4

> When we think about emerging infectious diseases within Australia, we are thinking about what we can do within our own borders—to detect them, to control them et cetera. But we need to recognise that the Asia-Pacific region is quite an important incubator for emerging infectious diseases and for increasing antimicrobial resistance. Perhaps we should be looking to develop collaborative interactions with strategic partners in the region so that we can actually anticipate some of these problems and prevent them reaching our borders.[1]

International cross-border issues

4.1 As discussed in Chapter 3, infectious diseases do not respect international borders. As people become more internationally mobile, so too will the spread of disease.

4.2 The Committee heard evidence from a range of infectious disease experts suggesting that infectious disease issues must be dealt with collaboratively and as issues of international importance, rather than national issues which are dealt with in isolation from other countries.

4.3 The Committee was told that Australia must engage with its regional neighbours and act as a leader in controlling emerging threats of infectious disease before they spread across borders.

4.4 In an article titled *One planet – one health: moving towards sustainable solutions*, presented to the Committee, it was stated:

> Infectious diseases will continue to challenge and erode global health initiatives if we cannot address these underlying problems

---

1 Professor Tania Sorrell, Director, Sydney Institute for Emerging Infectious Diseases and Biosecurity, *Official Committee Hansard*, Canberra, 25 May 2012, p. 4.

> in developing countries, and prevent and control the spread of infections to, and within, them.[2]

4.5 The Asia-Pacific region has been flagged as a significant area regarding emerging threats of infectious disease:

> The Asia-Pacific region is an important 'hot spot' for emerging infectious diseases, with favourable climatic conditions, high population densities, livestock intensification and poorly regulated antimicrobial use. Because of extensive international travel and global trade that rapidly bypass geographical and social boundaries, these infections are a global threat.[3]

4.6 Dr Adam Kamradt-Scott, of the University of Sydney, told the Committee that Australia had a self-interest to assist neighbouring countries by strengthening their capacity to respond to emerging infectious disease threats:

> … Added to this, the socioeconomic and health disparities between and within countries of the region are profound, ranging from the high-income countries of Singapore and Malaysia to some of the poorest nations such as Laos and Cambodia. Our immediate neighbours—Papua New Guinea, Indonesia and Timor-Leste—also unfortunately fall into this category, each with their own unique challenges. Within this context, there is no denying that we have a clear self-interest to assist our neighbours to strengthen their capacity to deal with health threats before they spread to our shores, whether they arrive by sea or air. Importantly, it is only in developing a two-pronged strategy of helping our neighbours as well as strengthening our own national health systems that we can hope to secure our own health.[4]

4.7 Professor John McBride, of James Cook University, explained there was a stark difference in the health care provided in Australia and Papua New Guinea, when the close proximity between these countries was considered:

> The difference in health care across the three kilometre stretch of sea is extremely stark. It is antenatal emergencies, or women in obstructed labour, kids with measles or haemophilus influenza

2 Tania Sorrell, Ben Marais, Lyn Gilbert and Michael Ward, *One Planet – one health: moving towards sustainable solutions*, Appendix B Tabled document 3.

3 Tania Sorrell, Ben Marais, Lyn Gilbert and Michael Ward, *One Planet – one health: moving towards sustainable solutions*, Appendix B Tabled document 3.

4 Dr Adam Kamradt-Scott, Senior Lecturer in International Security Studies, Centre for International Security Studies, University of Sydney, *Official Committee Hansard*, Cairns, 2 August 2012, p. 15.

> type B and things like that that come across the border and end up being evacuated down to Cairns, costing the Australian taxpayer a lot of money, because there are not even rudimentary health services operating efficiently across the border. A little bit of investment in the healthcare markers and fairly low-cost things happening in Western Province could pay dividends for the Australian taxpayer.[5]

4.8 This chapter identifies some of the infectious disease issues facing the Asia-Pacific region, and how these issues may impact on the public health of Australia. Australia's role within the region is also discussed.

4.9 The Committee acknowledges the limitations of this report and advises that this chapter was never intended as a comprehensive survey of infectious disease issues in the Asia-Pacific region or in Australia.

4.10 In this chapter, the issue of tuberculosis is discussed in some detail. This reflects the fact that the spread of tuberculosis in the Asia-Pacific region (and particularly in the Papua New Guinea/Torres Strait Islands region) was discussed in detail by participants during the roundtable discussions, and is viewed by many of the participants as a significant risk to the future health of Australians.

Torres Strait Islands/Papua New Guinea border

4.11 The border between the Torres Strait Islands (TSI) and Papua New Guinea (PNG) is unique.

4.12 The Torres Strait Treaty (the Treaty) was established in 1978. The Treaty defines the boundaries between Australia and PNG and establishes a protected zone to manage the common border area and protect the ways of life of traditional inhabitants.[6]

4.13 The Treaty allows traditional inhabitants to cross the border for customary purposes, under community guidelines and without passports or visas.

---

5 Professor William John Hannan McBride, Professor of Medicine, Infectious Diseases Physician, School of Medicine and Dentistry, James Cook University, *Official Committee Hansard*, 2 August 2012, pp. 12-13.

6 House of Representatives Standing Committee on Health and Ageing, *Regional health issues jointly affecting Australia and the South Pacific*: *Report of the Australian Parliamentary Committee Delegation to Papua New Guinea and the Solomon Islands*, March 2010, p. 18. See also Department of Foreign Affairs and Trade, *The Torres Strait Treaty*, http://www.dfat.gov.au/geo/torres_strait/, viewed on 17 December 2012.

