

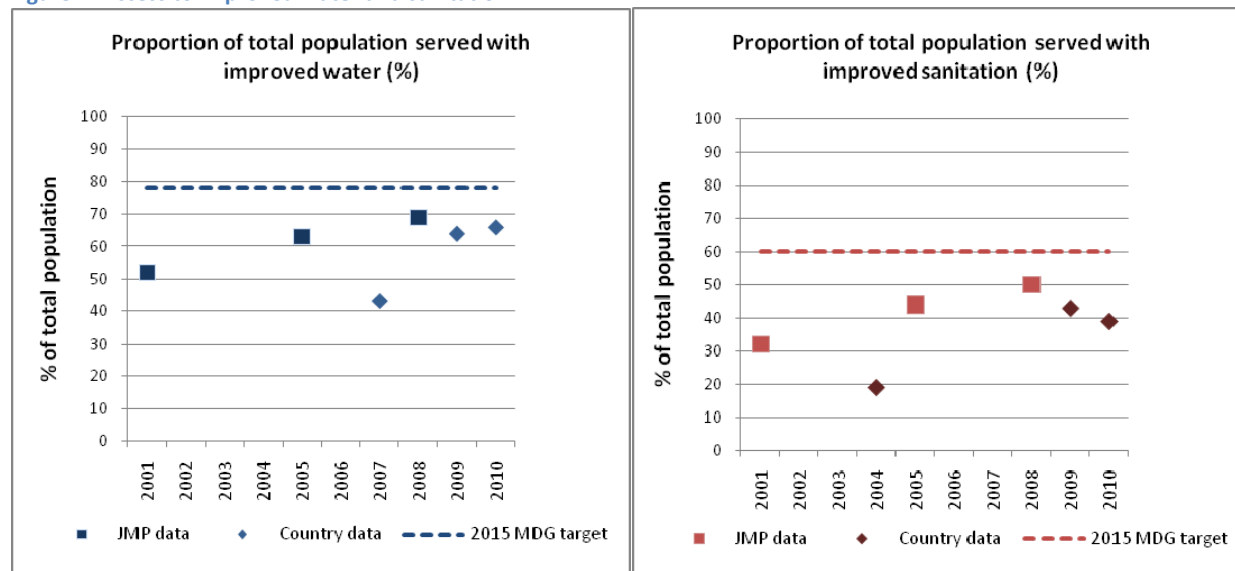
Headline issues

- Timor-Leste is a fragile state with associated challenges for the WASH sector, including a shortfall in administrative and human resource capacity to implement policies and programs.
- The Government of Timor-Leste is now the largest investor in both urban and rural WASH, reflecting significant achievements in building the profile and priority of WASH and an important shift from the dominance of donor finance over the past decade. The challenge in coming years is to ensure increased government investment reaches those in need, which requires significant efforts to strengthen administrative systems and enhance absorptive capacity.
- Improving the sustainability of WASH infrastructure is a critical area of need in Timor-Leste. Clarification of institutional arrangements for ongoing management and maintenance of water and sanitation systems is required, as well as broader reform to ensure dedicated investment in sustainable service provision.

Coverage and WASH related health statistics

Access to improved water and sanitation is poor in Timor-Leste, with coverage rates amongst the lowest in the region. WHO/UNICEF Joint Monitoring Program (JMP) 2008 data cites access to improved water in Timor-Leste at 86% and 63% for urban and rural areas respectively, with access to improved sanitation at 76% for urban and 40% for rural.¹ According to JMP data, sanitation coverage in Timor-Leste is particularly poor, with 19% and 52% of the urban and rural populations respectively practising open defecation.¹ Government of the Democratic Republic of Timor-Leste (GoRDTL) 2010 data places access to improved sanitation at 84% in urban and 26% in rural areas.² National water coverage data is comparable to JMP, citing access to improved water at 91% in urban and 57% in rural areas.² Figure 1 presents aggregate JMP and national data, showing differences between them.

