

**Timor-Leste** 

## HUMAN DEVELOPMENT REPORT 2011

## MANAGING NATURAL RESOURCES FOR HUMAN DEVELOPMENT

DEVELOPING THE NON-OIL ECONOMY TO ACHIEVE THE MDGs







#### **Timor-Leste**

## HUMAN DEVELOPMENT REPORT 2011

# MANAGING NATURAL RESOURCES FOR HUMAN DEVELOPMENT

DEVELOPING THE NON-OIL ECONOMY TO ACHIEVE THE MDGs

## **Message from the President**

Since the publication of the last National Human Development Report in 2006, Timor-Leste has made considerable progress in improving its people's livelihoods, alleviating poverty and improving social conditions.

Recently the percentage of the population living in poverty has been estimated to have fallen from 49.9 percent in 2007 to 41 percent in 2009. This has been accompanied by important gains in human development. In education, school enrolments have increased and literacy levels have improved substantially. In health, under-five and infant mortality rates have declined significantly, as has the maternal mortality ratio. Timor-Leste currently is on-track to meet many of its Millennium Development Goals.

This progress has been made possible by high growth rates in recent years enabling improvements in livelihoods. Non-oil per capita incomes have increased from an average of US\$ 398 in 2007 to US\$ 599 in 2009. The country has managed its petroleum revenues efficiently to deliver growth, which is now enabling us to begin to realize the Development Vision outlined in our country's first National Development Plan – at independence in 2002 – for every East Timorese to live in a prosperous society with adequate food, shelter and clothing for all people, by 2020.

Despite these achievements, however, we are acutely aware of the challenges we face as a post-conflict, low-income country. Internationally, I have often heard Timor-Leste referred to as a fragile state, likely to succumb to the resource curse. In recent years, we have devised strategies to prevent this from happening. We have used the wealth from our petroleum revenues carefully, targeting areas for increasing productivity and improving welfare. We have focused on promoting sustainability in the development of our rural economy. The conflicts which restricted our potential for development have been addressed. Substantial progress has been made politically by strengthening our state institutions, reforming our security sector, introducing expansionary fiscal policies and providing more effective and efficient service delivery.

As outlined in the 2011 Human Development Report, Timor-Leste faces many challenges. There remain increasing disparities between rural and urban areas. Although poverty levels have declined in recent years, poverty remains widespread. Policies and programmes must be put in place to ensure that growth is inclusive. Timor-Leste needs to strengthen its communications, transport and financial infrastructures. The country's natural resource base is fragile. Land, water and forested areas are under stress. The country is experiencing demographic changes with profound implications for its future development. The majority of its population are below the age of 21, and migration from the countryside to the capital, Dili, is at very high levels. The challenge of employing this population is immense.

As outlined in the draft of its forthcoming *Strategic Development Plan, 2011-30*, the Government is aware of the importance of these development challenges, and is devising specific strategies to address them. The targets for the *Plan* are benchmarked against the Millennium Development Goals, reinforcing Timor-Leste's commitment to them. The 2011 Human Development Report will be extremely useful for us in discussing the challenges we face, and their potential impact, as well as in its detailed suggestions for specific strategies to address these challenges. We welcome the Report, and look forward to our discussions with you on its contents and its contribution to our *Strategic Development Plan*.

Dr. José Manuel Ramos-Horta,

President of the Democratic Republic of Timor-Leste

#### **Foreword**

The 2011 Timor-Leste Human Development Report provides a detailed description and assessment of the present state of human development in Timor-Leste. The country has made substantial progress since it first outlined its Pro-Poor 'Development Vision' in the 2002 National Development Plan, published on the eve of the restoration of its independence.

The 2011 Report charts this progress – in reducing poverty, improving living standards, and improving conditions in crucial areas such as health and education. The Report highlights the ways in which the country's Petroleum Fund has been managed to promote economic growth and fund human development.

Despite these gains, however, the country continues to face many challenges. It must decide how its petroleum wealth can best be used to develop its non-oil economy, and particularly the rural sector, where poverty remains widespread. Increasing disparities between rural and urban areas have emerged strongly in recent years, and these need to be addressed as a matter of urgency, with a strong focus on developing the rural economy, home to the vast majority of the country's population.

Rural-urban migration levels remain high, with resultant widespread unemployment amongst the country's substantial young population. To deal with these levels of unemployment, there is a vital need to develop the non-oil economy in a sustainable way. This requires facilitating investment and substantial improvements in the country's infrastructure.

Improvements in governance are a crucial precondition for meeting such challenges. In recent years, budget execution has improved substantially. These changes need to be reinforced by the development of a fully-functioning independent audit agency and, more generally, the establishment of effective anti-corruption mechanisms.

Furthermore, successful implementation of policies to improve levels of human development requires a greater involvement in decision-making by those for whom these policies are devised. Hence, rural communities must be involved actively in development decisions affecting their livelihoods, via an effective decentralization to the districts and below.