The Department of Foreign Affairs and Trade (DFAT) has overall responsibility for the Treaty.[7]

4.14 Mr Tim Chapman, from Department of Agriculture, Fisheries and Forestry (DAFF), outlined the TSI/PNG border zones that were established for quarantine purposes:

> When the Torres Strait Treaty was put in place there were amendments to the Quarantine Act. The Torres Strait is divided into two zones for our purposes: There is the Torres Strait Protected Zone, which is the northernmost islands and it is those islands in which the traditional movements take place. Then there is the Torres Strait Special Quarantine Zone, which is those southernmost islands, including Thursday Island and Horn Island, close to the Australian mainland. When people travel from the Protected Zone—the northernmost islands—to the Special Quarantine Zone, they undergo biosecurity clearance.[8]

4.15 The Committee's previous report into *Regional health issues jointly affecting Australia and the South Pacific* canvassed the possibility that Australia's border with PNG could become the gateway for further health threats like mosquito-borne diseases, HIV and drug-resistant tuberculosis (TB) entering Australia.[9]

4.16 The porous nature of the border between PNG/TSI, having regard to the frequency of traditional movements, poses a unique challenge for Commonwealth agencies responsible for preventing the spread of infectious disease.

4.17 The Committee was told that the biosecurity of the protected zone is managed in a number of ways.

4.18 Firstly, there are staff members from DAFF present on all inhabited islands in the Torres Strait to identify any emerging biosecurity issues. If traditional visitors are identified as being unwell, they are isolated and treated in the local health clinics.[10]

---

7 House of Representatives Standing Committee on Health and Ageing, *Regional health issues jointly affecting Australia and the South Pacific*: *Report of the Australian Parliamentary Committee Delegation to Papua New Guinea and the Solomon Islands*, March 2010, p. 18. See also Department of Foreign Affairs and Trade, *The Torres Strait Treaty*, http://www.dfat.gov.au/geo/torres_strait/, viewed on 17 December 2012.

8 Mr Tim Chapman, First Assistant Secretary, Quarantine Operations, Department of Agriculture, Fisheries and Forestry, *Official Committee Hansard*, Canberra, 25 May 2012, p. 29.

9 House of Representatives Standing Committee on Health and Ageing, *Regional health issues jointly affecting Australia and the South Pacific*: *Report of the Australian Parliamentary Committee Delegation to Papua New Guinea and the Solomon Islands*, March 2010, p. 5.

10 Mr Tim Chapman, First Assistant Secretary, Quarantine Operations, Department of Agriculture, Fisheries and Forestry, *Official Committee Hansard*, Canberra, 25 May 2012, p. 28.

4.19 Secondly, traditional visits within the Torres Strait Protected Zone can be curtailed when issues such as infectious disease outbreaks occur.[11]

4.20 Mr Miles Henderson, of the Department of Immigration and Citizenship (DIAC), gave an example of restrictions being placed on traditional movements during a cholera outbreak:

> The arrangements for traditional travel under the treaty are quite treasured and respected. There were still some movements and, except for when there is a stated health reason for a person to be moved off to a clinic, people will make arrangements to turn around as soon as practicable. If a boat arrives we do not turn it around and push it back, but you work with the arrivals to see if there is inclement weather or they have run out of petrol, or whatever. They will return voluntarily as soon as it is practicable.[12]

4.21 Mr Chapman agreed that on the whole, there was a high level of community support for enforcement of biosecurity arrangements:

> [Residents] have a very good understanding of the obligations, whether they are biosecurity obligations or whether they are Torres Strait Treaty obligations, and such small communities are actually remarkably effective in making sure that the wrong things do not happen.[13]

4.22 The Australian Agency for Aid Development (AusAID) understands that while the Torres Strait Treaty does not allow free movement to Australia for the purpose of seeking health care, residents from PNG Treaty Villages in the Torres Strait have done exactly this for a number of years. AusAID's response has been to support PNG in providing access to high quality health care in PNG, so that PNG nationals will not feel a need to travel to the Torres Strait for treatment.

4.23 The issue of PNG nationals accessing health care in Australia is discussed further in this chapter.

---

11 Mr Tim Chapman, First Assistant Secretary, Quarantine Operations, Department of Agriculture, Fisheries and Forestry, *Official Committee Hansard*, Canberra, 25 May 2012, p. 28.

12 Mr Miles Henderson, Acting Assistant Secretary, Border Security Policy, Department of Immigration and Citizenship, *Official Committee Hansard*, Canberra, 25 May 2012, p. 28.

13 Mr Tim Chapman, First Assistant Secretary, Quarantine Operations, Department of Agriculture, Fisheries and Forestry, *Official Committee Hansard*, Canberra, 25 May 2012, p. 28.

Preventing the spread of tuberculosis (TB)

4.24 Tuberculosis (TB) is an infectious bacterial disease which most commonly affects the lungs. It is transmitted from person to person via droplets from the throat and lungs of a person with active respiratory disease.[14]

4.25 The bacteria that cause TB can develop resistance to antimicrobial drugs. Multi-drug resistant TB, or MDR-TB, does not respond to at least two of the most powerful anti-tuberculosis drugs. Extensively drug-resistant TB, or XDR-TB, responds to even fewer available medicines. [15]

4.26 One of the primary causes of drug resistant TB is the inappropriate or incorrect use of antimicrobial drugs, or use of ineffective formulations of drugs.[16]

4.27 Australia has an enviable record of TB control, holding one of the lowest rates in the world. The Committee was told that this record was possible because Australia maintained dedicated TB control programs in each state and territory, and that our government policy and expertise was the best in the world.[17]

4.28 Professor Tania Sorrell, of the Sydney Institute for Emerging infectious Diseases and Biosecurity, said:

> We know at the moment, that around 80 per cent of our cases of TB are actually imported. There is very little, what we call, endemic transmission—that is to say, transmission within the community once people actually come to Australia.[18]

4.29 Given the porous border between PNG and TSI, the spread of drug-resistant TB within PNG has raised concern among Australian infectious disease experts that drug-resistant TB may become a wider issue in Australia.

