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## The Economics of HIV/AIDS in Small States: Evidence from Pacific Island Countries

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### 3.1 Introduction

The Pacific island economies are made vulnerable by a number of geographical and economic factors. Although we acknowledge the importance of geographical factors, this chapter will focus on the economic factors, arguing that the surge of HIV/AIDS has added a new dimension to the vulnerability of these fragile states.

HIV/AIDS was first detected in the Pacific in the mid-1980s. It has spread steadily in the Pacific since then, given the prevalence of a number of aggravating factors required for an epidemic. A 2004 estimate by the Asian Development Bank (ADB) for its Pacific member countries revealed a total of 10,500 HIV/AIDS cases (SPC, 2004). This number has increased rapidly and a 2009 report on the Pacific revealed a total of 29,629 reported cases of people living with HIV with 5,162 new HIV diagnoses in 2008. Of these, 99 per cent are in Papua New Guinea (UNAIDS Pacific Region, 2009). However, this figure is obviously underestimated because of people's unwillingness to report to health authorities and also due to the lack of surveillance systems. In a 2005 report, ADB expressed concern about HIV/AIDS' potential destructive effects on the economic and social development of the Pacific economies and societies (ADB, 2005b). The bank resolved to:

- Help countries in the region to understand the nature of the epidemic by generating information through improved surveillance and other studies,
- Enhance the decision making skills of programme managers through improved use of information,
- Build the skills of local government and civil society organisations to implement prevention and care programmes, and
- Develop useful and practical monitoring and evaluation systems (ADB, 2005b).

Among the Pacific island countries, Papua New Guinea and Fiji have the highest number of reported cases of HIV. At a sub-regional level, Melanesian countries report almost all HIV-related cases (see Table 3.2). The risks to the Pacific are great, given the current state of its socio-economic development. One of the first formal reports prepared by the United Nations stated the following with respect to vulnerability of the Pacific population:

*The principal reasons that the Pacific region is vulnerable to the AIDS epidemic stem from these social, economic and cultural dynamics: the movement of people out of, into and within the region; mobility that assists the introduction and spread of HIV; the youthful age structure of Pacific island populations and their high dependency ratios; the very slow growing, even stagnant, economies of the region and consequently, very limited opportunities for employment and the growing impoverishment*

*of some people; and socio-cultural factors that pattern the status of women and the behaviour of men.*  
(UN, 1996: 23)

Therefore, the objectives of this study are to identify the main economic issues associated with HIV/AIDS in small states, including the region's specific determinants of transmission. Furthermore, we examine the micro and macro level impacts of HIV/AIDS and the best practices in the region for coping with HIV/AIDS, the inclusion of economic policies and government spending, as well as policies to prevent and treat it, and the cost effectiveness of these policies. We also examine the financial support from the government budget and external funding accessible to small states, including the trend in public sector resource allocation towards combating HIV/AIDS, the costs and its effectiveness.

To fulfil the objectives of this study, we examined the existing literature and undertook in-depth interviews to answer the research questions embedded in the objectives. The second section of this chapter examines the social and economic impact of HIV/AIDS on Pacific economies and societies. Section 3 examines the region's specific risk factors associated with the spread of HIV/AIDS. Section 4 provides an overview of the local, regional and international support for HIV/AIDS programmes in the Pacific region and its effectiveness. The last section provides the summary and conclusion.

The Pacific Regional Strategy on HIV/AIDS 2004–08 was developed through an extensive consultative process, taking into consideration the uniqueness of the Pacific region and issues related to HIV/AIDS, including lessons learnt from countries that have successfully halted and reversed the spread of HIV/AIDS. Following the regional HIV/AIDS co-ordinating meeting in October 2003 in Nadi, Fiji, a Regional Strategic Reference Group (RSRG) was established. The group comprised representatives from the main sub-regions of the Pacific, including the American-affiliated Pacific island countries and the French territories, people living with HIV/AIDS, non-governmental organisations, the Joint United Nations Programme on HIV/AIDS (UNAIDS) and technical agencies.

*The goal of the strategy is to reduce the spread and impact of HIV/AIDS, while embracing people infected and affected by the virus.*

Greg Urwin, Secretary General of the Pacific Islands Forum Secretariat

The Pacific Regional Strategy on HIV/AIDS (2004–08) was built on a vision for the Pacific, where the spread and impact of HIV/AIDS is halted and reversed; where leaders were committed to leading the fight against HIV/AIDS; where people living with and affected by HIV were respected, cared for and had affordable access to treatment; and where all partners committed themselves to these collective aims with the spirit of compassion inherent in Pacific cultural and religious values. The goal of the strategy was to reduce the spread and impact of HIV/AIDS, while embracing people infected and affected by the virus. The Pacific Regional Strategy came up with the Pacific Regional Strategy Implementation Plan, which is a framework for national and regional activities in the Pacific to co-ordinate a collective response to HIV and AIDS. It was formed under the following themes:

- Leadership,
- A safe and healthy Pacific islands community,
- Access to quality services,
- Human rights and greater involvement of people living with and affected by HIV/AIDS,
- Co-ordination, collaboration and partnership,
- Funding and access to resources,
- Planning, monitoring and evaluation, surveillance and research, and
- Addressing vulnerability.

The Pacific Regional Strategy on HIV/AIDS 2004–08 was implemented over a five-year period by all governments, non-governmental organisations and regional stakeholders. Countries were encouraged to meet the commitments made by their leaders to actively play their part in implementing the strategy.

This year, the United Nations Regional Task Force on Injecting Drug Use and HIV/AIDS for Asia and the Pacific, the World Health Organization (WHO), the Joint United Nations Programme on HIV/AIDS (UNAIDS), the United Nations Office on Drugs and Crime (UNODC), The Global Fund (TGF) and the Asian Network of People who Use Drugs (ANPUD) launched 'A strategy to halt and reverse the HIV epidemic among people who inject drugs in Asia and the Pacific 2010–2015' during the XVIII International AIDS Conference which was held in Vienna, Austria (18–23 July 2010). Counting on the commitment of member states and civil society, the expertise of the UN agencies, the meaningful involvement of people who use drugs and the political and financial engagement of development partners, the Strategy is designed to be implemented country by country with a strong regional component. This new strategy is an additional tool that can be used by the Pacific member states in their efforts to achieve the Millennium Development Goal number 6 and advance interventions for the prevention and control of the HIV epidemic by 2015.