Figure 1: Access to improved water and sanitation



Source: WHO/UNICEF Joint Monitoring Program (JMP) (2010) data for 2008.¹ Country data for 2004/2007 from the National Directorate for Water Supply and Sanitation *Strategic Investment Plan 2007* (SIP), estimates for sanitation based on 2004 data.³ Country data for 2009 from the Timor-Leste Demographic and Health Survey 2009-10⁴ and for 2010 from the 2010 national census.² MDG targets described in the 2009 *Millennium Development Goals Report for Timor Leste*.⁵

While the most recent GoRDTL access figures are provided by the 2010 census, more detailed information is available in the 2009 National Demographic and Health Survey. As well as information on water source and method of treatment, the survey presents data on time taken to collect water (with almost 30% of households taking longer than 30 minutes) and the person in the household responsible for collection – typically women.⁴²

The Timor-Leste Strategic Development Plan (SDP) 2011-2030 commits the government to achieving the water and sanitation MDGs by 2020 and describes the aim that “by 2030, all citizens will have access to clean water and improved sanitation”.⁶ GoRDTL identified MDG targets are to increase access to adequate water supplies to 81% of the urban and 75% of the rural population, and access to improved sanitation to 64% of urban population and 55% of rural population.⁵

According to the JMP, almost three quarters of the 1.1 million population in Timor-Leste live in rural areas,¹ indicating the WASH challenge to be predominately rural. Rural water coverage is making good progress, however access to sanitation in rural areas remains a concern. Rural water coverage is expected to increase rapidly in the coming years, reaching MDG targets.⁷ However the projected increase assumes that current levels of investment will be maintained and that water systems will be sustainable, which requires significant investment in community management, quality design and construction and improvement of operation and maintenance systems.⁸ Progress in rural sanitation is less promising, with 2010 census data indicating that only 25% of the rural population has access to improved sanitation.²

Timor-Leste’s high rate of urbanisation (5% per year)⁹ suggests need for improved planning around infrastructure development and service provision in the capital Dili and other urban areas. Less than half of Dili’s water is supplied from a water treatment plant¹⁰ with unsafe sources including shallow boreholes, wells, springs, and rivers meeting remaining demand.^{11,12} Water supply in Dili is constrained by low pressures in the distribution system, inadequate maintenance of mains and a high record of illegal connections,¹⁰ with non-revenue water estimated to be 96% of the total volume supplied.¹² Service in district towns is variable and the quality of service provision is often unknown. In some towns it has been reported that supply systems currently provide untreated water, bypassing treatment systems or disinfection.¹² No sewerage system exists in Dili or other urban centres and sewage is typically discharged untreated or with minimal onsite treatment into drains, rivers, fields, or gardens.^{10,12} The recently released Strategic Development Plan 2011-2030 outlines plans to address problems associated with poor sewerage infrastructure, including development of a collection system for Dili and scoping sewerage solutions as part of the District Centres Masterplan.⁶

Poor progress is compounded by problems with the sustainability of WASH infrastructure. Surveys in recent years cite functionality of community managed infrastructure to be between 10-70%, with actual figures believed to be at the lower end of that scale.¹³ Studies conducted in 2008 and 2009, found limited participation of women in water management groups, however recent data shows that 70% of GMFs have at least 30% women membership, 10% have women leaders, 94% have women in management positions and 33% have women registered in technical roles.¹⁴ Small hamlets with family groupings, often located in the remote hills, face significant challenges accessing an improved water source, and the cost per head can be out of the reach of GoRDTL and donors.⁵ While the focus is on attaining the MDGs at a national level, these groups may be geographically vulnerable.

