

Pacific Health Security Scoping Mission
SOLOMON ISLANDS COUNTRY REPORT
following consultations in Honiara, 25–29 March 2018

Please note: This draft country report draws on findings during the visit to the Solomon Islands, including an interim de-briefing with DFAT in Honiara. It has been updated slightly after further discussion with regional level partners.

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) but not yet for malaria (i.e. artemisinin-resistant *Plasmodium falciparum*; ARPF). The link between NCDs and infectious diseases like TB and AMR bacterial infections is increasingly recognised. Strengthened capacity to comply with the International Health Regulations (IHR) will help countries to combat both new and endemic health threats.
- 2. An independent, high level scoping team visited Honiara, Solomon Islands on 25-28 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 Solomon Islands Government (SIG) officials and health program managers to: share information about the Initiative; assess Solomon Islands’ 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 Honiara are shown at **Annex 3**.
- 3. The visit to Solomon Islands 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, Tuvalu and Samoa, and another is under way in Nauru. In-country missions will also be undertaken in April 2018 in Papua New Guinea (PNG) and Fiji, with further consultations to be held in conjunction with the Pacific Heads of Health (HOH) Meeting in Nadi on 18-19 April.
- 4. The team thanks the SIG for supporting the visit and meeting arrangements, for very productive discussions, and for the opportunity to visit and observe activities in the National Referral Hospital (NRH) and laboratories in Honiara.** Special thanks to the Permanent Secretary (PS) and Under-Secretary for Health Improvement (USHI) of the Ministry of Health and Medical Services (MHMS), heads of MHMS departments, the Director of Livestock and Veterinary Services of the Ministry of Agriculture and Livestock, other SIG officials, non-Government and development partners 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 Solomon Islands

- 5. The Solomon Islands experiences frequent outbreaks of vector-borne (VBD) and vaccine-preventable diseases (VPD).** Large outbreaks of dengue fever occurred in 2013 and 2016 (mainly affecting Honiara, but with cases also detected in Guadalcanal, Malaita, Western and Choiseul Provinces); deaths from dengue shock syndrome and haemorrhagic fever were recorded. Zika virus (ZIKV) was circulating in 2016. A large outbreak of almost 5,000 cases of measles affecting all provinces of the Solomon Islands occurred in 2014-15; it was eventually controlled with a nationwide supplementary measles immunisation campaign targeting individuals aged 6 months to 30 years. Outbreaks of rubella were reported in 2012 and 2015, followed by occasional infants born with suspected congenital rubella syndrome.
- 6. Malaria and TB are both endemic in the Solomon Islands;** more than 50,000 cases of malaria (annual parasite incidence around 82 per 1,000 in 2016) and about 400 cases of TB (with occasional, sporadic cases of MDR-TB) are reported each year. Despite progress by the national malaria program, localised outbreaks of malaria are still reported. Drug-resistant *P falciparum* malaria has not yet been documented but ongoing high rates of transmission and periodic shortages of rapid diagnostics and artemisinin-based combination therapy represent a continuous risk of the evolution of artemisinin resistance. To achieve the 2030 malaria elimination target agreed to by leaders at the East Asian Summit comprising the Asia Pacific Leaders Malaria Alliance (APLMA, of which Solomon Islands is a member), the focus needs to shift progressively from malaria control to malaria elimination.
- 7. Immunisation coverage remains precarious and there is ongoing risk of resurgence of VPDs.** Reported coverage in 2014 was 88% for three doses of diphtheria-tetanus-pertussis (DTP), 94% for oral poliomyelitis (OPV) vaccine and 93% for a single dose of measles-rubella (MR) vaccine; we were advised during the country visit that MR coverage has since slipped to 83% in 2017. Solomon Islands has now introduced *Haemophilus influenzae* type b and inactivated poliomyelitis (IPV) vaccines, and plans to roll out a second dose of MR vaccine and strengthen cold chain infrastructure this year
- 8. The Solomon Islands is entering transition from Gavi support, and is expected to have fully transitioned by 2022.** Most current Gavi support is used for outreach and cold chain support. The World Bank and Gavi have jointly worked on transitional financing models. Although acute respiratory infection makes up a reported 18% of under-five deaths and diarrhoea 7%, there are no plans yet to introduce rotavirus or pneumococcal conjugate vaccines.
- 9. The Solomon Islands is located in an area of the Pacific known for frequent tropical cyclones; it also lies on an active seismic area known as the Pacific 'Ring of Fire'.**