### **3.2 The economic and social impact of HIV/AIDS in the Pacific**

Economic and social hardship in Pacific populations could become severe in the next two decades if effective strategies are not pursued. The impact can be classified into two levels: the macro and the micro levels. Economic analysis of the impact of the HIV/AIDS epidemic on an economy and its households can help bring a number of issues to the forefront. It will help demonstrate that the destruction of labour can starve the business sector of a productive and qualified labour force. It can demonstrate how the government sector can be deprived of significant revenue as a result of declining economic activity. It can also demonstrate how a government's health expenditure can rise in its bid to tackle the epidemic. It can demonstrate how, at the national level, outputs, and thus income, will be lost as a result of a decline in the working-age population. It will demonstrate how households losing the wage earner can face an economic and social crisis. The economic impact can be due to a diversion in the micro and macro budget towards healthcare, in particular the cost of payment for antiretroviral (ARV) drugs, and the loss of household and national income.

With a third of the world's surface and just 0.14 per cent of the world's population, HIV/AIDS prevalence in the Pacific is generally considered low compared with the other regions, but the unique demographic dynamics of the region entails that even a small number of people living with HIV can translate into high incidence and prevalence rates that can have devastating impacts on individuals, families, communities and economies (UNAIDS, 2009).

The Pacific region comprises 22 independent countries and territories spreading across 30 million square kilometres of the Pacific Ocean. It is in many ways unique and one of the world's most diverse regions – a vast range of different cultures, traditions, languages, political systems, lifestyles and living conditions. This makes the cost of implementing and co-ordinating HIV programmes higher in the region.

In the Pacific, more than 90 per cent of HIV infections reported in 2004 were recorded in Papua New Guinea, prompting the World Health Organization to predict that one in five Papua New Guinean men, women and children will be infected with HIV within the next decade unless urgent action is taken (Oxfam, 2009).

Latest UNAIDS estimates suggest that there are currently 54,000 people living with HIV in Papua New Guinea and fewer than 500 in Fiji. By the end of 2008, only 11 people in Tuvalu had been diagnosed with HIV but with a population of only 9,700, the known incidence of infection is similar to those of Guam and French Polynesia. Kiribati is only slightly behind. The 36 known cases in Federated States of Micronesia (FSM), 290 in Fiji, 19 in Marshall Islands and two in Nauru produce similar incidence rates. However, the low levels of confirmed cases and lack of surveillance in other countries preclude estimations in the Pacific region.

**Table 3.1** Per capita ODA, total external expenditure on health and on HIV, 2005

<i>Country</i>	<i>ODA (US\$) received per capita 2005</i>	<i>External expenditure on health (US\$) per capita 2005</i>	<i>External expenditure on HIV per capita – as % of external expenditure on health</i>
Cook Islands	554.2	103.9	3.3
Fiji Islands	76.8	9.6	4.2
Kiribati	302.2	29.8	3.7
Marshall Islands	996.1	143	2.6
Nauru	889.1	7.7	2.6
Palau	1,164.1	146.4	11.2
PNG	43.9	5.1	172.5
Samoa	238.4	14.1	2
Solomon Islands	419.5	22.7	1.3
Tonga	319	36.2	1.4
Tuvalu	856.2	37	17.8
Vanuatu	183.1	15.6	6.4

*Source:* UNSW Global (2009): 51–52

For some small countries such as Tuvalu and Kiribati, whose sources of income are pegged to a very narrow range of economic activity, any negative effect on this activity will have a devastating effect both on the households and the national economy. The largest source of income for Kiribati is remittances from Kiribati nationals working as seafarers. Seafaring remittances to Kiribati total approximately US\$6 million to US\$10 million (10 to 17 per cent of GDP) per year (Connell and Brown, 2005; Dennis, 2003). If this financial flow was reduced, as a result of commercial shipping companies turning to other countries to source labour due to high HIV prevalence, the cost would be considerable. A drop of 10 per cent in seafarers' remittances would be equivalent to US\$1 million to US\$2 million per year.

A decline in national income also would have a significant local and household impact. In 2003, the Secretariat of the Pacific Community (SPC) reported that each seafarer supported an average of seven people in Tuvalu, eight in Kiribati and six in Fiji. Some seafarers reportedly supported as many as 30 people at home (Dennis, 2003). These families would be deprived of their principal source of income taking into account that the Pacific island:

- Economies have low levels of per capita income,
- Countries have a narrow range of income sources,
- Populations have a large subsistence agricultural base,
- Production systems are labour intensive, and
- Countries have relatively high poverty levels and high income inequality.

**Table 3.2** Cumulative reported HIV, AIDS and AIDS deaths: incidence rates and gender distribution, all Pacific island countries and territories (to December 2008)

Country	Mid-year population 2008	New cases 2008	Cumulative cases			HIV cumulative incidence per 100,000	HIV M	HIV F	HIV gender unknown
			HIV including AIDS	AIDS including deaths	AIDS related deaths				
MELANESIA	8,312,416	5,132	28,932	2,932	429	348.1	12,846	14,820	1,266
MELANESIA excl Papua New Guinea	1,884,011	48	638	162	76	33.9	414	222	2
Fiji Islands	843,888	31	290	34	11	34.4	162	128	0
New Caledonia	246,598	15	331	118	59	134.2	246	83	2
Papua New Guinea	6,468,405	5,084	28,294	2,770	353	37.4	12,432	14,598	1,264
Solomon Islands	520,617	2	12	5	4	2.3	4	8	0
Vanuatu	232,908	0	5	5	2	2.1	2	3	0
MICRONESIA Federated States of Micronesia	471,803	15	343	187	151	72.7	248	78	15
Guam	110,445	1	36	28	28	32.6	24	12	0
Kiribati	117,290	5	192	109	82	163.7	164	28	0
Marshall Islands	97,201	2	52	28	23	53.5	30	16	10
Nauru	53,889	5	19	5	4	35.3	4	5	4
Northern Marianas	9,570	0	2	1	1	20.9	2	0	0
Palau	63,130	1	33	12	10	52.3	19	14	0
POLYNESIA	20,278	1	9	4	3	44.4	5	3	1
American Samoa	655,016	22	356	131	95.8	54.3	250	105	1
Cook Islands	64,337	0	3	1	0	4.7	2	1	0
French Polynesia	15,564	0	2	0	12.8	12.9	1	1	0
Niue	262,497	16	302	107	63	115.0	215	87	0
Pitcairn	1,550	0	0	0	0	0.0	0	0	0
Samoa	66	0	0	0	0	0.0	0	0	0
Tokelau Islands	181,964	3	19	8	8	10.4	13	6	0
Tonga	1,168	0	0	0	0	0.0	0	0	0
Tuvalu	102,652	2	17	10	9	16.6	9	8	0
Wallis and Futuna	11,035	1	11	4	3	99.7	9	1	1
ALL COUNTRIES	14,183	0	2	1	0	14.1	1	1	0
ALL excl Papua New Guinea	9,439,235	5,169	29,631	3,250	675.8	313.9	13,344	15,003	1,282
	2,970,830	85	1,337	480	310	45.0	912	405	18

Source: UNAIDS Pacific Region (2009:20)

Figure 3.1 and Table 3.3 explain the transmission mechanism of HIV/AIDS and aggravating factors at various levels of Pacific island economies.