WASH related health statistics confirm that there remains significant need for improvement. Compared with other Southeast Asian countries, Timor-Leste has the worst rate of WASH-related DALYs (figures shown

below in Table 1). A recent rural sanitation survey found rates of handwashing after using the toilet to be around 8% for households with a handwashing facility close to their place of defecation, with rates of handwashing with soap potentially as low as 2.5% (as indicated by the percentage of households with soap and water at the handwashing facility).¹⁵ The recent demographic and health survey found that 16% of all children under 5 had diarrhoea in the two weeks before the survey.²

Table 1: Summary health statistics

Infant mortality (deaths per 1000 births) ¹⁶	56
WASH-related DALYs (% of all DALYs) ¹⁷	15%
Total WASH related DALYs (Years) ¹⁷	42,088
Total WASH related deaths per year ¹⁸	866
WASH related proportion of deaths (%) ¹⁸	12%

Sources: World Bank and WHO as shown in endnotes

Finance trends

The Government is now the largest investor in WASH with significant increases in GoRDTL investment since 2010 for both urban and rural water in particular.⁸ However, while resources are available,¹⁹ there are a number of barriers to effective financing in the WASH sector, limiting the rate of progress. GoRDTL investment is constrained by poor absorptive capacity,²⁰ and until recently the sector was dominated by donor finance.¹⁹ A lack of recurrent budget for basic administrative operations and inadequate human resource capacity and managerial skills severely constrain the ability of the public sector to plan and manage WASH investment.¹⁹

More information is available about rural investment than urban. GoRDTL has demonstrated continued budgetary commitment to rural WASH in recent years, with the budget increasing from \$US0.7M in 2009 to \$US5.5M in 2010 and to \$US8.9M in 2011.²¹

Government investment prioritises water over sanitation and capital infrastructure investment over maintenance.⁷ In 2011, \$US9M has been invested in rural water supply systems and \$US760,000 in rural sanitation infrastructure.⁷ If Timor-Leste is to have any chance of achieving the rural sanitation MDG target, it has been estimated that an additional investment of approximately \$US12M is required over the next four years and this investment needs to focus on behaviour change along with infrastructure.⁷ As of late 2011, the government has allocated US\$11.4 million to WASH for the 2012 budget submission.¹⁴

At the district level, the government recently began using the Water Information System (established with support from BESIK) to prepare delivery plans and priority lists.²¹ The Water Information System will provide DNSAS with regular information on the status of rural water systems.

Financing trends for the urban sector are less clear, though the 2010 UN-Water Global Annual Assessment of Sanitation and Drinking Water (GLAAS) report estimates the urban sector to be more constrained than the rural. GLAAS survey respondents estimated the adequacy of funding as 'less than 50% of needs' for the urban water and urban sanitation subsectors.²² Adequacy of funding for rural water was reported to be 'between 50% and 75% of needs' and information for rural sanitation was not reported in GLAAS.²²

Sector governance

Timor-Leste is a fragile state and is experiencing post-conflict challenges relating to governance, administrative capacity and human resources.¹⁹ Within this context, a number of government and donor

agencies are working to improve WASH services and sector management including the Ministry of Finance (which manages the national budget), the Ministry of Infrastructure and the Ministry of Health.¹⁹ The National Directorate for Water and Sanitation (DNSAS) and the National Directorate for Water Resource Management (DNGRA) are the key technical agencies responsible for water supply and sanitation service delivery and for the management of Timor-Leste’s water resources.¹⁹ The Ministry of Health (MoH) plays a significant role in sanitation and hygiene promotion through the National Directorate for Community Health (DNSC).¹⁹ The National Agency for Development (ADN) and the Ministry of State Administration and Territorial Management both administer grants to district authorities to contract companies to construct water supply and sanitation infrastructure, with the district offices of DNSAS being responsible for the survey and design, technical supervision and operation and maintenance.⁸

The Decree Law No. 1 of 2011 flags upcoming changes to institutional arrangements for WASH, with the creation of a Directorate-General of Electricity, Water and Sanitation (DGEWS) within the Ministry of Infrastructure.²³ Under DGEWS, four directorates will be created including for water services (DNSA), basic sanitation (DNSB), water quality (DNCQA) and electricity.⁸ These changes are expected to come into effect in 2012.⁸

WASH has National Priority 1 status in Timor-Leste and a number of legal and policy documents have been developed to guide the sector including the National Terrestrial Water Resources Policy 2011, the Health Strategy 2011-2030 and the Decree on Water Services 2004.¹⁹ Policy consultations have been completed for the initial Draft National Water Supply Policy and the Draft National Sanitation Policy, including specific gender and ‘access for all’ considerations.²¹ Both are now being finalised for legal vetting then approval by the relevant Minister prior to submission to the Council of Ministers for adoption.²¹ In general, the various strategies and policy documents contain sound principles and establish sector ideals, however there is a need for operational detail to facilitate effective implementation.¹⁹ With the recent revision of a number of policies, the development of strategies and roadmaps is the next step.¹⁴