 - a) Localised tsunamis may follow larger undersea earthquakes such as the one that struck Western and Choiseul Provinces in April 2007, killing more than 50 people.
 - b) More recent natural disasters include Tropical Cyclone Freda (December 2012), a magnitude 8.0 earthquake and subsequent tsunami affecting the Santa Cruz Islands in Temotu Province (February 2013) and flash flooding in Honiara following heavy rain associated with Tropical Cyclone Ita (April 2014).
 - c) Extreme weather events such as these 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

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population displacement (e.g. interruption of treatment and care for people with chronic diseases or disability, risk of sexual or gender-based violence).

d) **Climate change and climate variability are likely to increase the frequency and severity of extreme weather events in the Pacific.**

Public Health Emergency Preparedness

10. Solomon Islands conducts self-assessment of its core capacity to implement the requirements of the IHRs approximately annually under the IHR State Parties' monitoring questionnaire (IHR-MQ). The USHI is the IHR Focal Point. The most recent IHR-MQ results are summarised at **Annex 4**; these, together with an independent assessment conducted in late 2017, show strong surveillance, laboratory, response and risk communication capability but broad weaknesses for other core IHR capacities. The positive achievements are a reflection of recent efforts to strengthen the Solomon Islands Syndromic Surveillance System (SI-SSS; [paragraph 16](#)).

11. A National Disaster Council (NDC) is in place and a detailed National Disaster Management Plan (NDMP) was approved by Cabinet in February 2018; the NDC only convenes when a specific 'event' is identified.

a) NDC membership is at the Permanent Secretary level and is chaired by the PS of the Ministry for Environment, Climate Change, Disaster Management and Meteorology; it also includes private sector, non-Government organisations (NGO), civil society, donor and development partner representatives.

b) The Minister with lead responsibility for a disaster would declare any associated state of emergency, on the advice of the NDC, and the chair of the NDC would pass to him for the duration of the emergency; for pandemics and human disease-related incidents this advice would come from the Minister of Health through the NDC while, for pest- and animal disease-related disasters, it would come from the Minister of Agriculture and Livestock.

12. There is no dedicated line item within the national budget to respond to disasters, nor in the health budget to respond to outbreaks, public health emergencies or the health consequences of environmental disasters. Following a declaration of a 'state of disaster', the NDC assumes control, directs financial allocations through the Minister with the lead responsibility for disasters to Cabinet, where payments are then authorised and paid through the Ministry of Finance. All donor funds received during a 'state of emergency' are paid into the NDC either through the consolidated accounts or direct to the NDC account.

13. There is currently no mechanism for whole-of-Government oversight of IHR implementation in the Solomon Islands. IHR action plans were developed for 2012-14 and 2014-16 but were not actively implemented – possibly due to a disconnect with annual planning and budget cycles.

a) Preparations to develop an 'all-hazards' National Health Emergency Plan (NHEP) are proceeding under the guidance of the Public Health Emergencies and Surveillance Unit (HESU). The NHEP would define specific health security aspects of the NDMP, and would also guide the strengthening of core IHR capacities.

b) The HESU has a methodical approach to strengthen IHR core capacities and, for now, will prioritise this and the IHR-MQ ahead of a Joint External Evaluation (JEE), desk-top exercises or after-action reviews.

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c) The opportunity for selected HESU officers to observe and participate in a JEE in another country would potentially enhance understanding of IHR-related needs.

14. The National Referral Hospital (NRH) Emergency Response Committee is activated when there is imminent disaster and / or in response to natural disasters or disease outbreaks. The NRH Emergency Department (ED) has a mass casualty plan, although no simulation exercise has been conducted for more than two years.

15. The Environmental Health (Public Health) Act (1996), Health Services Act (1996), and Health Workers Act (1989) are all more than 20 years old. All of these legislations need to be updated to meet the needs of the IHRs with appropriate provisions for EIDs (including methods for mandatory reporting of EIDs). In particular, a separate Public Health Act is needed to provide an overarching legislative framework for public health and IHR compliance in the country.

Surveillance, risk assessment and response

16. The national syndromic surveillance system is established at 13 sites in 8 provinces. Conditions monitored include acute fever and rash, diarrhoea, influenza-like illness, prolonged fever and, since 2013, dengue-like illness. Reports are submitted weekly to the Pacific SSS through the regional Pacific Public Health Surveillance Network (PPHSN).

17. An event-based surveillance system using mobile phone technology is also in place. It was first used to monitor diarrhoeal illness following the tsunami in Western Province in 2007.