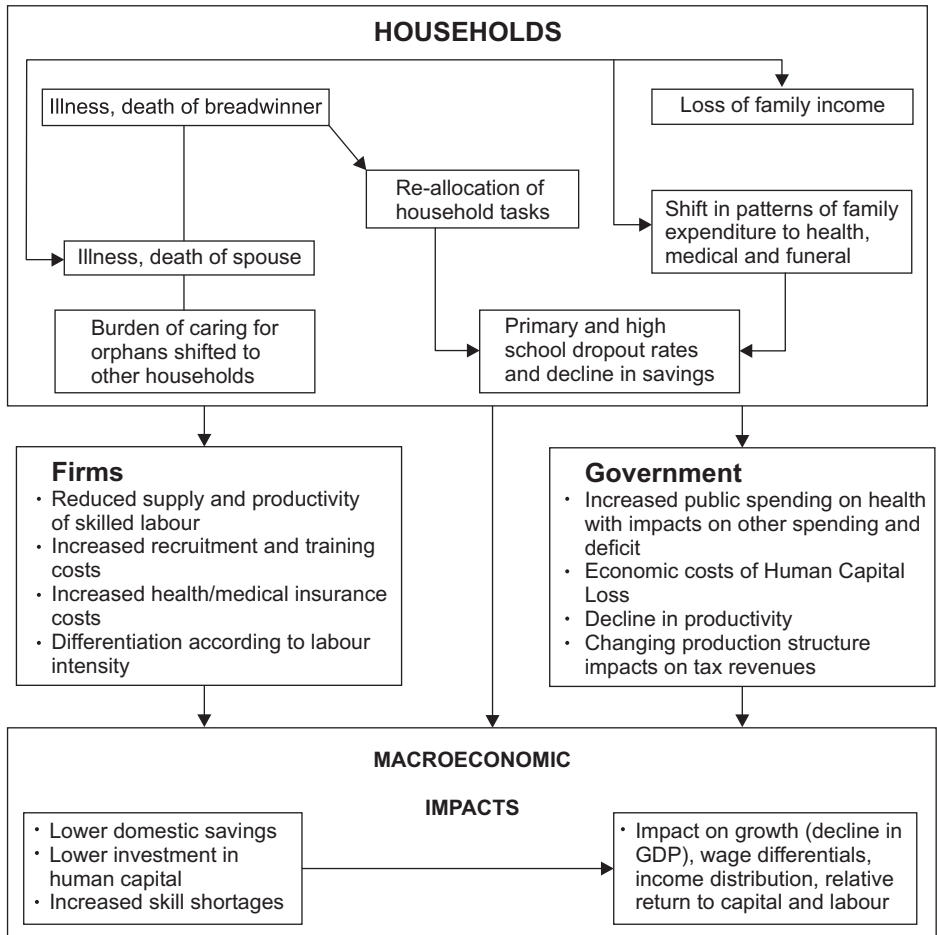


Figure 3.1 Channels for economic impact of HIV/AIDS on Pacific economies

Table 3.3 Summary of economic impact of HIV/AIDS on Pacific economies and societies

<i>Key parameters</i>	<i>Factors influencing the impact</i>	<i>Possible impact</i>
<b>Households</b>		
Reallocation of household resources towards:	<ul style="list-style-type: none"> <li>• Share of household income spent on healthcare</li> <li>• Size of funeral and mourning expenses</li> <li>• Responsibilities to care for extended family or others due to obligations</li> <li>• Share of household income on non-essential expenditure</li> <li>• Household savings</li> <li>• Extent to which public resources are provided</li> <li>• Share of household income lost</li> <li>• Ability to maintain household production – diversion of other resources such as children, extent of underemployment</li> </ul>	<ul style="list-style-type: none"> <li>• Very low share of household income is spent on healthcare</li> <li>• Most families have few resources to reallocate</li> <li>• Public provision likely to be limited to tertiary services in urban areas</li> <li>• Increase in school dropout rate</li> <li>• Low levels of education and ease for intergenerational household poverty</li> <li>• Urban areas – what proportion of households rely on a single income source?</li> <li>• Rural areas – area depend – reliance on remittances and underemployment in agriculture (is land or labour the constraining factor?)</li> </ul>
Loss of income from illness:	<ul style="list-style-type: none"> <li>• Those with HIV/AIDS</li> <li>• Carriers</li> <li>• Household members</li> </ul>	<ul style="list-style-type: none"> <li>• Current education levels are low. What is the response in terms of withdrawal from education likely to be?</li> <li>• Current investment mainly in cash crops, little opportunity in micro-enterprises. How will these be affected?</li> </ul>
Loss of future income:	<ul style="list-style-type: none"> <li>• Current education and response to household income and expenditure impacts</li> <li>• Return to education – what are the opportunities (initiatives) provided by better education?</li> <li>• Current investment and response to household income and expenditure impacts – what are the investment opportunities?</li> </ul>	<ul style="list-style-type: none"> <li>• Shortage of skilled labour means skilled wages likely to increase constantly</li> <li>• Transport sector likely to be one of the most affected, and this will in turn impact on other sectors – particularly cash cropping</li> <li>• Likely to impact most on the government as an employer</li> <li>• Mining may be very effective in education efforts – but national impact is limited due to small workforce</li> </ul>
From labour, due to reduced skill levels		
From lower investment in fertiliser, implements, seed, land, micro-enterprises etc.		
<b>Sectoral</b>		
Loss of labour leading to higher labour costs	<ul style="list-style-type: none"> <li>• Share of labour force affected by HIV/AIDS</li> <li>• Skill level of labour affected</li> <li>• Supply constraints on labour by skill level</li> </ul>	
Additional costs of employment:	<ul style="list-style-type: none"> <li>• Share of labour force with healthcare benefits and coverage of benefits</li> <li>• Share of labour force with pension benefits and size of benefits</li> <li>• Response of companies to the problem – likely effectiveness of such efforts</li> </ul>	
Medical benefits		
Pensions		
HIV/AIDS awareness programmes		