Poor implementation is compounded by capacity constraints in the Timorese WASH sector. A 2009 review of capacity found a significant gap in human resource capacity in terms of engineers, professionals, technicians and skilled workers, indicating a continued need for support from foreign expertise.¹¹ The survey found that DNSAS – the main implementing agency for urban and rural sectors – had only three engineers few other staff with tertiary qualifications in senior management.¹¹ Since this review human resource capacity within DNSAS has increased significantly, with 16 of the 20 graduates from the Diploma in Rural Water and Sanitation Management and Technical Studies program at the Institute of Technology in Surabaya now working in DNSAS.¹⁴

Table 2 details the GLAAS assessment of overall perception of the WASH sector in Timor-Leste. Constraints relating to human resource availability are confirmed by GLAAS respondents, with financial planning, monitoring and evaluation also scoring particularly poorly.

Table 2: GLAAS assessment of overall perception of the sector (four sector average scored out of 10)²²

Implementation and coordination of national policies and institutions	6/10
Planning, monitoring, and evaluation of the sectors	7/10
Financial planning and resources for the sectors	5/10
Human resources availability/development	4/10

Subsector governance

Urban water and sanitation

The Ministry of Infrastructure (Mol) oversees water supply and sanitation in urban areas with operational responsibility lying with the Directorate for Water and Sanitation (DNSAS). The 2004 Water Services Decree gives DNSAS responsibility for the provision and maintenance of water supply services in urban areas including Dili and capital towns in Timor-Leste's 12 other districts.¹² Compared with other government agencies in Timor-Leste, Mol and DNSAS are relatively strong, though still constrained by a lack of human resource and financial capacity.¹⁹ In Dili, few household connections are metered and cost recovery is very low.¹² Water tariffs for urban areas have been established by the Ministries of Infrastructure and Finance but are not yet in use.⁸ Support for urban WASH has been dominated by water supply programs with little attention to sanitation or hygiene promotion initiatives.¹²

Rural water and sanitation

As with urban water and sanitation, the Ministry of Infrastructure (Mol) is the lead agency for the rural sub-sector through the Directorate for Water and Sanitation (DNSAS), with a key role in sanitation and hygiene promotion played by the Ministry of Health.

A Rural Water, Sanitation and Hygiene (RWASH) Strategy for 2008-2011 was developed through a consultative process, describing principles that sectoral programs: align with government policy and customary law; promote gender and social equity; are supported by an integrated and enhanced government, civil society and private sector; and maintain a balance with environmental and natural resource management.²⁴ The strategy has not yet been translated into specific operational plans.

Challenges are presented by the process of decentralisation which is seeing greater involvement in governance and service delivery from Timor-Leste's 13 districts and 65 sub-districts.^{12,19} Local government reform is being led by the Ministry of State and Territorial Administration.¹⁹

Rural WASH training courses are now available through local educational institutions with 120 Master Trainers delivering ongoing training mentoring to a range of individuals and organisations.¹⁴ However significant capacity gaps remain, particularly in the context of decentralisation where local governments don't have the skills required to support communities in managing facilities.

The Secretary of State has signed off on Rural Water Supply Guidelines and DNSAS has requested that the Minister present Guidelines to the Council of Ministers so that they are applied by all Ministries implementing rural water supply projects.²¹ The guidelines outline service level objectives to deliver 30-60 litres per person per day with water points located within 100m of all households, though this can be challenging given low population densities in rural areas.¹² Efforts are now under way to increase awareness and uptake of the guidelines.¹⁴