The Timor-Leste Government is acutely aware of these problem areas, and of the risks it faces in trying to resolve them. This is reflected in the draft summary of its National Strategic Development Plan 2011-2030. The country has made substantial progress towards achieving its Millennium Development Goals (MDGs). The Macro-Economic Framework presented in the 2011 Human Development Report outlines strategies for Timor-Leste to achieve its MDGs by 2025. Most importantly, it also provides detailed strategies for developing the non-oil economy, and more particularly the rural sector.

We hope that the presentation of these strategies will feed into the discussions currently taking place on the final design and implementation of the *Strategic Development Plan*, and that the *2011 Timor-Leste Human Development Report* will make a significant contribution to the country's efforts to achieve sustainable growth and promote human development.

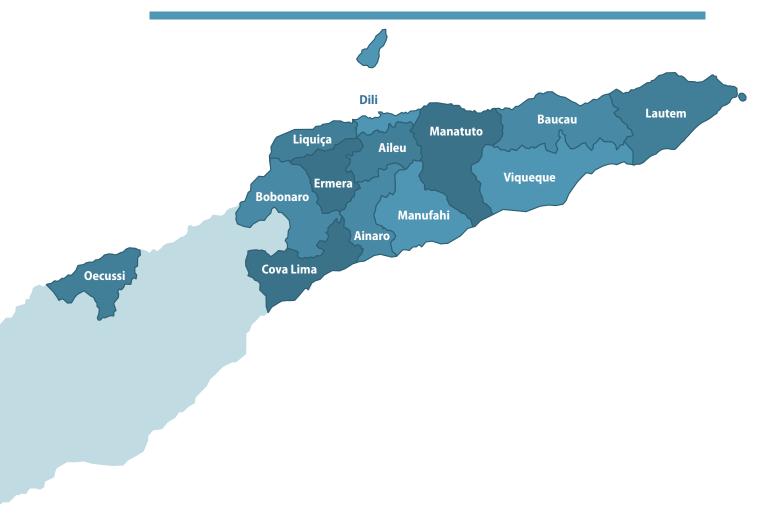
Finn Reske-Nielsen

Assistant Secretary-General

Deputy Special Representative of the Secretary General for Governance Support Humanitarian Coordination and Development

UN Resident Coordinator, UNDP Resident Representative, Timor-Leste

## Maps





## **Abbreviations**

	Asian Development Bank	INDMO	Instituto Nacional de Desenvolvimento de
	Acquired Immunodeficiency Syndrome Aliança Maioria Parlamentar		Mão de Obra (National Labour Force Development
AusAID	(Parliamentary Majority Alliance) Australian Agency for International	KWh	Institute) Kilowatt hour
	Development	JICA	Japan International Cooperation Agency
BCI Relun	Basic Capabilities Index Belun translates from Tetum to English as 'friend'	JPDA	Joint Petroleum Development Area Least Developed Country
Deluii	or'partner'. It is an NGO in Timor-Leste that aims	LPG	Liquefied Petroleum Gas
DIC	to address the incidence of community conflict	MDG	Millennium Development Goals
	Bank for International Settlements Banking and Payments Authority		Multidimensional Poverty Index Megawatt
CAVR	Comissão de Acolhimento, Verdade e	NDP	National Development Plan
	Reconciliação (Commission for Reception, Truth and		Net Enrolment Rate Non-Governmental Organization
	Reconciliation)		Overseas Development Institute (United
DHS	Demographic and Health Survey National Directorate of Employment,	ODE	Kingdom) Office for the Promotion of Equality, Timor-
DINL	Timor-Leste Government		Leste Government
DNS	Direcção Nacional de Estatístca	PNTL	Policia Nacional de Timor-Leste
	(National Directorate of Statistics) Timor-Leste Government	PPP	(Timor-Leste National Police Force) Purchasing Power Parity
	Disaster Risk Management		Psychological Recovery and Development
	Estimated Sustainable Income European Union	ς <i>ξ</i> ,D	East Timor Standard and Poor's, an international
Falintil /	Falintil /		financial ratings agency
F-FDTL	Forças Armadas de Defesa de Timor-Leste	SDP	Strategic Development Plan
FAO	(Timor-Leste Armed Forces) Food and Agriculture Organization	JEFOFE	Secretaria de Estado da Formação Profissional e de Emprego
	Forum Komunikasi Untuk Perempuan Timor		(Secretary of State for Professional Training
	Lorosa'e (Timor-Leste Women's Communication	SIP	and Employment) Sector Investment Plan
	Forum)		Servisu Integradu da Saude Comunitaria
FRETILIN	Frente Revolucionária do Timor-Leste Independente		(Integrated Community Health Services System)
	(Revolutionary Front of Timor-Leste)	SMEs	Small and Medium Enterprises
GDI	Gender Development Index Gross Domestic Product	SMS	Short Message Service
	Gender Empowerment Measure	33FE	Secretary of State for the Promotion of Equality, Timor-Leste Government
GER	Gross Enrolment Rate	TLNHDR	Timor-Leste National Human Development
GHI	Global Hunger Index Gender Inequality Index	TLSLS	Report Timor-Leste Survey of Living Standards
GTZ	Deutsche Gesellschaft for Technische	UN	United Nations
	Zusammenarbeit (The Aid Agency of the German Government)	UNDESA	United Nation Department of Economic and Social Affairs
GWh	Gigawatt hour	UNDP	United Nations Development Programme
	Human Development Index Human Development Report	UNESCO	United Nations Educational, Scientific and Cultural Organization
HIV	Human Immunodeficiency Virus	UNFCC	United Nations Framework Convention on
	Human Poverty Index	LINIEDA	Climate Change
	Incremental Capital Output Ratio Internally Displaced Person	UNICEF	United Nations Population Fund United Nations Children's Fund
IHDI	Inequality-Adjusted Human Development		United Nations Integrated Mission in
IMF	Index International Monetary Fund	USAID	Timor-Leste United States Agency for International
	Instituição de Microfinanças de Timor-Leste		Development
ПΟ	(Timor-Leste Microfinance Institute) International Labour Organization		World Bank World Health Organization
ILO	micmational Labour Organization	VVIIO	TTOTA FICUITI OTGUTILATION