**Table 3.3 Summary of economic impact of HIV/AIDS on Pacific economies and societies (continued)**

<b>Sectoral (continued)</b>	
Additional cost of labour turnover:	<ul style="list-style-type: none"> <li>• Skill needs of sector</li> <li>• Access to skilled labour supply</li> <li>• Level of training required</li> <li>• Firm size and ability to provide on-the-job training</li> </ul>
Recruitment costs	<ul style="list-style-type: none"> <li>• Customs regarding caring for family, mourning and funerals determining absenteeism</li> </ul>
Training costs	<ul style="list-style-type: none"> <li>• Availability of HIV treatment programmes to maintain productive employment</li> <li>• Culture in terms of impact on attitude to work and the future</li> </ul>
Productivity losses:	<ul style="list-style-type: none"> <li>• Sector potential to replace labour with capital</li> <li>• Source of comparative advantage – if low-cost labour reduces potential</li> <li>• Extent to which production is for the domestic market</li> </ul>
Absenteeism	<ul style="list-style-type: none"> <li>• Extent to which government workforce is affected</li> <li>• Flow-on effect to attitude for future</li> </ul>
Higher sick leave use	<ul style="list-style-type: none"> <li>• Share of government revenue for income taxes</li> <li>• Progressive nature of tax system, indexation of tax brackets</li> <li>• Government expenditure response to increase demand</li> </ul>
Loss of interest and effort	
Reduced investment, changes in investment decisions:	
• Shifts to more capital intensive production	
• Reluctance to invest	
<b>Government</b>	
Impact on government capacity:	
• To deliver services due to loss of skilled labour	
• To develop and deliver policies and improve governance	
Impact on government revenue is anticipated to decline due to lower labour supply, and lower firm profitability (higher costs)	
Impact on government expenditure anticipated to increase as:	
• Costs rise as for other employers	
• Demand for government services rises	

Source: Centre for International Economics (2002: 73–77)



### 3.3 Country case studies and social and economic risk factors

The Pacific island communities have a number of factors peculiar to the region, which increases the risk of HIV/AIDS infection. These factors, when identified, can be the basis of policy formulation for mitigating risk. The following risk factors encourage the rapid spread of HIV/AIDS in the Pacific:

- Existence of seafarers in the Pacific region,
- Peacekeepers from the Pacific region to missions abroad,
- Substance abuse,
- Geographical factors,
- Sexually transmitted infections,
- Sexual minorities,
- Commercial sex,
- Youth behaviour,
- Demographic factors, and
- Refusal of medical tests.

The following section provides an exposition of these factors.

#### 3.3.1 Seafarers in the Pacific region

An increasing number of the Pacific islands' population is entering the seafaring business. In 1997, an estimated 6,000 Pacific islanders were registered seafarers on fishing, chemical and cargo ships (Peteru, 2002). The majority of the seafaring community has attained little education and originates from poor households. Given that they spend a considerable period of time away from home, they do tend to engage in high-risk sexual activities. Compounding this problem is the fact that they are not tested upon their return.

Oriente (2005) suggested that seafarers probably were the primary mode of HIV transmission to the Pacific region. A study in Kiribati pointed out that 9 per cent of seafarers had chlamydia; 3 per cent had syphilis; and HIV/AIDS prevalence was 0.3 per cent (UNAIDS, 2004). It is widely believed that among seafarers from Fiji, Tuvalu and Kiribati unsafe sex is often practised. The three major reasons given for this behaviour include loneliness, consumption of too much alcohol and peer pressure (see Table 3.4).

**Table 3.4** Reasons given by seafarers for practising unsafe sex (%)

<i>Reasons</i>	<i>Tuvalu</i>	<i>Kiribati</i>	<i>Fiji Islands</i>
Loneliness when away from home	82	79	70
Drinking too much alcohol	79	79	81
Influence of friends and peers	62	62	80
Uncomfortable using condoms	76	69	69
Believe will not catch STIs	71	52	57
Hearing bad news from home when at sea	68	80	–

*Source:* Dennis (2003)

### 3.3.2 Increasing number of Pacific people serving in peacekeeping missions abroad

In October 1970, Fiji became the 127th member of the UN. As a result, it has maintained a significant number of its police and military personnel (600 per year on an average) in the UN peacekeeping missions, primarily in Iraq, and with MFO Sinai in the Middle East. Fiji also has a number of private citizens working in Iraq and Kuwait, mostly in security services. Officers serve in these countries for periods ranging from 3 to 12 months. Although pinning down the level of risk attached to being away from home for long periods would be difficult, it is reasonable to expect that the probability of engaging in high-risk sexual behaviours would be high. This, in turn, will mean that when peacekeepers return to Fiji, they expose their family members and others to diseases that they may have contracted while abroad. Moreover, given the culture of the country, family members would normally not question the returning member on his sexual activities while on the mission.

### 3.3.3 Economic and demographic factors

Any attempt to explain the distribution of HIV needs to include both the economic and social factors. In the early stage of the epidemic, the literature on HIV/AIDS attempted to show a positive relationship between HIV infection rates and the sexual behaviours of persons who earned high incomes. Over time, it was observed that HIV incidence rose among those with lower educational and income levels. The reason put forward for this is that the 'poor' tends to engage in commercial sex as a business for livelihood. However, what has been found is that HIV contraction had led to more financial trouble for poor families as their incomes and wealth are depleted on medical care (Greener et al., 2000).

A study by Over (1997), using 1997 data from 50 countries in Africa, Latin America, Asia and the Middle East, showed that HIV prevalence levels increase as income per capita declines and inequality – as measured by the inequality indicator, the Gini coefficient – increases. The primary reason for this is that poor persons are not able to afford HIV prevention services, including treatment for sexually transmitted infections (STI). They also generally tend to be less educated and thus have less knowledge about the risks of HIV and its prevention methods.