18. Although there was not time for the team to conduct a full assessment of national surveillance systems, there is some evidence that **surveillance remains somewhat fragmented and is incompletely integrated with the national DHIS-2 based health information system (HIS).** The SI-SSS could and should be linked to the HIS; however, the event-based surveillance system serves a different purpose (i.e. early warning) and it is not a priority to link it to the HIS. Subject to an agreed approach to cover the cost of mobile phone credits, the Health information Unit is interested in piloting mobile phone based modules for routine data collection into DHIS-2.

19. The NRH laboratory does not conduct systematic surveillance and reporting of AMR or sterile site surveillance data to guide clinical management of bacterial infections. The team was informed that anecdotal evidence suggests a 97% resistance to Amoxicillin and 77% resistance to co-trimoxazole among common pathogens.

20. Point of entry (POE) health and quarantine security procedures need to be strengthened to manage risks associated with international air and maritime arrivals.

a) Improved air links mean that the Solomon Islands is no longer shielded from emerging regional and global health threats by its location and geography. **It is now possible to travel from Asia to Honiara within the incubation period of many infectious diseases** of international public health concern. The team was made aware of discussions to introduce direct international flights into the new Munda International Airport in the Western Province.

b) **An estimated 3,500 foreign workers – many from Asia – enter the Solomon Islands every year.** Police Clearance and a valid Medical Report are pre-requisites for issuance of long-term visas and work permits; however, the medical report is very general and does not prescribe special screening of foreign workers entering the country. There is no pre-arrival health screening of travellers entering the country on short-term visas, such as tourists and short-term business travellers, and on-arrival screening is through a simple, basic questionnaire.

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- c) **Institutions in the Philippines comprise the second-largest overseas training provider to Solomon Island undergraduate students** after Fiji, with a reported 500 students training in the Philippines annually.² No health screening is required for returning nationals, regardless of their travel history in Asia.
- d) **Foreign Ships servicing up-country mining and forestry camps can potentially by-pass designated ports for quarantine and health inspection and proceed directly to their provincial destinations.** The team was advised some of these ships may transport live and frozen poultry and sometimes dogs and cats.
- e) Dedicated medical rooms with appropriate equipment and supplies are necessary at designated international airports and seaports to cater for incoming passengers who may need assessment or segregation. The team was not able to visit or assess the **medical room at the Henderson International airport terminal**, which is reported to lack PPE and clinical necessities for emergency passenger care and stabilisation.
- f) **There is limited routine inter-sectoral dialogue** between the MHMS and other ministries responsible for POE screening, and no endorsed multi-sector work plan to address IHR gaps. A coordination mechanism chaired by the USHI was established during the global outbreak of H1N1 influenza in 2009-10, but only for the duration of that outbreak.

21. **Strong community networks and NGOs are well positioned to support the response to health threats and natural disasters.** Available time did not allow for a detailed review or risk communication strategies.

22. **Workers from the Solomon Islands are able to access Australia's and New Zealand's Pacific labour mobility schemes** for low and semi-skilled workers. A medical examination by a designated medical practitioner is required prior to acceptance, but no reciprocal medical clearance is required on return. Workers with asymptomatic NCDs, dormant *P vivax* malaria and latent TB infection are at greatest risk of an adverse health event during their placement.

Laboratories

23. **The NRH laboratory acts as a clinical diagnostic and blood transfusion laboratory and, simultaneously, as a public health laboratory.** The Solomon Islands population and NRH bed capacity have both increased significantly since the laboratory and hospital were built about 30 years ago. However, laboratory space has not expanded and the rooms are very overcrowded.

24. **Laboratory capacity appears overwhelmed by the combination of clinical and public health demands** and the need to undertake screening for labour mobility schemes (paragraph 22). There are other issues with laboratory infrastructure that likely impact on biosafety. Quality control issues have also been noted, and antibiotic sensitivity test results need to be interpreted with caution.

25. **The NRH laboratory budget is based on clinical testing only, and is usually fully expended by mid-year.** Additional reagents and supplies are purchased with donor assistance.

26. **Screening for infectious pathogens as indicated by the syndromic surveillance program is undertaken at NRH** using rapid diagnostic tests. Large numbers of samples are referred during outbreak events.

² The Philippines experiences ongoing public health threats from measles and TB (including MDR-TB). Malaria remains prevalent in the south of the island of Palawan, although ARPF has not been detected. There is heavy tourist traffic between ARPF-affected countries of the Mekong region, southern China and Palawan.

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27. **A separate facility on the NRH campus is designated as a dengue laboratory and equipped with a range of instruments for virological and molecular analysis, but is unused.** NRH staff were trained in Taiwan to conduct PCR-based testing, but this service is not currently available. Equipment appears to have been left unattended for an extended period of time and may be at risk of damage.