## **Contents**

Messages	vii
Foreword	ix
Maps	X
Abbreviations	xi
Acknowledgements	1
Executive Summary  Key Messages of the Report	3
Chapter 1 Building the Nation: Achievements and Challenges	9
Chapter 2 The State of Human Development in Timor-Leste	27
Chapter 3 The Petroleum Fund and Human Development in Timor-Leste	55
Chapter 4 Strategies for Developing the Rural Sector and the Non-Oil Economy	79
Chapter 5  A Macro-Economic Framework for Achieving the Millennium Development Goals in Timo	or-Leste 105
Annex 1: Bibliography	127
Annex 2: Statistical Note and Definitions of Terms used in the Report	131
Annex 3: Millennium Development Goals, Targets and Indicators	
Annex 4: Millennium Development Indicators: Definitions	
Annex 5: Status of the Millennium Development Goals in Timor-Leste	
Annex 6: Calculating the Human Development Index and Associated Indices	155

## **Acknowledgements**

This Human Development Report for Timor-Leste was produced by a panel of experts including John G. Taylor, Rui A. Gomes, Tobias Rasmussen, Michael Ross, Andrew Rosser, Martin Sandbu, Tibor van Staveren, Ricardo F. Neupert, Sonny Harmadi and Hafiz A. Pasha.

For their support and encouragement, we are indebted particularly to Mikiko Tanaka, Country Director UNDP Timor-Leste, Akbar Usmani, former Country Director UNDP Timor-Leste, Finn Reske-Nielsen, DSRSG/HC/ UN Resident Co-ordinator/ UNDP Resident Representative Timor-Leste, Nick Beresford, Former Deputy Country Director UNDP Timor-Leste, Pradeep Sharma, Senior Assistant Country Director UNDP Timor-Leste, António Franco, former Country Director of the World Bank Timor-Leste, José Ramos-Horta, President of the Republic of Timor-Leste, Emilia Pires, Minister of Finance, Government of Timor-Leste, Rui Manuel Hanjam, Vice-Minister of Finance, Government of Timor-Leste, João Mendes Gonçalves, Minister of Economy and Development, Government of Timor-Leste, Rui Maria Araújo, former Health Minister, Government of Timor-Leste, Mari Alkatiri, former Prime-Minister, Government of Timor-Leste, Omar Noman of the Resource Centre in Colombo and Ayako Higuchi, who was instrumental in developing the concept note for the NHDR.

Individuals consulted during the preparation of the Report included Helder da Costa, João Mariano Saldanha, Aurélio Guterres, Lucas da Costa, Edmundo Viegas, Clare Danby, Tom Hyland,

António Serra, Abraham Joseph, João Cancio, Minister of Education, Government of Timor-Leste, Gil Alves, Minister of Tourism, Trade and Industry, Government of Timor-Leste, Mariano Asanami Sabino, Minister of Agriculture and Forestrys, Government of Timor-Leste, Nelson Martins, Minister of Health, Government of Timor-Leste, Elaine Capizzi, Arnold Kohen, Graham Williams, Clinton Fernandes and Alissar Chaker. Numerous other individuals have been consulted from the Regional Bureau of Asia and the Pacific and the Human Development Report Office in New York Headquarters.

We are particularly grateful to Charles Scheiner of La'o Hamutuk (The Timor-Leste Institute for Development Monitoring and Analysis), Anthony Goldstone, Richard Curtain, to colleagues at the Political Affairs Section of the United Nations Mission in Timor-Leste (UNMIT), Preston Pentony, and to Elaine Tan, UNIFEM Representative, for their detailed comments on drafts of the Report.

The Report was edited by Nadini Oberoi and Clare Santry. Administrative and management support was provided by Cornelio Barros, Begoña Gonzalez and Sung-ku Kim.

#### **Principal Author**

John G Taylor

#### Coordinator

Rui Gomes

#### **Authors, Technical Background Papers**

Tobias N. Rasmussen Andrew Rosser

Martin Sandbu

Michael Ross

Tibor van Staveren

Ricardo F. Neupert

Rui A. Gomes

John G Taylor

Sonny Harmadi

Hafiz Pasha

#### Statistician

Omas Bulan Rajagukguk

#### **Editor**

Nandini Oberoi

#### Design

we are boq, Ida.