Existing empirical literature on the Pacific also demonstrates that HIV/AIDS tends to have a much higher impact on women than on men. Over (1997) also demonstrated the correlation of HIV prevalence level with several proxy indicators of women's equality in society, such as low female participation in the non-agricultural workforce (less than 30 per cent is associated with high HIV levels); and the gap between male and female literacy rates, or less education among women. Recent UNAIDS data on some islands in Oceania suggest men and women now have a relatively equal risk of infection (although the risk faced by women is growing, UNAIDS, 2009). It is nevertheless true that in Pacific societies women tend to be less vocal and thus tend to have less access to social services. Women tend not to actively seek medical assistance for several reasons. Female unemployment rates are relatively high in the Pacific islands, ranging from 27 per cent in Tonga to 84 per cent in Tokelau, with a regional average of nearly 43 per cent (Pacific Operations Centre, 2007). This means that many women do not have any earning capacity and thus do not control funds. Second, females are required by cultural convention to spend more time looking after the extended family members at home, thus neglecting their own health and medical requirements.

Lack of opportunities has resulted in high levels of outward migration from the small Pacific island countries. Internal migration is also evident from the increases in movement of people from rural to urban areas. Returning migrants create avenues for HIV transmission. Rapid rural to urban

migration has been unmatched by the job opportunities in the urban sector, thus some people are pushed to engage in commercial sex.

### 3.3.4 Sexual behaviour patterns

One of the main impediments to campaigning against HIV/AIDS is the cultural barrier surrounding discussion about sexual behaviour. Pacific traditions and culture do not allow such discussions between specific kinship relations and this is also supported by religious teachings. This restriction is proving a major obstacle to the limited efforts by Ministry of Health officials to educate the general public. In one survey of Samoans, only 4–5 per cent of people considered that informing others about HIV could be preventive (Seniloli, 2003). Education programmes must be targeted first at the leaders, as the Pacific communities are leader-driven societies. Leaders include policy-makers, church elders and village chiefs. Once they are convinced of the benefits of the required change, the rank and file can be convinced. These education programmes must be supported by scientific research. An audit of research on sex and sexuality conducted in 1999 found 7,240 studies that have, at least tangentially, dealt with aspects of sex in the Pacific (Chung, 1999). However, of these, none was directly on HIV/AIDS.

### 3.3.5 Sexual behaviour of youth

Since sexual activity is by far the main transmission mechanism propelling the HIV/AIDS epidemic it will be useful to briefly review the evidence on the sexual behaviour of young people in the Pacific. United Nations Children's Fund (UNICEF) research, conducted in Tonga in 2000, reveals a number of interesting dimensions of youth sex. First, the study found that among the 15 to 19 year olds, 13 per cent of girls and 42 per cent of boys said they had had sex. Second, of those who had had sex, 58.5 per cent of the boys had three or more different partners, while 33.3 per cent of girls had done the same. Thirdly, most of them revealed that they never or rarely used condoms or any other means of contraception (UNICEF, 2001a). Another study sponsored by UNICEF on Pohnpei targeted a large representative sample of school students with ages ranging from 15 to 17 years. The study concluded from the sample that 81 per cent of boys and 42 per cent of girls had begun having sex and that 69 per cent of boys and 29 per cent of girls had three or more sexual partners. The sample also revealed that the majority of the students never or rarely used condoms. The study also explicitly surveyed youths out of school, mostly among the 17 to 20 years age group. The survey revealed that 86 per cent of boys and 60 per cent of girls had had sex. Furthermore, the study revealed that 61 per cent of boys and 24 per cent of girls had had sex with three or more partners and 73 per cent of them never or rarely used condoms (UNICEF, 2001b).

Jenkins (1996) undertook a similar, but rather smaller, study in Fiji, RMI and Samoa for youths in the 18 to 20 years age group. The study found that, among males, 72 per cent of Fijians, 64 per cent of Fijian Indians, 66 per cent of Marshallese and 64 per cent of Samoans had begun having sex. Furthermore, 15.6 per cent of Fijians, 9.6 per cent of Marshallese and 2.3 per cent of Samoans had paid for sex in cash. The study also revealed that 12.2 per cent of Fijian females and 2.4 per cent of the Marshallese females had paid men for sex. The study noted sex trade statistics for Fiji, RMI and Samoa. For Fiji, it was reported that 4.9 per cent of Fijian males and 13.3 per cent of Fijian females sold sex. In RMI, it was reported that 6 per cent of males sold sex, while for Samoa the figure was 6 per cent each of males and females.

PhD research by Kaitani (2003) on young Fijian men revealed quite interesting results. The research, using qualitative methods and a cluster survey of 822 men under the age of 25 years, mostly in educational institutions, demonstrated the poor quality of sexual and reproductive

health education available in schools. The study found a strong influence of Christian religious and moral beliefs on attitudes; however, it noted a lack of evidence of these being practised. The study revealed that by the age of 19 years, 61 per cent of these young men had had premarital sex (vaginal or anal intercourse). First sexual experiences were with other men (10 per cent); female casual friends (39 per cent); girlfriends (34 per cent); sex workers (16 per cent); and new acquaintances (2 per cent). In the prior six months, about 31 per cent had had three or more partners and 11 per cent had visited sex workers for sex. Furthermore, the study showed that those who appeared to show greater religious commitment were significantly more likely to have had sexual intercourse and to have multiple partners in the prior six months. The author interpreted this finding by noting that such young men had greater access to sexual partners through church socials than those who did not attend. Another revelation of the study was that more than 70 per cent of these sexually active men had never used condoms and only about 24 per cent claimed to be consistent users. The study also revealed that 'convoy' or group sex, in which many men line up for one woman, was being practised. While this study did not measure the frequency, another study conducted in 1996 among youths in Fiji found that 41 per cent of males and 15 per cent of females had participated in convoys (Jenkins, 1996). Similar sexual behaviour has also been documented for Solomon Islands, where convoys are called 'longline'. Buchanan-Aruwafu (2002) reveals that 21 per cent of males and less than 1 per cent of females from a sample of 300 admitted taking part in longline.

### 3.3.6 Commercial sex trade

Risky sexual behaviour is acknowledged to be one of the main drivers of the HIV/AIDS epidemic. The commercial sex trade provides ample opportunity for this risky behaviour. In spite of this, if we exclude transactional sex, the area of commercial sex in the Pacific has yet to be subjected to rigorous research. Two studies that have been conducted are those by Plange (1990) and Sainath (1994). Both studies reveal that in Fiji commercial sex is growing and an increasing number of young females are pushed to the streets as a result of rising unemployment and poverty. Another study by Mageo (1998) demonstrated that sale of sex for cash and /or other commodities or services is widespread in the Pacific, particularly by females. The study argues that there exists a definitional problem with the term 'sex worker' or 'prostitute', partly because the exchange of sex for commodities (fish, other food items, shell jewellery and trade goods) is an old pattern in many Pacific islands and has been observed and documented many times (Mageo, 1998; Snow and Waine, 1979; Wallace, 2003).