4.30 Dr Stephen Vincent, Director of Thoracic Medicine at Cairns Base Hospital, told the Committee that there was an increase of drug-resistant TB in PNG, which was difficult to address:

---

14 World Health Organization, *Tuberculosis*, http://www.who.int/topics/tuberculosis/en/, viewed on 19 December 2012.

15 World Health Organization, *Multidrug-resistant tuberculosis*, http://www.who.int/features/qa/79/en/index.html, viewed on 19 December 2012.

16 World Health Organization, *Multidrug-resistant tuberculosis*, http://www.who.int/features/qa/79/en/index.html, viewed on 19 December 2012.

17 Dr Justin Waring, Medical Director, Western Australian Tuberculosis Control Program, Chair, National Tuberculosis Advisory Committee, *Official Committee Hansard*, Perth, 8 August 2012, p. 4.

18 Professor Tania Sorrell, Director, Sydney Institute for Emerging Infectious Diseases and Biosecurity, *Official Committee Hansard*, Canberra, 25 May 2012, p. 4.

> The growth of the number of patients coming across from PNG—those being PNG nationals—has exponentially grown to where we have had about 250 cases of drug-resistant TB in the last 10 years. It is a concern because there is a high prevalence of drug-resistant TB in the Western Province—probably about 40 per cent, we predict—and this is not only mono resistance but multidrug resistance, which generally requires at least two years of treatment and five or six different drugs, at great expense.[19]

4.31 Dr Vincent said that without effective surveillance and infectious disease control, there was a concern that TB would spread into the Torres Strait from PNG:

> … there are grave concerns that, if drug-resistant TB gets into the Torres Strait, it is easy for it to get into Australia because there is a lot of back and forward movement. We suspect that there is multidrug-resistant TB [MDR TB] in the population of the Torres Strait which just has not declared itself yet—but we are looking. Now that there are two cases of [extensively drug-resistant TB] XDR TB, it is a major public health problem. The cost of drug-resistant TB is exponential to that of fully sensitive TB as well, so it is going to be a major cost impact and health impact for the future.[20]

4.32 In Australia, the surveillance and control of TB is managed on a number of levels, including:

- specific tuberculosis control units or programs run by states and territories; and
- the National Tuberculosis Advisory Committee (NTAC), which provides advice to the Communicable Diseases Network Australia (CDNA), the Department of Health and Ageing (DoHA) and the states and territories.[21]

4.33 Australia primarily provides support for TB management in PNG through AusAID. In February 2012, AusAID committed an initial $11 million over four years to help PNG manage TB in Western Province. AusAID's strategy for TB management in PNG is based on the WHO's established

---

19 Dr Stephen Vincent, Director, Thoracic Medicine, Cairns Base Hospital, *Official Committee Hansard*, Cairns, 2 August 2012, p. 5.

20 Dr Stephen Vincent, Director, Thoracic Medicine, Cairns Base Hospital, *Official Committee Hansard*, Cairns, 2 August 2012, p. 5.

21 See Department of Health and Ageing, *National Tuberculosis Advisory Committee*, http://www.health.gov.au/internet/main/publishing.nsf/Content/cdna-ntac-pubs.htm, viewed on 21 December 2012.

global standards for an effective TB and MDR-TB response and includes providing both short and long term initiatives, including:

- a custom built 'sea ambulance' (medical boat);
- new infrastructure at Daru, including an interim TB isolation ward at Daru Hospital;
- new infrastructure and clinics around the border area, Sibagadaru and Mabudawan; and
- funding World Vision to deliver its 'Stop TB in Western Province Program', which supports TB specialist staff and trains and manages a network of local health workers.[22]

4.34 Ms Caitlin Wilson, of AusAID, told the Committee that one of the difficulties in managing TB in PNG was in ensuring that people diagnosed with TB complied with the rigorous and long term medication regimen:

> One of the weaknesses that we have certainly been discussing with health colleagues, with our health specialists in our department, and more broadly with specialists, is the lack of adherence to a protocol as opposed to a lack of ability to actually manage on the PNG side. We have certainly seen good progress in the last six months with an increase in confidence of patients, particularly patients who have returned to PNG for treatment, having been seen in North Queensland over a period of time.[23]

4.35 During the public roundtable discussions, the Committee heard evidence of a number of recent policy changes made at a state and Commonwealth level regarding TB management in Australia and in PNG. It was feared that some of these changes could cause increased rates of drug resistant TB in PNG and Australia. Recent policy changes have included:

- the closure of a health clinic on Saibai Island where patients (including PNG nationals) were screened and treated for TB;
- AusAID supporting the development of TB treatment and outreach services in the Western Province area; [24] and
- the closure of the main Queensland Tuberculosis Control Centre based in Cairns.[25]

---

22 See Ms Caitlin Wilson, Assistant Director-General, PNG and Solomon Islands Branch, AusAID, *Official Committee Hansard*, Canberra, 25 May 2012, pp. 24-25. See also AusAID, *Tackling Tuberculosis in Western Province, Papua New Guinea: a long term approach to ensure effective and sustained TB services*, October 2012.

23 Ms Caitlin Wilson, Assistant Director-General, PNG and Solomon Islands Branch, AusAID, *Official Committee Hansard*, Canberra, 25 May 2012, pp. 24-25.

24 See, for example, Ms Caitlin Wilson, Assistant Director-General, PNG and Solomon Islands Branch, AusAID, *Official Committee Hansard*, Canberra, 25 May 2012, pp. 24-25.