Sanitation Guidelines are currently being prepared,¹⁴ which promote on-site sanitation through wet or dry latrines.¹² Sanitation has historically been subsidised by government and donor programs, though more recently NGOs have been implementing Community Led Total Sanitation (CLTS) and this has now been included in a draft national sanitation policy prepared in 2010.¹² The approach advocated in the final national sanitation policy will likely impact upon institutional arrangements for rural sanitation, with the possibility that households are made responsible for their own sanitation infrastructure with national

policies and standards the purview of DNSAS and an increased role for the Ministry of Health at the sub-national level.¹²

The Decree on Water Services 2004 places responsibility for management of rural water supply systems with communities,^{10,12} either through formal user groups (GMFs) or informal structures.¹² Few user groups are able to recover costs for basic operation and maintenance, and many are not functioning sufficiently well to collect any payment for water services.¹⁹ The functioning of user groups is constrained by conflict in communities over the past 30 years, with many communities displaced several times.¹⁹

Another factor constraining the rural sector is need for improved coordination and clarity of roles and responsibilities of different government agencies delivering water supply. The GoRDTL is using a decentralised development model of contracting, whereby DNSAS is responsible for the survey, design and contract preparation and then District Administration is responsible for contracting at sub-national level.⁸ The focus of this model is on capital infrastructure with limited funding for operation and maintenance of water systems.⁷ Research has found that for rural water supply systems, sustainability could be significantly enhanced through improved survey and design, effective supervision systems, community engagement and support for community management of systems with DNSAS being resourced to provide operation and maintenance support to communities for more complex water.⁷

In the absence of strong local government or private sector actors, NGOs play important role in filling service delivery gaps in the rural sector.¹⁹ NGOs have played a vital role and strengths include their ability to provide both infrastructure and support for sanitation demand creation and hygiene promotion, however there are concerns related to the longer term sustainability of NGO initiatives when local government is not engaged and community user groups lack the financial or technical capacity to operate and maintain systems.¹⁹ Furthermore, a 2008 survey reported a perception that government was not being held accountable for water service delivery in part due to reliance on NGOs,²⁵ though the situation has changed considerably since 2008 and government is playing a more active coordination role through the decentralisation process (with 88 subdistrict facilitators supporting implementation of community WASH programs).¹⁴

Health and hygiene

The Ministry of Health is the lead agency for health and hygiene and plays a key role in rural sanitation, with the Department for Environmental Health (EHD) coordinating relevant WASH sector initiatives. A strategic plan for the health sector was developed in 2007 covering the period 2008-2012, identifying WASH as one of five significant determinants of health.¹⁹ This has recently been superseded by the Health Strategy 2011-2030,⁸ which identifies 'the configuration of the sanitary system' as one of five main elements.²⁶ The Ministry of Health has developed a Behaviour Change Communication Strategy (draft), which is currently being implemented.⁸ EHD are focusing on four key hygiene messages: safe management and storage of water; proper disposal of adult and child faeces; handwashing with soap at critical times; and active participation of women in WASH decision making.⁸

Health and hygiene promotion at the community level is undertaken by volunteer family health promoters (PSF), coordinated by district based health services under the auspices of the Integrated Community Health Services System (SISCA).¹⁹

Community infrastructure projects also sometimes include hygiene promotion components through the community engagement process overseen by MoH-EHD and DNSAS.¹⁴ Implementing local NGOs are typically responsible for conducting hygiene training for user groups.¹² Training is more intensive than SISCA

programs, but only occurs in communities with infrastructure programs and evaluation typically assesses comprehension of messages rather than behaviour, so the success of these initiatives is difficult to assess.¹²

Climate change and water resources

A Water Resources Policy for Timor-Leste has been drafted.²¹ Information about the availability and status of freshwater sources in Timor-Leste is currently being collated, and the National Directorate for Water Resources Management is being established.²¹ In collaboration with Geoscience Australia, the first Hydrogeology Map (draft) has been produced and a simplified version indicates aquifers of high water potential, low water potential and non-aquifers.²¹

DNGRA staff have now been exposed to water resource management techniques of field studies, dye-tracing in karst environments, rainfall and stream-gauging, development of a hydrogeological map from the geology map and field observations.²¹ They are participating in a national census of wells, springs, caves and other groundwater features to complete the hydrogeological map details.²¹ In conjunction with Norwegian legal advisors they are developing water resources management policy and water resources law.²¹