A more recent study by WHO (2006) on Fiji and Kiribati revealed that commercial sex is widespread in the country. The WHO survey found that in Kiribati, 22.5 per cent of the sampled males engaged in commercial sex while females involved in this activity were only 0.5 per cent. For Fiji, the study found that 5.8 per cent of males engaged in commercial sex while no females engaged in commercial sex.

Fiji has recently witnessed a surge of Chinese sex workers brought in to service Asian sailors and fishermen (Jenkins, 2005). This activity is often shielded from the public and is held in brothels with Chinese managers. In contrast, Fijian sex workers can be found in suburban residences, on the streets, in parks and clubs, and increasingly on-call through an organised cell phone network or via massage parlours advertised in the daily newspapers. A study by Peteru (2002) reported that seafarers note easy availability of sex workers in Fiji, French Polynesia, Guam, Nauru, New Caledonia, PNG, Samoa and Tonga. In the Solomon Islands, the term *dugongs* (Buchanan-Arawafu et al., 2003), and in Kiribati the term *korekoreas* refer to young women who meet tuna fisherman and sailors at the docks as they take shore leave (Vunisea, 2005). Previously, women could board the ships, but a new policy in 2004 attempted to halt this practice. The ingenuity of all concerned can probably be

counted on to make enforcement problematic. Buchanan-Aruwafu's (2002) research done in Auki, Solomon Islands in 2000 showed that 13 per cent of 262 sexually active youth (both male and female) had exchanged sex for money or resources. The study noted that of all the sexually active males, 18 per cent reported buying sex in the previous year and only one has ever used a condom. A rather dated study by Jenkins (1996) found that selling sex for cash was reported by 4.9 per cent of Fijian males and 13.3 per cent of Fijian females, as well as 6 per cent of males in RMI and 6 per cent of both males and females in Samoa. The study further noted that 12.2 per cent of Fijian and 2.4 per cent of Marshallese females, with no Samoan females, had paid men cash for sex.

### 3.3.7 Sexual abuse and violence

It is sometimes argued that sexual abuse and violence among children do exist in the Pacific (Christian Care et al., 2005; Wan Smolbag Theatre et al., 2004). The point made is that a strategy is needed to manage the differences between prosecuting abusers and providing HIV harm reduction methods to older girls or boys at risk of exposure. While the literature has not been able to provide a direct link between child sexual abuse and HIV infection, there is ample evidence from outside the region that serves to demonstrate that women who are physically and sexually abused by their partners, whether married or not, are at additional risk of acquiring HIV and other STIs (Dunkle et al., 2004; Johnson and Hellerstedt, 2002; Martin et al., 1999; Raj et al., 2004). The task of preventing the spread of HIV between partners is certainly more difficult than preventing the spread to clients of sex workers. However, once abuse is part of the scenario we should be aware of the higher risk of infection, and children or spouses who are abused and report it to women's and children's centres should be subjected to screening and blood testing. It would also make sense for these centres to provide training on how to protect abused spouses and children from possible infection in the future.

### 3.3.8 Sexual minorities

Pacific island societies are also endowed with a significant 'traditional gender-variant role' for males. There are various terms given for these gender-variant roles, for example, the *fa'afafine* for the Samoans, *fakaleiti* for the Tongans, *laelae* for the Cook Islanders and *mahu* for the Tahitians and Hawaiians (Jenkins, 2005). Jenkins noted that although it is generally understood that young males often had their first sexual experience with *fa'afafine* it was not their femininity which was crucial. These gender variants are also seen as very helpful and valuable to the community. Most Pacific islanders who live gender-variant roles resist the use of terms such as transgender, gay, transsexual, homosexual and so on, because they feel these terms are centred on sexuality and sexual preference (Jenkins, 2005). Traditionally, the indigenous terms were centred on aspects of the person, who was appreciated within the family and community. Sexuality was more private and not central to the identity of an individual. In a manner similar to native Americans, in some places such as Hawaii and Samoa, transgendered people have begun activities intended to rebuild their respectable place in society (Schmidt, 2001). Nonetheless, under the constant influence of Western models of sexuality, economic pressures, tourism and, to some extent, the models that grow in HIV/AIDS programmes, these Pacific formulations are being altered. These groups were the first to have become infected with HIV in the Pacific (Spiegel, 1991).

With increasing international influence and linkages, these groups with gender variant roles have formed their own identity groups and associations. While they may be able to assert influence as a group, they still have difficulty being accepted as individuals in the extended family, community and society. There are studies which have also demonstrated that these groups have high risk levels. A study of HIV/AIDS cases on French Polynesia before 1990 (n=90) revealed that 42 per cent were homo/heterosexual transmissions. This proportion dropped to 34 per cent with the inclusion

of 2002 data (Clark, 2005). A study done on Fiji by Hecklinger (2001) states that in Fiji 71 per cent of 400 males who have had sex with other males reported their male partners' self-identity as heterosexual when interviewed by a non-governmental organisation. There is need for further research in this area, carrying out in-depth interviews with these men who have had sex with other men. This should shed light on the profile of the men who have sex with men (MSM) since it is known that for some young men their first sexual experience is with another man. Although this behaviour is not coterminous with homosexuality, it tells us about the possible role of a bridging group and the particular risks that might result.

### 3.3.9 Sexually transmitted infections

It is commonly acknowledged that there is a link between the pattern of STIs and the spread of HIV/AIDS infections. A study on Samoa based on a survey of 427 pregnant women found high levels of chlamydia (30.9 per cent) and trichomoniasis (20.8 per cent), although the gonorrhoea and syphilis levels were much lower and no HIV infections were detected. The study also noted that those under 25 years old were three times more likely to have an STI than older women (Sullivan et al., 2003). Another study on Vanuatu, surveying 547 pregnant women, revealed that 39 per cent had one or more STIs. The most common infection was trichomoniasis (27.4 per cent), followed by chlamydia (21.4 per cent), gonorrhoea (5.9 per cent) and syphilis (2.4 per cent). None of the women were found to have HIV/AIDS (Sullivan et al., 2003). Similarly, a case study of patients in one clinic in Fiji revealed that more than 70 per cent of all STIs were among young people between the ages of 15 and 25 years. A more recent study on Kiribati women revealed similar results (Oriente, 2006). The survey of antenatal women and seafarers, undertaken by the Ministry of Women and WHO, revealed that among the seafarers 20.2 per cent had HSV-2, 9.3 per cent had chlamydia, 2.7 per cent had syphilis and 0.3 per cent had HIV. Among the antenatal women, none had HIV and 1.4 per cent had syphilis (WHO-WPRO and Ministry of Health, Kiribati, 2005). Collectively, the STIs prevalence data indicated widespread unprotected sex and the likelihood that men also had high levels of untreated STIs, heightening the risk of HIV transmission in the community.