4.36 Dr Vincent said of the former clinic on Saibai Island:

> I guess we shot ourselves in the foot by having a good clinic up and running. The people in PNG knew that, if they were sick with a TB type illness, coming to the Saibai chest clinics would be valuable, because 85 per cent of them were cured, 85 per cent of them survived, as opposed to one person dying every two hours in PNG. That type of presentation you are talking about was not uncommon and it is probably still going to occur. The issue is that we actually have no ability to go up there anymore …
>
> …The worry now is that these people will present quite unwell and infect others and our TB clinics have no presence on Saibai or Boigu whatsoever, as opposed to the situation where every two weeks we had clinics up there.[26]

4.37 Dr Justin Waring, Medical Director at the Western Australian Tuberculosis Control Program and Chair of NTAC, argued that the best option to control the spread of MDR-TB into Australia and to manage TB in PNG was to combine the two policies: i.e. update the clinic on Saibai Island and support a TB management scheme in Western Province:

> The people are going to keep coming and, even if the activity in Western Province were to become successful, with their TB program becoming much more effective, it would take at least 20 to 30 years to get there. In the meantime, you face the prospect of having the people not only coming legitimately across the border—they might be coming for the wrong reasons but they do have the right to cross the border—but coming with drug-resistant TB, which is much worse.[27]

4.38 Dr Waring said that Australia had to remain vigilant about maintaining low rates of TB by maintaining effective screening and treatment programs:

> As a generalisable principle in public health, if you control something well, you get very few cases, and that then prompts administrators to take funding away because it is not a problem anymore. This has happened in New York City and London with TB. It has not happened in Australia, but we are constantly at risk

25 See, for example, Dr Stephen Vincent, Director, Thoracic Medicine, Cairns Base Hospital, *Official Committee Hansard*, Cairns, 2 August 2012, pp. 5-6.

26 Dr Stephen Vincent, Director, Thoracic Medicine, Cairns Base Hospital, *Official Committee Hansard*, Cairns, 2 August 2012, p. 10.

27 Dr Justin Waring, Medical Director, Western Australian Tuberculosis Control Program, Chair, National Tuberculosis Advisory Committee, *Official Committee Hansard*, Perth, 8 August 2012, p. 6.

> of it happening. As an example of that, the Queensland government has announced as part of their cost-cutting that they are going to close down their central TB control. So we need to be conscious that we are not just maintaining it to treat the few cases that we get but maintaining it to maintain public health activity, which is all about screening and picking up cases early and making sure that we treat them adequately.[28]

4.39 As noted earlier in the report, irregular maritime arrivals (IMAs) from countries where TB is still endemic pose another infectious disease risk for Australia.

4.40 Dr Mark Parrish, of International Health and Medical Services (IHMS – the contracted detention health services provider for DIAC), explained that there was a rigorous treatment and follow-up process in place in Australia for any person identified as having active, infective TB when they arrived in immigration detention (usually they would arrive by boat on Christmas Island). Dr Parrish explained that all people on the same boat would be considered to be 'contacts' of that individual and they would have a chest x-ray at six, 12 and 18 months after their arrival in Australia. IHMS would also advise the relevant state or territory communicable disease centre.[29]

4.41 Dr Parrish also advised of the follow-up process once a person moved from immigration detention to the community:

> In the cohort of clients that we are responsible for we make sure if they are in the detention system for that six- to 12-month period that they are contact traced and have that screening chest X-ray or further follow-up as required. If they move into the community on a visa we will hand that information over to the local centre for disease control—each state has one of those—and ensure that they have the details of the individual to follow up. [30]

4.42 Dr Padbodh Gogna, of IHMS, told the Committee that without rigorous screening and ongoing treatment of people with TB, there was a risk that drug resistance could develop:

> So, these people will require lifelong screening with drugs that if not taken on a regular basis will end up creating even more failure

28 Dr Justin Waring, Medical Director, Western Australian Tuberculosis Control Program, Chair, National Tuberculosis Advisory Committee, *Official Committee Hansard*, Perth, 8 August 2012, p. 4.

29 Dr Mark Parrish, Medical Director, Health Services, International Health and Medical Services, *Official Committee Hansard*, Canberra, 24 August 2012, pp. 5-6.

30 Dr Mark Parrish, Medical Director, Health Services, International Health and Medical Services, *Official Committee Hansard*, Canberra, 24 August 2012, p. 6.

> rates and more resistant forms of TB. It is something we are on the precipice of.[31]

4.43 Dr Julie Graham, of the Indian Oceans Territory Health Service, stated that cuts to state and territory-run TB programs around the country had reduced the ability for health service-providers to follow up individuals with TB:

> Statistics show that the risk of reactivation of TB becomes more prominent in the first 12 months when someone has resettled in a country and certainly state-based TB programs have had funding cuts to them and so reduced their ability to follow up those individuals who have latent TB or new arrivals into the system. That produces a risk. We know that the rates of TB in the areas that these people are coming from are higher than the rates in Australia. We have seen it before in the Northern Territory where we had people coming down from Timor. Twelve months into that settlement program we were seeing increased rates. So, it is continuing those ongoing healthcare services to these in-settlement programs on the mainland for an extended period of time.[32]

4.44 Dr Graham proposed that contact tracing for a person diagnosed with TB remain in place for at least a two-year period, rather than 12 months, as was the case in some states and territories:

> With TB, as I said, once you have been exposed to it, the bug lies dormant in your system and can be in the system lifelong. There is also the risk of exposure from an acute case in a confined environment over a long period of time—which happens within our centres here and in the centres on the mainland. The initial contact tracing process should be established for a two-year period because the data shows that that is when reactivation of TB is the most likely to occur. In some states that has been reduced down to 12 months.[33]

---

31 Dr Parbodh Chandar Gogna, Area Medical Director, Christmas Island, International Health and Medical Services, *Official Committee Hansard*, Christmas Island, 21 November 2012, pp. 10-11.

32 Dr Julie Leanne Graham, Director of Public Health and Medicine, Indian Ocean Territories Health Service, *Official Committee Hansard*, Christmas Island, 21 November 2012, p. 10.

33 Dr Julie Leanne Graham, Director of Public Health and Medicine, Indian Ocean Territories Health Service, *Official Committee Hansard*, Christmas Island, 21 November 2012, p. 11.