# **Executive Summary**Key Messages Of The Report

Timor-Leste has made substantial progress in the years following its independence in 2002 and particularly since the 2006 crisis. The 2011 Timor-Leste National Human Development Report (TLNHDR) charts this progress and provides a detailed assessment of:

- The current state of human development in Timor-Leste;
- The key challenges to be met;
- How these challenges can best be addressed in the coming years.

Human development enables the realization of human potential. It focuses on what people can do and become – their capabilities – and about the freedom they have to exercise real choices in their lives. Human development is intrinsically linked to the Millennium Development Goals.

#### The Petroleum Fund and Human Development

A fundamental issue for the country is the way in which the revenue from its Petroleum Fund – the single largest source of revenue for Timor-Leste – can best be utilised to promote human development through the development of the non-oil economy, and in particular the rural sector – home to around 70 percent of the country's population, approximately 41 percent of whom it has been estimated recently are living in poverty.

Consequently, the TLNHDR focuses on the ways in which the non-oil economy can best be developed. In doing this, it aims to:

- Present the achievements of the country thus far in meeting its development goals. This presentation and the TLNHDR's subsequent assessment are made on the basis of the most detailed and contemporary data currently available, and as accurately as possible. In areas where such data is unavailable, assessments are based on information obtained through available reports and documents, and from discussions with relevant stakeholders. The assessment details the reality of the country's development a reality that contrasts with stereotyped views often encountered internationally of a country mired in poverty, with ongoing conflicts and a potential to succumb to the 'resource curse'.
- Generate discussion on the appropriateness and relevance of the various strategies available for the development of the non-oil economy, and particularly the rural sector. This will be the most crucial issue facing Timor-Leste in the coming years. Consequently, the TLNHDR focuses on how the country's petroleum wealth can most effectively be used for implementing pro-poor economic growth, developing the rural sector, enabling poverty reduction, facilitating employment generation and promoting private sector development. In its discussion of strategies for developing the rural economy, and in its presentation of a Macro-Economic Framework for achieving the Millennium Development Goals (MDGs), the TLNHDR directly addresses these issues and makes specific suggestions for strategic development in particular sectors.

#### **Achievements since Independence**

In the initial years of the country's post-independence development, major steps were taken to rebuild the nation. Free and fair elections were held, and a Constitution drafted, with almost all the constitutionally mandated institutions created in a relatively short period of time, by 2005. The post-2002 Fretilin Government addressed a range of development challenges in a pro-poor growth *National Development Plan* (NDP) applauded by donors as an exemplar of a Poverty Reduction Strategy. The Plan put forward a 'Development Vision', which has continued to act as a guide to the implementation of sector development strategies. Within the crucially important petroleum sector, the Government devised a legal framework for production, taxation and revenue management, viewed favourably as an exemplar of international best practice, consistent with the principles adopted by the Extractive Transparency Initiative.

#### **Underlying Problems and the 2006 Crisis**

Accompanying these achievements, however, there remained pervasive, ongoing problems – high youth unemployment, falling per capita incomes and increasing poverty rates in rural areas. These problems undoubtedly had an influence on the outbreak of the country's 2006 crisis, which also resulted from continuing divisions within the police, military and the political elite.

Economically, the 2006 crisis had a profound impact. Progress during 2002-5 was set back dramatically. The non-oil economy contracted by 5.8 percent, delivery of social and welfare services was severely restricted, and unemployment worsened. 2007 data indicate that per capita income in the non-oil economy was approximately 20 percent lower in 2006 than in independence year 2002. As a result of the crisis, at the beginning of 2007, approximately 150,000 internally-displaced people were living in temporary camps, in poor conditions, fearful of returning to their villages.

#### Post 2006: Addressing National Priorities and Promoting Growth

Faced with this situation, subsequent governments and particularly the present coalition Government – *Aliança Maioria Parlamentar* (AMP), led by Prime Minister Xanana Gusmão, have focused on addressing the underlying issues contributing to the crisis – improving public safety and security, enhancing social protection, addressing the problems faced by youth, tackling unemployment, improving social service delivery, and promoting clean and effective government. The TLNHDR assesses the extent to which the Government's strategy of focusing on these national priorities has succeeded in addressing the main post-2006 problem areas, and examines its emerging strategy for promoting growth, human development and poverty reduction, as the Government finalises its *Strategic Development Plan* (SDP) for the years 2011-30.