### 3.3.10 Substance abuse and other risk

HIV/AIDS infection via injecting drug use has only been noted in a few countries in the Pacific. These countries are notably French Polynesia, Guam and Palau (Jenkins, 2005). Reports of heroin, methamphetamines and crack cocaine in the RMI, especially Ebeye, as well as sporadic reports from the Solomon Islands and elsewhere, are cause for concern and monitoring (Jenkins, 2005). The Jenkins (2005) study also noted that excessive alcohol consumption may be the most common substance misuse associated with high-risk behaviour.

There are other practices that could potentially raise the spread of HIV/AIDS, including body piercing and tattooing, as well as the use of penis inserts (Hull, 2002). These risks have often been noted in prison populations and among sailors and fishermen.

### 3.3.11 Geographical factors

The Pacific island countries present a different context to HIV/AIDS compared with the rest of the world given the region's geographical features. The region consists of approximately 25,000 islands with close to 10,000 being inhabited. The numerous small islands with small populations spread over vast expanses of ocean create particular problems of resource distribution, communication and integration. For countries like PNG, the distribution of antiretroviral therapy is even an issue within the main island due to a lack of proper roads and transport infrastructure.

Security of health workers and the general travelling population is also an issue in PNG, thus making health visits and drug distribution very difficult.

### The issue of stigma

The smallness of the Pacific islands poses a number of challenges, not the least of which is the challenge that households and individuals face in keeping private information confidential. Given that the societies are small and closely connected, it gets very difficult to keep private information to oneself. Once information about HIV/AIDS infection reaches others in the community, people react with hostility and blame those who have AIDS, for exposing them to the disease. Thus, people living with HIV/AIDS fear ostracism by family and friends. This kind of behaviour tends to give rise to another problem: the unwillingness to seek formal medical treatment, with the increasing possibility of many cases of infections going undetected.

## 3.4 Local, regional and international donor financial assistance and its effectiveness

### 3.4.1 Government health sector financing

There is a general trend in the Pacific with respect to health sector financing, whereby countries with larger populations tend to spend more funds on health than smaller countries. Table 3.5 presents

Table 3.5 Health expenditure in the Pacific, 2002

<i>Country</i>	<i>Central government expenditure (US\$ million)</i>	<i>Private health expenditure (US\$ million)</i>	<i>Assistance by development partners (US\$ million)</i>	<i>Total health expenditure (US\$ million)</i>	<i>Hospital beds</i>
<b>Melanesia</b>	46.1	27.7	4.4	78.1	2097
Fiji islands	66.7	14.0	42.2	122.9	12,900
Papua New Guinea	7.0	0.9	5.5	13.4	881
Solomon Islands	4.9	2.4	1.8	9.1	397
Vanuatu					
<b>Micronesia</b>	10.6	1.8	3.0	15.4	658
FSM	4.1	0.1	0.1	4.3	140
Kiribati	4.9	3.6	2.5	10.9	105
Marshall Islands	7.6	1.0	–	8.5	60
Nauru	7.0	0.8	1.0	8.8	90
Palau					
<b>Polynesia</b>	4.0	0.3	0.2	4.6	80
Cook Islands	0.7	0.0	–	0.7	–
Niue	10.4	3.7	1.3	15.5	661
Samoa	4.6	2.5	2.2	9.4	296
Tonga	0.1	0.4	0.2	0.8	56
Tuvalu					
<b>Total</b>	<b>178.7178.8</b>	<b>59.259.1</b>	<b>64.464.6</b>	<b>302.4302.5</b>	<b>18,42117,521</b>

FSM = Federation States of Micronesia.

Source: WHO (2005)

health expenditures broken down by private and public expenditures. Typically, such expenditures increase with higher per capita national incomes. Countries with the largest population spend the most on health. For example, PNG spent US\$123 million on health in 2002, while Fiji had the next largest expenditure at US\$78 million (WHO, 2005).

In terms of per capita expenditure, Nauru (US\$656); Palau (US\$439), RMI (US\$210) and FSM (US\$143) had the largest health expenditure per person. Assistance by development partners supports a great deal in health spending, particularly for Solomon Islands, PNG, RMI and FSM. However, health spending (as a percentage of GDP) is low in Pacific countries where HIV prevalence is increasing, although some governments in the region, such as Fiji, have allocated budgets for HIV prevention and care. Overall, however, health expenditure is lower than in Africa and the world average. For example, health spending in PNG was 4.3 per cent of the GDP in 2002, compared with 6.1 per cent on average in sub-Saharan Africa and 10 per cent worldwide (World Bank, 2006).

**Table 3.6** Health expenditure and sector performance in the South Pacific, 2002

<i>Country</i>	<i>Health expenditure (US\$ per capita)</i>	<i>Health expenditure (% GDP)</i>
<b>Melanesia</b>	94	4.2
Fiji Islands	22	4.3
Papua New Guinea	29	4.8
Solomon Islands	44	3.8
Vanuatu		
<b>Micronesia</b>	143	6.5
FSM	49	8.0
Kiribati	210	10.6
Marshall islands		
<b>Polynesia</b>	88	6.2
Samoa	91	6.9
Tonga		

FSM = Federation States of Micronesia

Source: WHO (2005)

Low health spending is seen as one of the major impediments to governments' efforts to control health problems, as per the Millennium Development Goals. The WHO has estimated that health expenditure of about US\$31 to US\$34 per person each year is required for basic healthcare (WHO, 2003). Surprisingly, except for PNG, per capita spending is above this threshold in all Pacific island countries, though spending on national HIV/AIDS programmes is limited.