Under the National Adaptation Programme of Action (UNDP) for Timor-Leste, water resources are identified as a high national priority for funding interventions.²¹ Planning for investigations in the critically vulnerable zone with high population densities has commenced to identify major fracture zones in rocks that can contain significant volumes of groundwater and permanent streams with alluvial water storage, to replace fragile spring sources that are subject to seasonal and dry-year diminution and local contamination.²¹ Timor-Leste is subject to the influence of El Niño weather effects which can reduce wet-season rainfall by up to 25% and during the dry season (May-October) many of Timor-Leste's rivers are dry.²⁷

Seasonal variation in the availability of freshwater is likely to be exacerbated by the impacts of climate change, which will mean hotter, drier and increasingly variable conditions with impacts on agricultural production and food security and damage caused by sea level rise to coastal areas including Dili.²⁸ As a small island nation Timor-Leste is vulnerable to a range of hazards likely to be exacerbated by the impacts of climate change including tropical cyclones, storm surges, floods, landslides and tidal-induced back-flooding, droughts, bushfire, and coastal erosion.²⁹ In addition, sea level rise is likely to pose significant threat to coastal environments, including directly impacting upon water resources and sanitation. More generally, climate change poses a significant threat to Timor-Leste's WASH sector in terms of health, weather disasters, habitat loss and economic stress, with the country scoring the second highest (severe) and highest (acute) vulnerability rating for 2010 and 2030 respectively ().

Table 3: Summary status of water resources and vulnerability

Renewable water (ML/population) ³⁰	Not available
Overall Climate Vulnerability factor 2010 ³¹ (on scale of <i>Acute, Severe, High, Moderate, Low</i>)	Severe
Overall Climate Vulnerability Factor 2030 ³¹ (on scale of <i>Acute, Severe, High, Moderate, Low</i>)	Acute
Environmental Vulnerability Status ³² (on scale of <i>Extremely vulnerable, Highly vulnerable, Vulnerable, At risk, Resilient</i>)	Not available

Combined with the average-annual-rainfall map and the map of distribution of population (houses) from the 2010 census, the Hydrogeology Map can be converted to a thematic map of vulnerability to climate change.²¹ Based on the vulnerability index development policy is being formulated for critical zones of low groundwater potential, low annual rainfall and high population densities.²¹

Donor environment

Donors active in Timor-Leste's WASH sector are AusAID, USAID, ADB, JICA and UNDP.¹⁹ The European Commission (EC) also commenced funding in 2011 for rural WASH programs.⁸ National and international NGOs play an important role in rural WASH, with a number of international organisations also active in the sector including UNICEF, Plan, WaterAid, Oxfam, Care, Triangle, CVTL (Red Cross), World Vision, and Child Fund.⁸

Donor financing has been significant across all sectors including WASH, and between 2002 and 2008 \$US1.78 billion ODA was allocated to Timor-Leste for both emergency and development assistance.¹⁹ To date, donor funded programs have been primarily implemented by managing contractors and NGOs outside of GoRDTL systems,¹⁹ though there are efforts to more closely align with government programs as assistance moves from humanitarian to longer term development support.¹⁹

In rural areas, the AusAID Rural Water Supply and Sanitation Program (BESIK) is the largest donor program in rural WASH. BESIK follows the previous AusAID Community Water Supply and Sanitation Project 2002-2006 and covers the period 2007-2012 with a total investment during this time of approximately \$US40M.⁷ Reviews of BESIK demonstrate successful change in policy and institutional planning and capacity development (68% of funds) and also support to delivery of water services (12% of funds), sanitation (5%) and hygiene (6%).⁷ USAID has been the second largest donor with a 4-year \$US20M that commenced in 2009 supporting access to improved water in up to four rural districts. EC will be funding approx \$US8M over the next 4 years.⁸