28. **The Pacific Paramedical Training Centre (PPTC) provides training at the NRH laboratory and in New Zealand in medical laboratory science, across six modules:** Medical Microbiology, Haematology and Blood Cell Morphology, Transfusion Science, Clinical Biochemistry, Laboratory Management, and Laboratory Quality Management; not all modules are offered each year. NRH participates in the PPTC external quality assurance program. Onsite training in histopathology will commence in 2018. Ongoing training in microbiology is needed.

29. **A National Public Health Laboratory (NPHL) at a separate site adjacent to the Solomon Islands National University (SINU) has three separate laboratories equipped to test water and food samples.** Two of the NPHL laboratories use microbiological and chemical methods to test water and tuna export samples. Human sample testing has not been conducted in the third laboratory since the facility was built.

30. **The NPHL has scope to take on much of the public health testing currently undertaken at the NRH laboratory.** The team was informed of the imminent construction of the University of the South Pacific (USP) Faculty of Public Health in Honiara, in partnership with SINU. Discussion with USP in Fiji subsequent to the Solomon Islands visit has confirmed that this would be an option for development of a University-based Public Health Reference Laboratory (PHRL) to support training of laboratory workers and various NPHL functions (see also recommendation at [paragraph 40b](#)).³

31. **Medical laboratory scientists who recently graduated from Fiji National University (FNU) and returned to the Solomon Islands in 2017 are yet to be employed due to lack of funded positions,** despite a critical need for additional laboratory staff. Training in medical laboratory technology at FNU is funded by SIG. An overarching laboratory development plan that predicts staffing needs and budgets appropriately would be helpful.

Infection prevention and control in health care settings

32. **There is limited infection control capacity, equipment and infrastructure at NRH.**

- a) **Infection Prevention and Control Policy and Guidelines** – The current IPC policy and guidelines are at least 10 years out-of-date and need to be reviewed and revised.
- b) **IPC Committee** – An IPC Committee exists but is not yet meeting regularly and is yet to develop an Action Plan.
- c) **Laboratory surveillance** – The NRH Laboratory undertakes bacterial culture, but there is no systematic national AMR surveillance system ([paragraph 19](#)).
- d) **Personal protective equipment (PPE)** – Gloves and operating theatre masks and gowns are the only PPE that is readily available in front line clinical areas of the NRH.
- e) **Emergency department** – The NRH ED waiting area is a crowded veranda outside the Department; this would constitute an infection control hazard for patients presenting with an unrecognised acutely infectious condition. Once the patient has undergone triage and/or an

³ The PHRL concept was also explored during the mission to PNG.

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infectious event has been recognised and declared, suspect patients would be issued with a mask at triage and an area of the veranda set aside as a separate waiting area.

f) Isolation wards – There is currently no isolation facility at NRH. The designated 5-room Isolation Ward has been temporarily re-purposed as a gynaecology ward since the labour ward was relocated to the previous gynaecology ward due to flooding. The design of the isolation rooms is inappropriate for managing risks to staff associated with highly infectious patients, with inadequate hand-washing facilities and no ante room facilities or separate patient bathrooms or laundry disposal.

g) Patient flow – There is direct ambulance access to within about 15 metres of the Isolation Ward, i.e. without needing to bring patients through the main hospital. Stretcher access is limited and ambulance patients would need to be lifted into the Isolation Ward.

Zoonoses

33. There is limited national veterinary and quarantine inspection capacity – one veterinarian in private practice in Honiara and one Australian volunteer who has completed his placement and had not been replaced at the time this report was finalised.

a) About 40 **para-veterinary officers** were trained by the Pacific Community (SPC) and are placed in the provinces. Refresher training incorporating hands-on skill development is a major need. SINU is currently developing a Diploma in Animal Health.

b) In March-April 2016, the Australian Government Department of Agriculture and Water Resources (DAWR) conducted the first **animal health survey** in Solomon Islands since 1998. For zoonoses, animal (poultry and pig) host densities were observed to be significant and are unlikely to be a limiting factor for disease spread within the more densely populated areas of Guadalcanal and Malaita. The Solomon Islands Ministry of Agriculture and Livestock (MAL) will need to consider appropriate ways to monitor host densities to assist biosecurity risk assessments.

c) The DFAT-funded **Solomon Islands Biosecurity Strengthening Project** should ensure that animal disease risks (including zoonoses) are included in risk assessment and mitigation training, policies and activities.

34. Surveillance of animal health is extremely limited, and there is no animal health lab in the country. A farmer concerned about the health of an animal would contact an Agriculture Extension Officer or para-veterinary officer for assessment. SPC helped the Solomon Islands to develop an avian influenza preparedness plan several years ago but this has not been updated.