Committee comment

4.45 The Committee considers that the concerns expressed by participants following recent policy changes regarding TB control (on a state and Commonwealth level) are based on the following views:

- there is a need to remain vigilant and maintain tight control of TB in Australia, notwithstanding Australia's currently low rate of active TB;
- Australia has an important role to play in supporting PNG in its management of TB and MDR-TB, and self-interest in managing the risk of spread of TB across the Australian border; and
- there is a need for a national coordination point for TB control in Australia, to allow for effective notification, surveillance and treatment of TB in Australia, including the ability to "contact-trace" to minimise spread of disease.

4.46 The Committee shares these views and will comment further on Australia's role as a leader in infectious disease control in the region, later in this chapter.

4.47 The Committee notes that Australia's focus in managing TB in PNG, through AusAID, has been to provide a package of assistance designed to develop PNG's capacity to control TB and minimise its spread. Notwithstanding this commitment, the Committee heard evidence that until PNG's capacity to treat TB was increased, screening and treating PNG nationals on Saibai Island could be an effective line of defence in preventing the spread of disease further into Australia.

4.48 During the Australian Parliamentary Committee's Delegation to Papua New Guinea and the Solomon Islands in 2009, the Committee visited Saibai Island. At that time, health clinics were operating at Saibai and Boigu, with referrals made to Thursday Island or Cairns Base Hospital, if necessary. Representatives of the Torres Strait Regional Authority (TSRA) and the Saibai community expressed concern that treating PNG nationals in health clinics in the Torres Strait placed strain on community resources and risked infectious diseases being transferred to Torres Strait Islanders. The Committee was told that approximately 253 people presented at the Saibai clinic in 2008-2009, when the local population was approximately 337 people. The TSRA estimated that less than 4 per cent of traditional movements from PNG involved visits to health clinics in the Torres Strait in 2007-2008.[34]

34 House of Representatives Standing Committee on Health and Ageing (HAA), *Regional health issues jointly affecting Australia and the South Pacific*: *Report of the Australian Parliamentary Committee Delegation to Papua New Guinea and the Solomon Islands*, March 2010, pp. 22-24,

4.49 The Committee appreciates the concerns expressed by Torres Strait Island representatives that treating PNG nationals for health issues on Saibai Island placed strain on the community's health resources and could lead to the transmission of infectious disease into the Torres Strait.

4.50 However, the Committee has heard evidence that shutting down Torres Strait Island clinics could leave some PNG nationals without access to timely medical intervention, which could lead to an increase in MDR-TB. The Committee heard that as traditional movements continue, there is a risk that MDR-TB could move into the Torres Strait. The Committee also heard that without an ongoing presence in the Torres Strait, the ability of Australian public health authorities to track the spread of TB and MDR-TB in the region is reduced.

4.51 The Committee considers that conducting health screening of PNG nationals prior to entry to the Torres Strait Islands would be contrary to free movement in the protected treaty zone, which is embedded in the Torres Strait Treaty. Noting the close proximity of Saibai Island to PNG, the Committee is of the view that reinstating the Saibai Island clinic would allow the continuation of free movement between PNG and TSI, while also protecting the risk of spread of MDR-TB within PNG and into the Torres Strait Island communities.

Recommendation 7

4.52 **Having regard to the terms of the Torres Strait Treaty, the Department of Health and Ageing, Queensland Health, AusAID and the Papua New Guinea Government:**

- **establish a set of protocols and procedures for the identification and treatment of tuberculosis and other infectious diseases in Papua New Guinea and the Torres Strait Islands; and**
- **consider what clinical services should be available in both Papua New Guinea and Australia for the identification and treatment of tuberculosis and other infectious diseases.**

4.53 The Committee notes that to address the inability of some PNG nationals to access vital TB treatment because of their remote location, AusAID has funded a sea ambulance which conducts outreach clinics throughout the

http://www.aph.gov.au/Parliamentary_Business/Committees/House_of_Representatives_Committees?url=haa/./pacifichealth/report.htm.

South Fly region. AusAID states in its paper, *Tackling Tuberculosis in Western Province, Papua New Guinea*[35], published in October 2012, that in five months, 11 outreach visits had been conducted.

4.54 The Committee watched with interest, the Four Corners program '*The Rise of the Superbugs*' screened by the ABC on 29 October 2012. The Committee notes comments made in that program that the sea ambulance did not visit some villages regularly enough to allow for effective treatment of TB.[36]

4.55 The Committee was concerned that it appeared in the Four Corners program that appropriate infection control protocols, such as the use of masks and the isolation of patients in TB and MDR-TB isolation units at Daru Hospital, were not being adhered to.

4.56 The Committee supports the continued efforts of AusAID in assisting PNG develop stronger management of TB, as Australia has an important role as a leader in health care in the region. The Committee notes that as part of its ongoing commitment to capacity building in PNG, AusAID has committed to undertake regular reviews of its assistance programs, and will revise programs where needed to ensure best practice and that the desired outcomes are achieved.

4.57 As part of a robust framework of review, in 2012 the PNG Government commissioned an independent report, *Evaluation of Risks of Tuberculosis in Western Province Papua New Guinea.*[37] The report identified several areas for improvement, including the need to develop better TB infection control practices at Daru Hospital. The report also recommended expansion of outreach activities, including increased use of sea ambulance.[38]

4.58 In a joint response to the report, AusAID and the PNG Government agreed to all of the report's recommendations, outlining the steps to be taken.[39]

4.59 In view of the issues reported on by the Four Corners program, and the stated commitment to ongoing assessment, the Committee expects that

35 AusAID, *Tackling Tuberculosis in Western Province, Papua New Guinea: a long term approach to ensure effective and sustained TB services*, October 2012.

36 ABC Four Corners, *Rise of the Superbugs*, transcript, http://www.abc.net.au/4corners/stories/2012/10/25/3618608.htm#transcript , viewed on 21 December 2012.

37 AusAID, *Evaluation of Risks of Tuberculosis in Western Province Papua New Guinea*¸ September and October 2012, pp. 43-44.