#### **Human Development in Timor-Leste**

The 2011 TLNHDR provides a thorough description and assessment of the current state of human development in Timor-Leste. According to the most detailed assessment of living standards currently available – as presented in the 2007 Household Living Standards Survey – poverty is widespread in Timor-Leste. This survey concluded that approximately 50 percent of the population was living in poverty in 2007. The next surveys enabling us to track poverty are the 2010 Census and a further household survey, in 2011. The results of the census should be available in 2011 and of the household

survey by 2012. Based on data made available from the Ministries covering the years to the end of 2009, the TLNHDR has reached the conclusion that these surveys are likely to show that poverty conditions have improved substantially since the 2007 Household Survey. Given the Government's policies of cash transfers to vulnerable groups, the subsidising of food prices, and the creation of jobs through initiatives funding labour-intensive employment in areas such as infrastructure development, it is highly likely that poverty levels have improved since 2007. From 2007-9, for example, Government funded labour schemes employed 40,000 Timorese annually, and the 2009 Pakote Referendum infrastructure development programme created 64,000 short-term jobs in the rural sector. Government data estimate economic growth at 12.2 percent in 2009, with average per capita incomes in the non-oil economy increasing from US\$ 398 per year in 2007 to US\$ 499 in 2008 and US\$ 599 in 2009. Other estimates, from the World Bank and the Asian Development Bank, give somewhat different rates of growth for 2009, respectively of 5.0 and 7.4 percent. Whichever estimate is taken, the relatively high rate of economic growth is likely to have had a positive impact on poverty. Beyond these projections and assumptions, however, as yet there is insufficient data to confirm these trends definitively. Significantly, however, further evidence for 2008-9 - based largely on district reports from the Ministries of Agriculture, Economy and Development, and Health, together with reports from NGOs working in the districts and from observations by those working in the President's Office on supporting small-scale poverty reduction village projects – suggests that in most districts, poverty levels may have improved. Recent World Bank predictive estimates suggest a poverty incidence rate of 41 percent in 2009. Accepting this approximate figure, and on the basis of current trends, poverty levels are likely to decline further in the coming years. Despite this improvement, however, there remain significant human development problems, notably in the areas of energy provision, food security and nutrition, access to education and health services and high levels of employment - of concern particularly for the country's youth. The TLNHDR argues that these pressing problems can only be addressed sustainably through the development of appropriate strategies for the development of the non-oil economy and particularly of the rural sector.

#### Promoting Sustainable Development of the Rural Sector and the Non-Oil Economy

Timor-Leste currently is in a challenging situation. Despite recent progress, much of the population remains poor, and there is considerable scope for improvements in levels of human development. To meet present and future needs the wealth from its oil must be utilised effectively to promote sustainable development of the non-oil economy. This raises a key question of how large accumulations can best be managed economically and politically to promote development. Discussions on this issue are ongoing, with Government plans to increase the level of withdrawals from the Petroleum Fund to finance key areas of development, such as infrastructure. The TLNHDR engages in this debate, by examining how withdrawals have been used thus far and suggesting ways in which use of withdrawals can be improved - based on international best practice, and assessing in detail the possible risks to ongoing good management. In contrast to commentators who argue that the portents for good management are not wholly favourable, the TLNHDR concludes that successive Governments in Timor-Leste have shown themselves to be fully capable of managing the Fund. Additionally, in recent years, the Government has succeeded in reducing the potential for seriously divisive conflict. However, the potential for conflict remains, and can be fuelled by continuing sources of resentment. As the TLNHDR argues in its last two chapters, potential bases for resentment can best be addressed by an inclusive and equitable development of the non-oil economy – reducing poverty in the agricultural sector by improving rural livelihoods and generating employment in the non-agricultural sectors.

#### **Achieving the Millennium Development Goals**

As outlined in the Report, Timor-Leste has made substantial progress in many MDG areas. It has achieved its 2015 goals for infant and under-5 mortality rates, for antenatal care coverage, and for the proportion of TB detected cases (under Directly Observed Therapy Short Course - DOTS). It is on track to achieve its MDGs in areas such as net enrolments in primary education, proportion of births attended by skilled health personnel, contraceptive prevalence rate, incidence rates associated with TB, and proportion of population with access to an improved drinking water source. However, Timor-Leste remains off-track for achieving remaining MDGs, such as proportion of population below the national poverty line, prevalence of underweight children under five years of age, proportion of children reaching fifth grade, proportion of children immunized against measles, maternal mortality ratio, proportion of population with comprehensive correct knowledge of HIV/AIDS, incidence associated with malaria, and proportion of population using an improved sanitation facility.

The Macro-Economic Framework presented in the TLNHDR outlines strategies for Timor-Leste to achieve all its MDGs by 2025. The framework is developed on the basis of a growth strategy, based on an average growth rate of eight percent in the non-oil economy over the next 15 years. The TLNHDR argues that such a strategy is feasible, financially sustainable, and will enable efficient and productive use of the Petroleum Fund, provided efforts are made to develop appropriate strategies for the development of the non-oil economy and primarily for the rural sector, mobilizing domestic resources to promote private sector development.

#### Strategic Development Plan

The TLNHDR presents detailed strategies for developing the non-oil economy, reducing poverty and improving current levels of human development and MDG indicators.

The analyses, assessments and strategies for developing the non-oil economy and the rural sector, as presented in the TLNHDR, will be of use to the Government as it engages in its ongoing stakeholder consultations and moves towards the final formulation of its Strategic Development Plan (SDP), striving to realise the Development Vision set out by and for its people at independence.