35. All meat products and domestic pig and poultry meal and are sourced from pre-certified suppliers in Fiji, Australia, New Zealand and PNG. The Ministry of Agriculture and Livestock has received direct requests from countries outside the South Pacific (i.e. Poland, Canada the United States and Brazil) to establish direct importation routes for meat products.

36. Animal husbandry breeding stock and family pets are imported only from Fiji, Australia, New Zealand and the United Kingdom; Solomon Islands quarantine requirements are observed prior to shipping from the source country. The sea border between Western and Choiseul Provinces and Bougainville (PNG) is regarded as ‘porous’ and maritime arrivals through this route may avoid inspection ([paragraph 20d](#)).

Critical health system constraints in addressing health security risks

37. Several areas of health system capacity also compromise the Solomon Islands' ability to respond to acute public health events. They include:

- a) **Laboratory Capacity – effective and well-functioning laboratory services are critical to ensuring health security**, both in terms of enhancing preparedness to identify and respond to emerging infectious diseases and in addressing endemic infectious diseases. The NPHL has the physical capacity to take on the public health functions currently performed at the NRH laboratory, and this would relieve some of the demands that are currently overwhelming the NRH laboratory. **There is an urgent need to undertake a targeted role delineation exercise for national laboratory functions.** The role delineation exercise would then guide development of a national laboratory policy to guide future development of laboratory services at both national and provincial levels, and resourcing and operational arrangements. Improving laboratory capacity will involve consideration of infrastructure, equipment, consumables and human resources capacity.
- b) **Pharmaceutical procurement and supply management (PSM), distribution, and monitoring of medicines, equipment and other essential chemicals and reagents** – Efficient and effective PSM and distribution systems for essential medicines and other consumables that ensure 'zero stock outs' at various points of service delivery (laboratories, health facilities) is essential to containing potential spread of infectious diseases. The team was informed of a three-month survey in 2017 that established that almost 30% of all health facilities in all provinces (range 0-52%) were out-of-stock of the first-line malaria treatment during the survey period. The National Medical Store is implementing an electronic software system (*mSupply*) for stock management, ordering and procurement to be rolled out to second level medical stores (SLMS) and selected health facilities at provincial level to improve stock monitoring and PSM. **There is urgent need for an independent assessment of the PSM and distribution to all health facilities, including an assessment of the robustness of the *mSupply* software** to identify and address critical bottlenecks and ensure the PSM system can respond effectively and efficiently to any emerging infectious disease threats.
- c) **Human resources and training** – The SINU School of Nursing and Allied Health Sciences of provides: undergraduate and postgraduate courses in nursing; undergraduate diplomas in public health and nutrition; certificate and diploma courses in Pharmacy; and postgraduate diplomas in emergency medicine, and health leadership and management. SINU does not provide training in laboratory sciences. Para-veterinary training is being developed under the School of Natural Resources and Applied Sciences.
- d) Discontinuity in capacity between the national level and the **health system platform at provincial level** constrains the ability of Provincial Health Offices to fully leverage improvements in systems and capacity at the national level.

Options for Australian support

38. The scoping mission identified a number of partner government and other stakeholder priorities for Solomon Islands, 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.

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- 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 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 address immediate priorities

39. The following areas of technical assistance are likely to respond immediately to areas of priority identified in discussion with Solomon Islands counterparts:

- a) **Laboratory Services:**
 - i) Technical assistance (TA) to: facilitate the **laboratory role delineation process**; help develop a clear **policy to guide future development of laboratory services** in Solomon Islands and ensure the complementarity of the NRH laboratories and NPHL; help define human resources capability needed to operate the two laboratories effectively; and identify and quantify improvements needed in each facility to implement their respective and combined roles effectively.
 - ii) TA 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 NRH microbiology laboratory.
- b) **Pharmaceutical services:** TA to undertake an **independent assessment of systems of PSM and distribution** of medicines and supplies to all health facilities, including an **assessment of the robustness of the mSupply software for country-wide implementation**; this will help to identify and address critical bottlenecks to ensure PSM is effective, efficient and can respond to any emerging infectious disease threats.
- c) Provision of **hospital design TA** to assess options for **remodelling the Isolation Ward** (subject to it no longer being needed for gynae patients) and possible re-design and refurbishment of the medical examination room at the arrivals and departure areas of the international airport terminal.
- d) Support for the **IHR focal point to attend or participate in a JEE** elsewhere in the region to gain experience and insight into the JEE purpose and process.