38 *Joint AusAID-PNG Government Response to Evaluation of Risks of Tuberculosis in Western Province*, November 2012.

39 *Joint AusAID-PNG Government Response to Evaluation of Risks of Tuberculosis in Western Province*, November 2012.

further reviews of AusAID's TB control initiatives in PNG will specifically examine and report on the progress toward improving infection control at Daru Hospital, and on the operation of the sea ambulance to ensure that PNG nationals who rely on this service for their TB medication continue to have access to appropriate medication in a timely fashion.

4.60 It is clear that one reason why Australia has one of the lowest rates of TB in the world is due to the tireless efforts and expertise of respiratory disease physicians and other experts, running effective control programs across each state and territory.

4.61 The Committee heard evidence specifically praising the success and ongoing efforts of staff within the TB control units situated in Western Australia and Queensland. From the evidence before the Committee, some of the important features of these state-based control units include:

- effective surveillance and information-sharing on a state and national level, to monitor the spread of TB;
- effective and timely contact tracing to ascertain whether other people in contact with the infected person have been infected with TB; and
- effective treatment of TB, including ongoing follow up with patients to ensure full medication compliance, thereby avoiding the development of drug-resistant TB.

4.62 Noting the importance of ongoing effective TB control in Australia, the Committee considers that there is a broader need for a coordinated national approach to infectious disease control. The Committee considers that this national approach would also encompass TB control. The Committee discusses this issue further in Chapter 6.

A global leader and partner

4.63 Australia has been a global leader in infectious disease control, in areas such as immunisation, TB control and in its ability to eradicate diseases such as endemic measles and polio.[40]

4.64 With a strong capacity in surveillance, treatment and control of infectious disease, it has been argued that Australia has an important contribution to make in the international community, particularly in assisting regional neighbours detect and control infectious disease.

40 Professor Peter McIntyre, Director, National Centre for Immunisation Research and Surveillance of Vaccine-Preventable Diseases, *Official Committee Hansard*, Canberra, 25 May 2012, p. 5.

4.65 Dr David Smith, clinical virologist and Chair of the Public Health Laboratory Network of Australia (PHLN), explained that Australia had a strong system of responding to emerging disease threats:

> We have a very robust system in Australia that has been able to deal with a number of threats that have come up so far. We now have a greater capacity. I believe you have heard about a number of quite sophisticated technologies that give us a lot more power to identify organisms. When SARS appeared, we knew the infecting organism within a couple of months. A decade or two ago, it would have been months or years before it was characterised. When pandemic flu emerged in 2009, we had tests available for that within two weeks, long before the pathogen ever entered into the country.[41]

4.66 Dr Laurens Manning, of the University of Western Australia, argued that as diseases were bi-directional, Australia had a responsibility to prevent the spread of infectious disease across its borders to other countries, just as it needed to manage the risk of diseases spreading into Australia from overseas:

> I would just like to make the point that these diseases are bidirectional. They go between these countries and Australia but also from Australia back to these countries as well. We have lots of expatriates working in Papua New Guinea, for example, and other places in the Pacific. The effect of this is that there is a disproportionate effect of transmissible diseases such as antibiotic resistant bacteria, HIV and tuberculosis in these countries. So it becomes a humanitarian issue as well. Part of our aid responsibility is to ensure that any surveillance network we have in place in Australia is at least in some umbrella capacity spread over our neighbours as well.[42]

4.67 According to Dr Waring, providing aid to regional neighbours played a significant role in preventing the spread of disease, preventing its importation into Australia, and, more broadly, improving the lives of people in nearby developing countries:

> If we contribute aid to countries like Papua New Guinea, East Timor, the Pacific Islands and Indonesia, we do not just improve our chances of reducing TB coming to Australia by helping our immediate neighbours control the problem. It has much greater

41 Dr David William Smith, Chair, Public Health Laboratory Network of Australia, *Official Committee Hansard*, Canberra, 25 May 2012, p. 36.

42 Dr Laurens Manning, Associate Professor, Infectious Diseases, University of Western Australia, *Official Committee Hansard*, Perth, 8 August 2012, p. 11.

> effects because, for example, TB affects the economic powers of young adults. If you reduce the incidence of TB in a country like Indonesia, you improve the working population. The mothers and the young adults do not get sick and die.[43]

Building capacity in neighbouring countries

4.68 Dr Manning considered that Australia should take a leading role in controlling and responding to infectious disease issues in the Asia-Pacific. He stated there was a gap in knowledge regarding infectious disease identification and control in countries such as PNG, West Timor, West Papua and the Solomon Islands:

> Essentially the main problem as I see it is that there is a huge knowledge gap in pretty much all aspects of infectious diseases in these countries, and that spans all facets of infectious diseases, from bacteria viruses through to parasites, and common diseases like golden staph right through to epidemic diseases like influenza or Hendra virus, that we are more familiar with as epidemics.[44]

4.69 The Committee was told that there was limited laboratory capacity in PNG, with even basic tests such as malaria and TB testing not being available in most settings, and other more complex tests only available in Port Moresby - or not available at all. Dr Manning proposed that Australia assist in building laboratory capacity in countries such as PNG:

> Essentially I submit to you that if we want to play a role as a leader in the region we need to be promoting expanded laboratory capacity in Papua New Guinea and a broader surveillance network that integrates well with our own but encompasses these countries.[45]

4.70 Dr Paul Armstrong, of the Western Australia Department of Health, told the Committee that a lack of laboratory capacity meant that some people with an infectious disease would not be diagnosed until well down the track:

> One of the issues is that in countries where the laboratory systems are less developed an outbreak of a disease of epidemic or pandemic potential which arises somewhere in a remote part of

43 Dr Justin Waring, Medical Director, Western Australian Tuberculosis Control Program, Chair, National Tuberculosis Advisory Committee, *Official Committee Hansard*, Perth, 8 August 2012, p. 11.