### 3.4.2 External assistance to the health sector

International support for health and population in the Pacific region is quite substantial. Regional analysis on a per capita basis reveals that donor assistance is far greater in this region than any other part of the world. In 2003, for example, official aid totalled US\$183 per person in Oceania, compared with US\$27 per person in Africa and US\$6 per person in Asia (OECD, 2006). Of this total, health represented 9 per cent of all aid flows, which is a smaller percentage of total aid in Africa, but higher than in Asia, the Americas and Europe.



**Table 3.7** Official aid and health aid in the Pacific

<i>Country</i>	<i>Official aid (US\$ per capita)</i>	<i>Health and population aid (US\$ per capita)</i>	<i>HNP external assistance (%)</i>
Africa	27	2.7	10
Asia	6	0.3	5
Oceania	183	16.5	9
Europe	55	0.6	1
Latin America	10	0.7	7

HNP = health, nutrition and population.

*Source:* Organisation for Economic Co-operation and Development (2006)

There are also a number of cases of HIV/AIDS-specific assistance provided by donor agencies and governments of developed nations. ADB (2005a:20) summarises the total external assistance to the Pacific region as follows.

### 3.4.3 Asian Development Bank

An HIV/AIDS grant of US\$8 million from the Asian Development Fund has been approved for Cook Islands, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu. Key components of the project are (i) surveillance; (ii) community-based interventions, such as STI services; and (iii) targeted HIV prevention in vulnerable groups. In addition, the HIV/AIDS prevention and control in Rural Development Enclaves Project for PNG has been approved. The project will support behaviour change, social marketing of condoms with the Australian Agency for International Development (AUSAID) and New Zealand's International Aid and Development Agency (NZAID) and improved surveillance.

### 3.4.4 International support for HIV/AIDS

Eleven small Pacific island countries were awarded an HIV/AIDS grant of US\$6 million over five years to (i) strengthen STI, HIV and behavioural surveillance and laboratory capacity (e.g. blood safety) in five countries; (ii) improve STI and HIV services by 2007; and (iii) reduce the risk of HIV and other STIs through targeted interventions. PNG was also awarded a five-year grant of US\$8.4 million to (i) reduce transmission among young people; (ii) scale up testing for HIV and STIs; and (iii) increase the availability of antiretroviral drugs.

**Australia:** Australia has two regional HIV/AIDS related projects in the Pacific, as well as a large HIV prevention investment in PNG, where US\$30 million is being invested over five years in 20 provinces to strengthen government response, STI treatment and social marketing of condoms. The Pacific's regional HIV project began in 2004 with A\$12.5 million funding from the government of Australia and a smaller sum from the government of France. It has been designed to help strengthen the capacity of Pacific island governments, NGOs and communities to develop, implement and evaluate multi-sector responses to HIV/AIDS. Australia and New Zealand have also been funding the Joint United Nations Programme on HIV/AIDS (UNAIDS) co-ordination in Suva for three years.

**France:** The Franco–Australian Pacific Regional HIV/AIDS and STI initiative aims to reduce the vulnerability to, and impact of, HIV/AIDS. The key purpose is to strengthen the capacity of governments, NGOs, and communities to respond effectively to the epidemic.

**New Zealand:** New Zealand has committed NZ\$730,000 to support the Pacific Islands AIDS Foundation for three years. The organisation promotes positive living, positive health, positive partnerships and positive action and prevention. Furthermore, New Zealand contributes NZ\$175,000 annually to a direct mail project.

**United Nations** (ADB, 2005a): The UN agencies present in the Pacific are working with UNAIDS across a wide range of fields, such as (i) surveillance of sexual abuse and exploitation of children, and the development of school curricula (United Nations Children's Fund); (ii) condom social marketing (United Nations Population Fund); (iii) reviews of HIV related legal issues (United Nations Development Programme); (iv) laboratory support, training in the treatment and care of HIV infected patients and a workshop on second-generation surveillance (WHO); and (v) meetings with police, military and other occupational groups regarding workplace policies (International Labour Organization, UNAIDS).

The HIV/AIDS funding supports numerous programmes that are part of the Pacific Regional Strategy on HIV/AIDS, which was developed to deal with the epidemic. This strategy was first developed in 1997, and then further refined and reformulated in 2004. The 1997 version was developed by several UN agencies and SPC. However, due to a lack of funds, it was never implemented. The revision of this strategy was prompted by the Pacific Islands Forum Secretariat at its meeting in 2002. ADB (2005) noted that the review exercise was quite challenging, given a variety of views arising out of the diverse cultures and religious backgrounds which exist in the region.

### 3.5 Summary and conclusion

The vulnerability of Pacific island economies stems from a number of factors. The stylised facts on vulnerability point out smallness, remoteness, narrow resource base and proneness to natural disasters. However, the Pacific community has also awakened to the fact that its economies face a real threat from HIV/AIDS infection. Formal statistics reveal that apart from Tokelau, Niue and Pitcairn Islands, all the other countries have varying degrees of HIV/AIDS infection. However, this figure is obviously underestimated because of the unwillingness to report to the relevant health authorities, and due to various social problems and a lack of surveillance systems. The Pacific policy-makers and various regional and international agencies have all voiced their concerns on the potential destructive effects of HIV/AIDS on the economic and social development of the Pacific economies and societies.

To provide an early response, these local, regional and international agencies have grouped together and are undertaking numerous measures to prevent any further spread of the deadly virus. The regional and international agencies have resolved to (i) help countries in the Pacific region understand the nature of the epidemic by generating information through improved surveillance and other studies; (ii) enhance the decision-making skills of programme managers through the improved use of information; (iii) build the skills of local government and civil society organisations to implement prevention and care programmes; and (iv) develop useful and practical monitoring and evaluation systems. Furthermore, a regional approach to research and development must be undertaken. Research on HIV/AIDS can be quite costly and thus not practical. The Forum Secretariat of the Pacific, in a joint venture with the SPC, has developed a 'Pacific Regional Strategy', and this strategy is now being funded by a number of regional and international organisations. Research and development on HIV/AIDS can be undertaken within the ambit of the Forum Secretariat of the Pacific to have the required economies of scale.

At the country level, national policy-making can go a long way to ensure that state resources are fully used. Enacting legislation for intellectual property rights on health issues will greatly assist in mobilising support to tackle the disease. The ability to effectively implement these strategies will depend a lot on the effective co-ordination among the execution agencies, co-operation of the local officials from the ministries of health, and understanding of the Pacific cultural and traditional factors. The implementation agencies must therefore work with rural village leaders to be effective and sustainable.

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