Potential medium- to longer-term Australian health security investments

40. The following technical assistance and support would potentially contribute meaningfully to health security and related capacity in Solomon Islands 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 (training and capacity development)** – identify a public health laboratory in Australia or elsewhere that will partner with the NRH laboratory and the MHMS NPHL to offer ongoing training in laboratory medicine, diagnostic technologies, quality assurance, and ethics.⁴ The varying degrees of expertise and experience needed at different levels of the 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

⁴ 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.

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PPTC) and in partnership with overseas training institutions (such as the FNU or USP) that lead to recognised, accredited postgraduate qualifications.

- b) **Laboratory (public health functions, including training)** – Subject to the proposed national laboratory ‘role delineation’ policy including a University-based PHRL function, the partnership between USP and SINU (paragraph 30) may potentially also include bringing the disused Solomon Islands Malaria Training and Research Institute (SIMTRI) building back into use as part of the SINU-NPHL complex.
- c) **Laboratory (animal health laboratory functions)** – Establish links with a regional animal health reference laboratory – e.g. the Australian Animal Health Laboratory (AAHL) in Geelong, Victoria or the Institute of Environmental Science and Research (ESR) in New Zealand – which can provide diagnostic services should a significant animal disease outbreak occur, particularly if zoonotic (e.g. highly pathogenic avian influenza).
- 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 NRH IPC Committee** to oversee the revision and 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 – support further development and country-wide implementation of the electronic *M-supply* software** to ensure effective stock-take and ordering of medicines and supplies from SLMs, laboratories and all health facilities and enhance overseas procurement through the National Medical Stores.
- g) **Workforce development** – undertake analysis of the appropriate level (and mix) of workforce required to successfully implement the IHR and develop and implement a workforce plan to achieve it, addressing both the workforce training aspects with relevant institutions (including SINU) and workforce deployment and management aspects with the public service, relevant government ministries, and the private sector.
- h) **POE screening for international arrivals** (including for labour mobility program participants) – More thinking needs to be done in relation to the application / implementation of screening on all incoming travellers to PICs, including the Solomon Islands. **Further discussion with WHO is 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.
- i) **Support select research topics to build evidence-base for informed decision-making on the public health risk profile** and help strengthen core capacity to achieve IHR compliance.

Next steps

41. Some **follow-up discussions** with key informants will be pursued by email and telephone over the coming weeks, and with relevant regional partners at the HOH meeting and in Suva.

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42. 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.

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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 security⁵. 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.

⁵ 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?

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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

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- 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.

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- 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



PNG-Pacific Scoping Mission

Background

It is estimated that the threat of epidemics and pandemics will increase over the coming decades. A major disease outbreak would have severe health and economic implications for the Pacific region – costing lives, and disrupting regional trade, travel, tourism and development.

Concurrently, existing and re-emerging infections like malaria, tuberculosis (TB) and dengue fever, childhood diarrhoea and acute respiratory infection also contribute greatly to the burden of disease in many Pacific Island countries (PIC) alongside an evolving non-communicable diseases (NCD) crisis.

The region is also experiencing growing problem of antimicrobial resistance (AMR), including in TB (MDR-TB), which threatens to undo decades of advances in the treatment of high burden diseases.

The Australian Government's Health Security Initiative for the Indo-Pacific region was launched in October 2017. It is implemented by a new part of the Australian Department of Foreign Affairs and Trade (DFAT) – the Indo-Pacific Centre for Health Security (CHS).

The Health Security Initiative will aim to strengthen country and regional capacity for prevention, preparedness, early detection and response to new and emerging infectious diseases (EID; such as Zika virus and new forms of influenza), existing infectious diseases currently impacting the Pacific region (such as dengue, malaria and TB) as well as drug-resistant infections. The Initiative also recognises the burden that NCDs place on health systems in the Pacific, and the often close links between NCDs and infectious diseases like TB and AMR bacterial infections.

Interventions resulting from this initiative will aim to strengthen health systems, which will protect against health security threats and also benefit the health system more broadly to address other health and human security concerns. Because about 70 percent of EIDs originate in animals before passing to humans, there will be an additional focus on animal health and zoonotic diseases.

The Scoping Study

The Scoping Study is the first of two separate high-level missions – this one to PNG and the Pacific and the other to Southeast Asia. Each mission will make recommendations to the IP-CHS on investment priorities, including for joint action with partner countries, other Australian government agencies, key development partners, international organisations and private foundations. This will be followed by a detailed design process for investments in key priority areas, with new projects and funding expected to commence in the 2018/19 Australian financial year.