44 Dr Laurens Manning, Associate Professor, Infectious Diseases, University of Western Australia, *Official Committee Hansard*, Perth, 8 August 2012, p. 2.

45 Dr Laurens Manning, Associate Professor, Infectious Diseases, University of Western Australia, *Official Committee Hansard*, Perth, 8 August 2012, p. 2.

> that country may not necessarily be diagnosed until well down the track, simply because they do not have laboratory expertise.[46]

4.71 Professor Geoffrey Shellam, of the University of Western Australia, told the Committee that better diagnosis and control of infectious disease in countries of origin would mean better overall control of the disease:

> Since infectious diseases know no boundaries, obviously if there were better diagnosis in the countries of origin then there would be better control and better awareness of what they have to do to control it. I do not know whether there is anything that can be done by Australia to improve this, but since we focus so much on quality control in our own diagnostic procedures we have a mind to improve diagnostic facilities wherever we can. I would have thought that a recommendation to investigate ways of increasing core facilities in neighbouring countries would be valuable.[47]

4.72 Dr Kamalini Lokuge, of the Australian National University, told the Committee that Australia had a history of aid which was short term, ineffective and did not produce long-term outcomes. Dr Lokuge stated that aid needed to be delivered at a grass roots level to build capacity and local engagement within local communities:

> I think what is needed is real engagement with those who are directly involved in taking up those services and delivering them, rather than just limiting our involvement to external assistance that is not monitored and is not accountable.[48]

4.73 Professor Sorrell said that building capacity within a country's own health system was important:

> The laboratories are fairly rudimentary. We have just come back from Indonesia and it is certainly true that their influenza capacity has been increased as a special initiative, funded from outside, but their ability to detect multi-drug-resistant TB is minimal, and some of the other diseases that occur in eastern Indonesia. They are asking for our help to build laboratory capacity. I think the two need to go hand-in-hand.[49]

---

46 Dr Paul Armstrong, Director, Communicable Disease Control Directorate, Department of Health, Western Australia, *Official Committee Hansard*, Perth, 8 August 2012, p. 8.

47 Professor Geoffrey Shellam, Professor of Microbiology, University of Western Australia, *Official Committee Hansard*, Perth, 8 August 2012, pp. 18-19.

48 Dr Kamalini Lokuge, Medical Epidemiologist, National Centre for Epidemiology and Population Health, Australian National University, *Official Committee Hansard*, Canberra, 25 May 2012, pp. 7-8.

49 Professor Tania Sorrell, Director, Sydney Institute for Emerging Infectious Diseases and Biosecurity, *Official Committee Hansard*, Canberra, 25 May 2012, p. 8.

4.74 Professor Shellam submitted that government should encourage national research funding agencies such as the National Health and Medical Research Council (NHMRC) to fund more international research collaborations, whereby Australian researchers worked with countries to our north to investigate diseases of importance in those countries.[50]

4.75 Professor Shellam told the Committee that he had a student from Malaysia conducting research in Australia that he could not conduct overseas, due to the lack of laboratory capacity:

> I have a student who has come from the health department in Malaysia, bringing the whole database of dengue since 2005—nearly 300,000 cases. He has discovered that there are a large number of cases of dengue-like illness which are actually not caused by dengue. They did not have the laboratory capacity to identify this. We have identified these cases by using PathWest in Western Australia. That is a particular example, but one would like to see real capacity in neighbouring countries to make good quality diagnoses—perhaps not tertiary level diagnoses but good quality diagnoses.[51]

4.76 Ms Jenny Da Rin, of AusAID, outlined the Commonwealth Government's current investments (through AusAID) in strengthening the capacity of neighbouring countries to respond to infectious disease issues:

> Probably our biggest investments really are about building partner-government capacity to deal with these issues themselves, to monitor effectively both at the national level and at the subnational level, and to have good data so that they have got a good understanding of what is going on, and to have effective coordination and control.[52]

4.77 Ms Joanne Greenfield, of AusAID, explained that AusAID had bilateral programs where representatives worked very closely with governments on the ground, as well as with the WHO:

> So we take a multipronged approach to what we do and we build up a framework around actually building the systems in the countries that we work in to actually deliver the health services to

50 Professor Geoffrey Shellam, Professor of Microbiology, University of Western Australia, *Official Committee Hansard*, Perth, 8 August 2012, p. 11.

51 Professor Geoffrey Shellam, Professor of Microbiology, University of Western Australia, *Official Committee Hansard*, Perth, 8 August 2012, p. 19.

52 Ms Jenny Da Rin, Assistant Director General, Education and Health Branch, AusAID, *Official Committee Hansard*, Canberra, 25 May 2012, p. 19.

save lives, to control diseases and to prevent maternal and child deaths.[53]

Committee comment

4.78 As a global citizen with a world class health care system, Australia has a responsibility to assist regional neighbours respond to emerging threats of infectious disease.

4.79 In fulfilling this obligation, Australia will in turn be protecting Australians and preventing the importation and spread of infectious disease into Australia from international sources.

4.80 It is clear that Australia must approach its role as a global leader in the fight against infectious disease using a multi-pronged approach:

- by assisting in building the laboratory capacity in the Asia-Pacific region;
- by implementing 'grassroots measures' such as educating and training health workers in neighbouring countries, to increase local capacity to diagnose and treat infectious disease; and
- by participating in collaborative research on infectious disease issues with neighbouring countries, to identify emerging threats.

4.81 From its previous visit to PNG and the Solomon Islands, the Committee understands the challenges that developing countries in the Asia-Pacific face in building capacity to implement ongoing effective infectious disease surveillance, treatment and control measures.

4.82 For example, the Committee witnessed firsthand in PNG instances where new health equipment sat idle in clinics and hospitals, because health workers either did not have the necessary training to use the equipment, or the resources required to maintain the equipment were not available and so equipment was not maintained.