The TLNHDR will also enable the international community to have a clear and detailed picture of the substantial achievements of the country thus far and the challenges that remain in the areas of human development.

#### **Challenges and Risks**

The key issue for the country is the management and use of its petroleum resources. Whilst in recent years there has been an obvious need to address short term needs via cash transfers and subsidies, for the longer-term, revenues must be focused on investing in public assets that raise productivity. There is an obvious danger to the sustainability of the Petroleum Fund, the single largest revenue source for the country, if the government makes excessively large withdrawals beyond its delivery capacity to finance a high and rising level of public investment. As outlined in the TLNHDR's Macro-Economic Framework for the attainment of the MDGs, a moderate-to-high growth strategy, emphasising rural development, from within a human development framework, can contain inequality and spread more widely the benefits of growth. Such a strategy is also likely to focus more on pro-poor sectoral allocations of public expenditure, thereby enabling the use of the Petroleum Fund to benefit the population more equitably and at the same time reduce the rate of depletion of the fund. This will be a major aim of the forthcoming *Strategic Development Plan* (SDP).

Increasing disparities between rural and urban areas are a further major challenge for the promotion of pro-poor, human development in the coming years. A renewed focus on the rural economy is an urgent priority. Policies for enhanced investment in agriculture and the rural economy need to be put in place to increase incomes, create employment, and boost demand for local products. Budgetary allocation to the agricultural sector in the past has not been commensurate with the needs of the rural population, and this requires rectification.

Whilst poverty levels have improved in recent years, poverty remains pervasive. Policies to address levels of poverty cannot rely solely on the "trickle down" effect of petroleum wealth, but as shown by the experiences of countries in the Southeast Asian region, policies and programmes must be put in place to ensure that growth is inclusive.

Since substantial increases in investment are required for the development of the non-oil economy and the rural sector, Timor-Leste needs to strengthen its communications, transport and financial infrastructures within a relatively short time-frame. The present regulatory framework is not particularly conducive to investment, and improving this is vital. The foreign investment law needs to be enacted as soon as possible to attract investments capable of generating employment, improving labour skills, and promoting technological upgrading.

Timor-Leste's natural resource base is fragile and fast degrading. Land, water and forested area are under considerable stress. Greater attention is needed to deal with the impact of the environment on poverty, through the promotion of measures to conserve and protect the natural resource base so that development activities are environmentally sustainable.

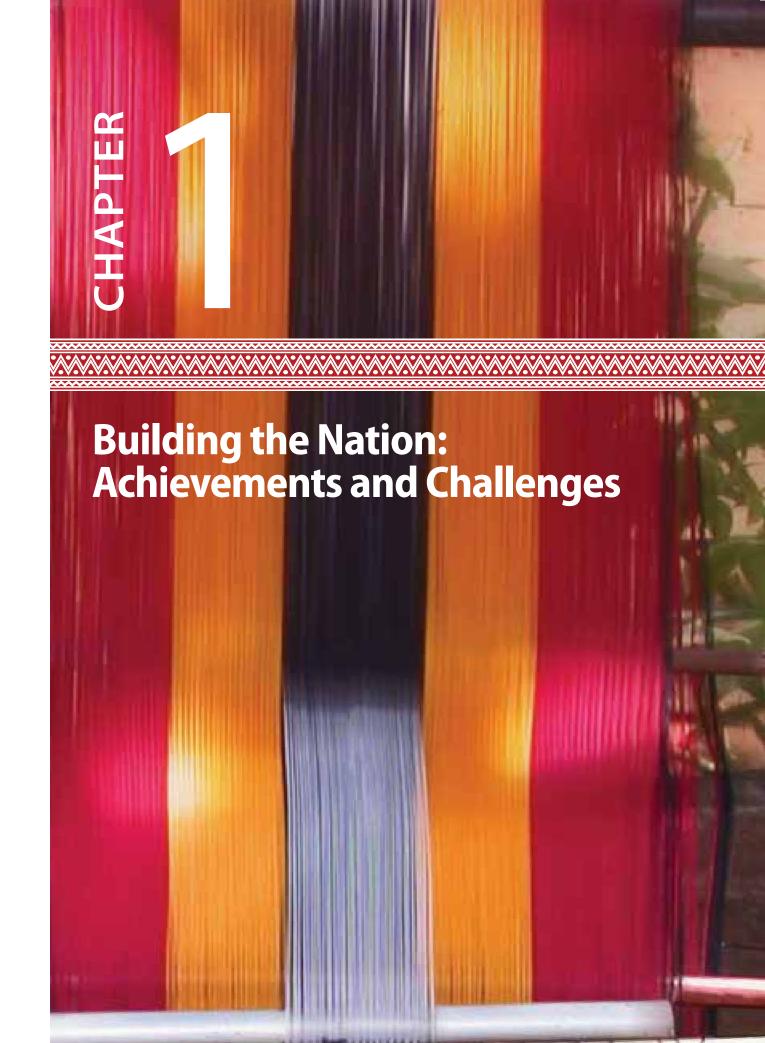
Timor-Leste is experiencing demographic changes with profound implications for its future development. It has one of the highest birth rates in the world, the majority of its population are below the age of 21, and migration from the countryside to the capital Dili is at very high levels. The challenges of employing this rapidly expanding urbanising population are immense, as are the challenges for reducing its current high birth rates, not least by a significant increase in investment in health and education.