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Your contribution

An independent Scoping Study team will be visiting countries in the Pacific region during March and April 2018 to consult with senior officials, clinicians, public health managers and decision-makers and other stakeholders. The purpose of the consultations is to:

- Provide an overview of Australia's Health Security Initiative for the Indo-Pacific
- Explore partner governments' and other stakeholders' views on priorities to strengthen health systems for health security in the region
- Determine interest in participating in activities that could be country-specific, multi-country or region-wide.

Although major infrastructure requirements are not within the scope of the Health Security Initiative, we will coordinate and collaborate with other major development partners in delivering health security activities, and this may include discussions with other donors about infrastructure requirements.

The Scoping Study team will be interested to hear your views on topics including:

- What are the current arrangements for preventing, preparing for, detecting and responding to existing and emerging infectious diseases threats in your country? This could include policies and procedures, operations and infrastructure, human resources, and financing arrangements. It may encompass human and animal health systems, disaster management and epidemic response, laboratories, quarantine and points of entry/exit, private sector engagement, immigration and labour mobility and health financing.
- What are the major constraints or challenges you face in preventing and containing infectious diseases, and protecting health security? What are the capacity gaps, human resource and training needs, and systems strengthening that are required?
- What are your key priorities for strengthening health systems for health security? What would make a difference to your operations?
- What partnerships currently exist in the region to strengthen health security in your country? How effective have they been and how could we help to improve on them? Are there critical gaps needing urgent attention?

Reporting

The team will prepare a short report from each country visited. This report will detail the main findings and feedback from the in-country consultations, and will identify options for interventions. The report will be shared with CHS and will acknowledge your involvement in consultations. DFAT will be happy to share a copy of each report with its respective country once it is finalised.

A consolidated report and recommendations will also be provided to CHS on conclusion of the scoping mission.

We appreciate your participation in this scoping mission and thank you for agreeing to take part in discussions.

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Scoping Team Itinerary

Samoa – 21-24 March

Solomon Islands – 25-29 March

Papua New Guinea – 9-14 April

Fiji – 16-21 April

Scoping 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 (SPC) and is now a board member of the Asia Pacific Leaders Malaria Alliance (APLMA).

Dr Rob Condon, Technical Specialist (public health)

Dr Rob Condon is a Public Health Physician with additional qualifications in Tropical Medicine and Epidemiology. He has wide experience in Pacific health systems and communicable disease control.

Dr Allison Imrie, Technical Specialist (laboratory)

Dr Allison Imrie is an Associate Professor of Pathology and Laboratory Medicine. She has established working relationships with some Pacific Laboratories.

Madeleine Moss, Deputy Head, Indo-Pacific Centre for Health Security

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

Contact details

Indo-Pacific Centre for Health Security at chs@dfat.gov.au or visit the website at indopacifichealthsecurity.dfat.gov.au

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Annex 3 – Principal activities and meetings during the Solomon Islands 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:

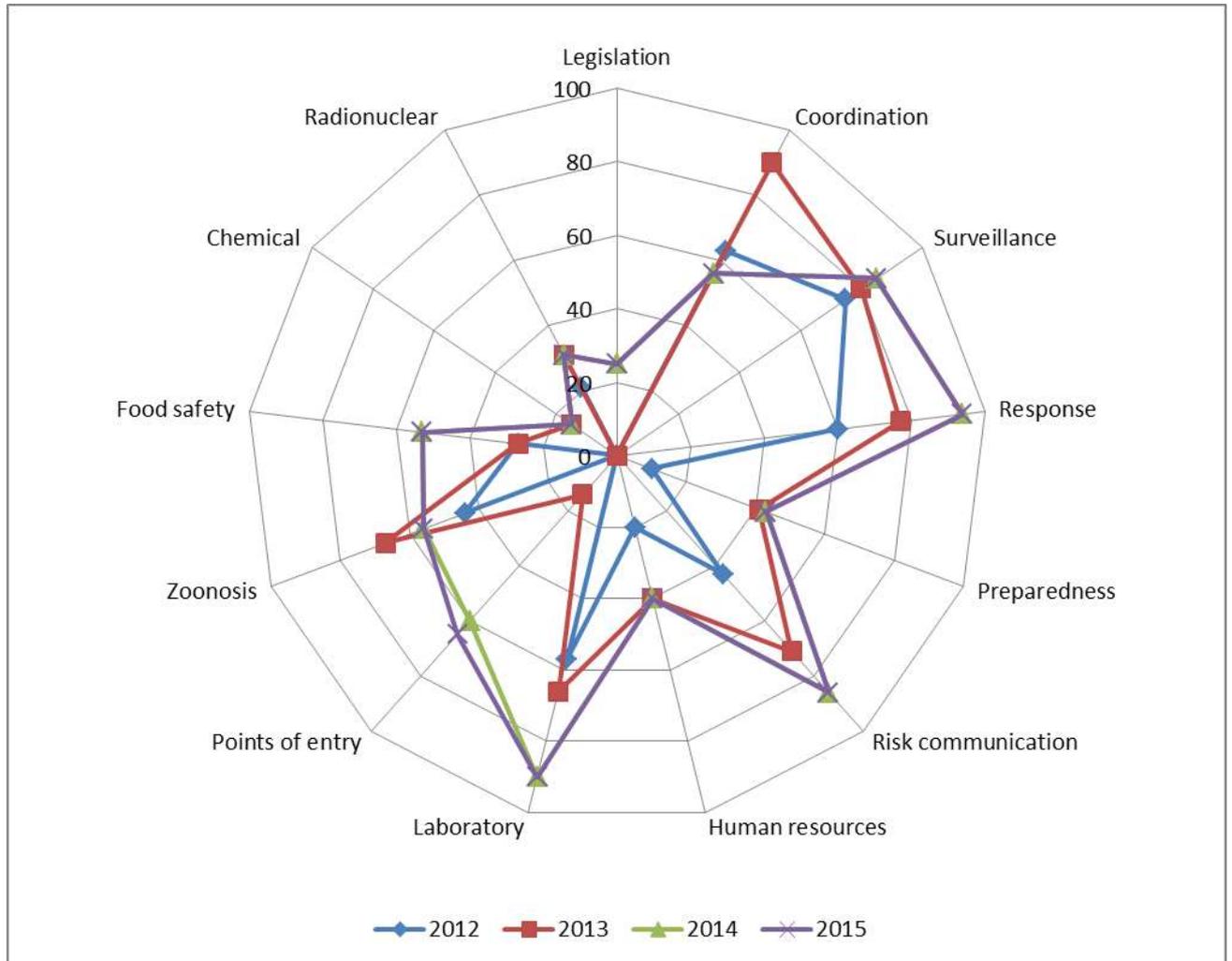
Date	Time	Meeting or Activity	Venue
Monday 26 March	8:45 – 9:15am	Briefing with DFAT High Commission First Secretary	King Solomon Hotel
	9:30 – 10:00am	Ministry of Health and Medical Services Permanent Secretary	MHMS Executive Office
	10:00 – 12:00pm	Ministry of Health and Medical Services roundtable Heads of Health Improvement and Communicable Diseases; Public Health; Non-communicable Diseases, Health Information; Public Health Surveillance and Response	MHMS Executive meeting room
	1:30 – 3:30pm	National Referral Hospital Roundtable, and hospital/laboratory site visit Head of Accident and Emergency; Laboratory Manager; Immunisation Manager and Advisor; Intern Training Advisor; Laboratory	National Referral Hospital
	4:00 – 5:00pm	Vector-Borne Disease program Head and Advisor, Vector Borne Diseases, WHO Medical Officer for Vector Borne Diseases	Tongs Building
Tuesday 27 March	9:00 – 10:00am	World Health Organization Advisors for Health Information Systems; Vector Borne-Diseases and NTDs, Surveillance and Emergency Health Preparedness, Non-Communicable Diseases, RMNCAH	Australian High Commission, Annex

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Date	Time	Meeting or Activity	Venue
	10:30 – 11:30am	Ministry of Education and Human Resource Development (MEHRD) Permanent Secretary	MEHRD office Point Cruz
	1:00 – 2:00pm	Ministry of Agriculture Permanent Secretary/Undersecretary, Director of Biosecurity, Veterinary Advisor	Ministry of Agriculture
	2:15 – 3:15pm	Ministry of Finance and Treasury Permanent Secretary	MOFT meeting room
	4:00 – 5:00pm	Australian High Commission High Commissioner, Counsellor, First Secretary, Health Program Manager	Australian High Commission Annex
Wednesday 28 March	9:00 – 10:00am	National Disaster Management Office Director	Vavaya Ridge
	10:30 – 11:30am	Public Health Laboratory Director	Public Health Laboratory, Kukum
	11:30 – 12:30pm	Solomon Islands National University Head of Medical Science School	SINU
	1:00 – 2:30pm	Development Partner Roundtable Country Representative (World Bank), Country Director (Oxfam), Secretary General (Solomon Islands Red Cross), National Officer (FAO)	Australian High Commission Annex
	3:30 – 4:30pm	Department of Immigration Immigration, Border Security and Labour Mobility	Ministry of Commerce

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Annex 4 – Solomon Island self-reported performance, by core capacity and year, 2012-2015; State Party Annual Reports under the IHR Monitoring Framework



Source: World Health Organization Global Health Observatory data