Support for urban WASH is provided by ADB and JICA. ADB programs include the Urban Water Supply and Sanitation Project in Dili focused on reducing non-revenue water and technical assistance to support DNSAS manage the Dili water system.³³ JICA has supported rehabilitation of water systems in Dili and selected district towns and villages through projects including the Water Supply System in Dili and the Water Supply Project in Same and Ainaro, both completed in 2007/2008.¹⁹ More recently, JICA has been supporting improvement of the water network in Dili and working with DNSAS to improve their capacity to operate and maintain water supply facilities.¹⁹

Coordination occurs informally through the WASH Forum and Sanitation Working Group, which provide an avenue for sharing of experiences for government, donors and NGOs active in the sector.⁷ Official coordination mechanisms including the DNSAS-led Program Management Group (PMG) and the rural WASH Policy Steering and Reference Group (PSRG) have been less successful to date with few meetings held.⁷

Sector monitoring

The rural WASH sector uses two tools for monitoring: the Sector Planning and Reporting Tool (SPT) and the Rural Water Information System (SIB). The Sector Planning and Reporting Tool is used by 12 agencies including the government to report on progress towards National Priority 1 WASH targets and global sector level indicators.²¹ The tool aims to collect information on all planned, in progress and completed activities against high level numeric indicators including access to water and sanitation, number of households with handwashing facilities, number of school facilities, number of women involved in management and access for disabled people.²¹

The Water Information System is populated with data from approx 96% of rural communities, and provides information on coverage, gaps and functionality with the aim to improve resource allocation decision

making.²¹ Full establishment of SIB is underway following which public access to SIB data will be made available.²¹

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- ¹⁵ Research by BESIK with the Ministry of Health (2011) Rural Household Sanitation Formative Research, report forthcoming.
- ¹⁶ The probability per 1,000 that a newborn baby will die before reaching age five (2009). Source: World Bank Open Data from the Inter-agency Group for Child Mortality Estimation.
- ¹⁷ Disability-adjusted life year (DALY) measures the years of life lost to premature mortality and the years lost to disability. Source: 2004 update of the Table 1 and Annex of the publication 'Safer water, better health', by Prüss-Ustün et al, WHO, Geneva, 2008. Accessed 28 June 2011. Available at http://www.who.int/quantifying_ehimpacts/publications/saferwater/en/index.html.
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- ²⁹ GFRR World Bank SOPAC Global Facility for Disaster Reduction and Recovery (GFDRR), World Bank & SOPAC (2009) *Reducing the Risk of Disasters and Climate Variability in the Pacific Islands: Timor-Leste Country Assessment*, GFDRR, The World Bank and SOPAC.
- ³⁰ Renewable Freshwater Supply estimates (km³/yr) (2006) from Pacific Institute (www.worldwater.org), converted to *ML per head of population* using JMP population estimates. Data should be used with caution and treated as 'order of magnitude'. Freshwater estimates (2006 updates) were made at different periods from different sources. 2008 JMP population data used for consistency with other calculations.
- ³¹ Source: Climate Vulnerability Monitor 2010 <http://daraint.org/climate-vulnerability-monitor/climate-vulnerability-monitor-2010>. Countries are classified according to: *ACUTE+*, *ACUTE*, *ACUTE-*, *SEVERE+*, *SEVERE*, *SEVERE-*, *HIGH+*, *HIGH*, *HIGH-*, *MODERATE*, *LOW*. For information on included datasets and methodology for aggregation and categorising, see http://daraint.org/wp-content/uploads/2010/12/CVM_Methodology.pdf.
- ³² Source: Environmental Vulnerability Index 2004 developed by SOPAC, UNEP and partners <http://www.vulnerabilityindex.net/>. Countries are classified according to: *Extremely vulnerable*, *Highly vulnerable*, *Vulnerable*, *At risk*, *Resilient*.
- ³³ ADB (2007) Country Operations Business Plan Timor Leste 2008-2010. Asian Development Bank, Manila, cited in Buhl-Nielsen, E., Giltner, S., Dutton, P. and Donohoe, J. (2009) *Draft Country Working Paper: Independent Evaluation of Australian Aid to Water Supply and Sanitation Services - East Timor*. Prepared for AusAID. 10 March 2009.