Improvements in governance are a crucial precondition for achieving sustainable growth. In recent years, budget execution has improved substantially. However, these changes need to be buttressed by concomitant changes in audit function and anti-corruption mechanisms, via the development of a fully-functioning independent audit agency. An enhanced anti-corruption system also needs to be fully implemented.

As outlined in the draft of its Strategic Development Plan the Government is aware of the importance of these development challenges, and is further developing and refining its specific strategies to address them. Ongoing progress in addressing these challenges is crucial, since not addressing them adequately could exacerbate or revive factors that have been shown to impact on stability in the past. These include groups exploiting grievances based on continuing levels of unemployment and poverty, discontent within the large youth population sometimes manifest as gang violence, tensions within the security sector, a sense that formal judicial processes are inadequate to guarantee criminal accountability, disputes over unresolved land ownership issues accumulated over decades, and dissatisfaction arising from perceived lack of good governance practices. The Government has addressed these issues and continues to address them, particularly in relation to the security forces, where substantial progress has been made in recent years.

Successfully promoting pro-poor policies also fundamentally requires a greater involvement in decision-making by those for whom many of the policies are devised, namely Timor-Leste's rural population. Successfully promoting human development and alleviating poverty will depend on rural communities being convinced that the implementation of strategies devised will be beneficial for them. Hence the importance of villagers being involved actively in development decisions affecting their livelihoods, of their meaningful participation, promoted via an effective decentralisation to the districts and below. Parliament currently is still working on laws introducing municipal governments in each of the country's 13 districts, and on the process of elections of these governments. Establishing district-level governments and devolving genuine power and authority

to them will go some way to decentralising decision-making. Recently, the Government decided to postpone the municipal elections until 2014. It would be of considerable benefit if these could be introduced earlier, to make the political system more inclusive, enabling local participation through municipal governments. There is little doubt that capacity-building at local level is required for the successful introduction of local government. Yet, capacity does already exist in many areas, and the lack of it should not be used as a justification for not extending political participation to the districts and villages.







# CHAPTER

## Building the Nation: Achievements and Challenges

Any assessment of Timor-Leste's current state of human development must begin by recognizing the progress that has been made since independence in 2002. It must also recognize the extremely difficult conditions under which independence was achieved and the challenges the country has been facing since.

#### Early Years of Nation Building (2002-2006)

East Timor emerged in August 1999 when 78% of the population voted for independence after a long struggle, during which scores of Timorese died and the country was left in ruins and more than half the population was displaced.

#### **A New Nation**

"Timor-Leste, the world's newest nation, was created out of ashes... An estimated 70 percent of private homes and public buildings were burned to the ground. Bridges and power lines were demolished, and the telecommunications system was rendered inoperable. Valuable files, including land and property titles, civil registry, and education records were destroyed. Following the ballot, most Indonesian citizens left the territory, resulting in a severe shortage of qualified and experienced professionals."

World Bank, Country Assistance Strategy, June 2005

In 1999, the country's Gross Domestic Product (GDP) declined by 40 percent. About 25 percent of the population was forced across the border into Indonesian Timor. Education and health services collapsed, and the country had little or no trained personnel. Eighty percent of the country's primary schools were destroyed. A large number of people have been traumatized by their experience of the Indonesian rule and the violence that they saw in 1999.

BOX 1

Despite the difficulties of building a nation from ashes, with extremely limited capacities, Timor-Leste made substantial progress in the years following independence. Major steps were taken to build the

nation. Free and fair elections were held¹ and a Constitution was drafted and accepted in a relatively short period of time. By 2005, most of the constitutionally mandated institutions had been set up. The post-2002 Government addressed the range of development challenges in a pro-poor growth National Development Plan (NDP), based on detailed participatory assessments, directly involving the population and its constituent stakeholder groups. The Plan put forward a 'Development Vision', which was implemented through a subsequent Road Map, detailing annual action plans for every sector. The NDP has continued to act both as a guide to the implementation of sector development strategies, and as a bench mark by which the people can judge the performance of their governments. Donors applauded the NDP as an exemplar of a Poverty Reduction Strategy².

#### Timor-Leste - A Vision for 2020

Through an extensive process of consultation in 2002 the people of Timor-Leste agreed on a vision of what they wanted their country to be like in 2020. This vision guided the formulation of the NDP, its implementation and the formulation of subsequent strategies. The main elements of this vision are:

- Timor-Leste will be a democratic country with vibrant traditional culture and a sustainable environment:
- It will be a prosperous society with adequate food, shelter and clothing for all people;
- · Communities will live in safety, with no discrimination;
- People will be literate, knowledgeable and skilled. They will be healthy, and live a long, productive life. They will actively participate in economic, social and political development, promoting social equality and national unity;
- Production and employment will increase in all sectors agriculture, fisheries and forestry;
- People will no longer be isolated, because there will be good roads, transport, electricity and communications in the towns and villages, in all regions of the country;
- Living standards and services will improve for all East Timorese, and income will be fairly distributed;
- Prices will be stable, and food supplies secure, based on sound management and sustainable utilization of natural resources;
- The economy and finances of the state will be managed efficiently, transparently, and will be free from corruption; and the state will be based on the rule of law. Government, private sector, civil society and community leaders will be fully responsible to those by whom they were chosen or elected.