4.83 The Committee supports AusAID's strategic goals in the Asia-Pacific region in working with governments to build their own capacity to provide infectious disease control measures which save lives and fight the further spread of disease.

4.84 The Committee supports AusAID's phased, long term support program for TB control in PNG which includes both shorter and longer term measures based on the WHO treatment guidelines for TB and MDR-TB. The Committee notes, for example, that in its paper, *Tackling Tuberculosis*

53 Ms Joanne Greenfield, Senior Health Specialist, AusAID, *Official Committee Hansard*, Canberra, 25 May 2012, p. 19.

in Western Province, Papua New Guinea[54], AusAID identifies building PNG's laboratory capacity to diagnosis and monitor TB and MDR-TB as short to medium-term goals.

4.85 As noted earlier, the Committee is reassured that AusAID and the PNG Government have a robust review and reporting framework in place. This will ensure that there is appropriate accountability in the implementation of aid measures in PNG and the opportunity to review and revise programs if needed to achieve outcomes. The Committee encourages AusAID to continue to work closely with the PNG Government and service-providers both during the initial roll-out of any measures and on a continuing basis, to ensure the ongoing viability of these programs.

Research collaborations

4.86 The Committee was told that Australia should continue targeted research in Australia and overseas, as a means of preparing Australia to respond effectively to future outbreaks of infectious disease.

4.87 Dr Deborah Lehmann, of the Telethon Institute for Child Health Research, considered that a key focus of research should be modelling to predict the future changes in climate and the environment, and research on surveillance activities. Further, Dr Lehmann stated that research on surveillance should be conducted both here and overseas. Conducting research on surveillance techniques overseas would be a means of supporting neighbouring countries in managing emerging disease threats.[55]

4.88 Professor Shellam argued for the need for more dedicated research funding for Australians involved in researching tropical infectious diseases overseas:

> At the moment it has been very difficult to get such support from our national body, the National Health and Medical Research Council, and many of our good researchers in Australia struggle to get funds to do adequate research in tropical countries. Other countries such as the United Kingdom, the Scandinavian countries and so on are much better served per capita in terms of funding for research in tropical areas, although the diseases are less immediately important to them. I think that is something that really does need to be addressed if we are to capture the best of

54 AusAID, *Tackling Tuberculosis in Western Province, Papua New Guinea: a long term approach to ensure effective and sustained TB services*, October 2012.

55 Dr Deborah Lehmann, Principal Research Fellow, Telethon Institute for Child Health Research, *Official Committee Hansard*, Perth, 8 August 2012, p. 4.

> what we do in Australia. We have some very good tropical research going on in Australia—malaria, in particular, is pursued at a very high level—but we are finding it difficult to do research in the countries in which these diseases are prevalent, because of lack of dedicated research funding.[56]

4.89 Professor Tania Sorrell, of the Sydney Institute for Emerging infectious Diseases and Biosecurity, advised that maintaining international links and building research capacity in neighbouring countries would assist in containing infectious disease issues in those countries:

> … An example of a more slowly moving issue is rabies in Indonesia, which is moving slowly towards the Torres Strait. It is partly related to the movement of humans and dogs between different islands. We need to keep a handle on that. We need to collaborate with partners and build their capacity to do research in Indonesia to actually contain the problem in Indonesia.[57]

4.90 Professor Shellam considered that funding more collaborative international research involving Australian researchers was important:

> One I mentioned before would be to allow the national grant-giving agencies to fund international research, involving Australian researchers, in infectious diseases which are important in countries to our north and that sort of thing. That would be a very important development …
>
> … Doing our own research in collaboration with those countries.[58]

4.91 Dr Clive Morris, of the National Health and Medical Research Council (NHMRC) advised that the NHMRC maintained links internationally with major funding organisations, to consider potential research collaborations:

> We work through both government and non-government funders of research. A good example of that is the Bill & Melinda Gates Foundation. We are in discussions with them about potential research collaborations. Just recently we held a joint symposium with the Singaporean health research agency, A*STAR, on tuberculosis and influenza. We will shortly be doing a joint call for

56 Dr Clive Morris, Head, Research Group, National Health and Medical Research Council, *Official Committee Hansard*, Canberra, 25 May 2012, p. 37.

57 Professor Tania Sorrell, Director, Sydney Institute for Emerging Infectious Diseases and Biosecurity, *Official Committee Hansard*, Canberra, 25 May 2012, p. 5.

58 Professor Geoffrey Randolph Shellam, Professor of Microbiology, University of Western Australia, *Official Committee Hansard*, Perth, 8 August 2012, p. 11.

> research into infectious diseases. We anticipate that that will be opening in June or July this year.[59]

Committee comment

4.92 Research is an important part of the fight against the outbreak of infectious disease in Australia and its importation from international sources. The Committee notes that NHMRC is already actively engaged in a range of activities to support international infectious disease research collaboration. In particular the Committee commends the NHMRC for its engagement with international government funders of research, and non-government funders of research such as the Bill and Melinda Gates Foundation.

4.93 To ensure that research of the highest calibre is supported, the Committee understands that the research funding is awarded following a rigorous competitive, merit-based assessment process. While supporting the principle of merit-based research funding, the Committee sees the strategic benefit to Australia and to its regional neighbours, of increasing collaboration to build infectious disease research capacity. Therefore the Committee recommends that the NHMRC provide more support for initiatives to increase international infectious disease research collaborations and build research capacity, particularly with neighbouring countries in the Asia-Pacific region.

Recommendation 8

4.94 **The National Health and Medical Research Council, in conjunction with key stakeholders, work collaboratively to provide more support for initiatives to increase international infectious disease research collaborations and build research capacity, particularly with neighbouring countries in the Asia-Pacific region.**

59 Dr Clive Morris, Head, Research Group, National Health and Medical Research Council, *Official Committee Hansard*, Canberra, 25 May 2012, p. 37.