building, Level 4
	6:30 – 7:00pm	**De-brief with DFAT Apia Post**	Australian High Commission, Apia
Saturday 24 March	6:00 – 6:30am	**New airport terminal site visit (Departures medical room)**	Faleolo International Airport

Annex 4 – Samoa's self-reported performance, by core capacity and year, 2011-2015; State Party Annual Reports under the IHR Monitoring Framework



Source: World Health Organization Global Health Observatory data