Source: East Timor: National Development Plan, Planning Commission, Dili, May 2002, p. xviii.

#### BOX 2

In the extremely important petroleum sector, the Government devised a legal framework for production, taxation and revenue management, also viewed favourably as an exemplar of international best practice, consistent with the principles adopted by the Extractive Transparency Initiative<sup>3</sup>. Macro-economic stability was achieved, and progress was made in restoring public services. As much as 35 percent of Government expenditure was devoted to the areas of health and education. Some health indicators improved, notably the under-five child mortality rate, and by 2005 more children were in school than at any time in the previous 30 years. The financial sector was organized and developed, accompanied by strong donor commitments.

Overall, in the early post-independence years, Timor-Leste performed well when compared with other post-conflict countries. A detailed assessment across a range of areas by the World Bank, for

<sup>1</sup> Elections for the Constituent Assembly were held in August 2001, Presidential elections were held in April 2002, followed by village elections in 2005. The national elections were assisted and overseen by UN Missions and were monitored by organizations such as the Carter Centre. The village elections were monitored by the Government. All reports concluded that the elections were conducted freely and fairly.

monitored by the Government. All reports concluded that the elections were conducted freely and fairly.

2 Donors and International Development Agencies were impressed particularly by the importance accorded to the formulation of detailed strategies for areas of human development such as health and education, as requested by the population in the pre-plan participatory assessments.

<sup>3</sup> In relation to transparency, Timor-Leste's Petroleum Fund was ranked fifth in the Peterson Institute's Transparency Index of sovereign funds, behind three US Funds and the Norwegian Pension Fund. In another transparency index, the Linaburg-Maduell Index of Sovereign Funds, Timor-Leste's Petroleum Fund was ranked in the top 20 of the world's funds, at number 18, in the first quarter of 2009.

example, ranked it first amongst the nine most recent post-conflict countries that it considered4. The indicators for the assessment were: transparency and accountability, public administration and rule-based governance, budgetary and financial management, health, education, public security, reconciliation, disarmament and reintegration, management of inflation and external debt, trade policy, management and sustainability of post-conflict reconstruction program, and reintegration of displaced populations.

However, alongside these achievements, there remained pervasive, ongoing problems. The non-oil and agricultural sectors experienced little development, with low productivity and low growth. Approximately three quarters of the labour force was employed in agriculture from 2001 to 2004, but agricultural productivity was very low – output per worker was less than one tenth of that in the industry and services sectors. Agriculture generated approximately one fifth of GDP. Unemployment levels remained high, particularly amongst youth, for whom the rate increased from 15 percent to 23 percent over the period 2001-2004. Of most concern was the high unemployment rate for youth in the main centres of Dili and Baucau, reaching 43 percent in 2004. Most significantly-GDP per capita declined (from US\$ 466 per annum to US\$ 292 per annum) during the 2001-2004 period, resulting in rising levels of poverty<sup>5</sup>.

These three problem areas - high youth unemployment, falling per capita incomes and increasing poverty rates in the rural areas – undoubtedly had an impact on the outbreak of the crisis that overtook the country in 2006 but they were not its major causes. These causes lay elsewhere, as outlined in BOX 3.

#### The Events of 2006

The proximate cause of the crisis of 2006 can be traced to the dismissal of a group of soldiers. In March 2006, 594 soldiers (almost half of the Falintil - Forças Armadas de Defesa de Timor-Leste (Timor-Leste Armed Forces F-FDTL) were dismissed because they had abandoned their posts. This group (soon to become known as the petitioners - peticionários) complained that they had experienced discrimination for some time due to a view that their commitment to the resistance, during Indonesia's rule, had been less than that of other soldiers. The majority of the petitioners came from the west of the country.

In late April, this group of petitioners demonstrated for four days in Dili. The then Prime Minister, Mari Alkatiri, ordered the F-FDTL to support the PNTL in ending the protest. Five petitioners were killed and several others were injured. In the coming days, long-standing frictions within and between the army and police, intensified. The situation worsened when, in May, the head of the military police and 28 of his subordinates, joined by some PNTL, abandoned their posts in sympathy with the petitioners. From the hills outside Dili, they launched attacks against army patrols, notably in Fatu Ahi, just outside Dili.

The fact that the petitioners came from the west of the country, and cited discrimination against them by easterners, eventually led to the emergence of conflicts in Dili. Street gangs began to engage in running battles, expressing their rivalries and hostilities in terms of east-west differences. Shops were looted and dozens of homes burned. In total, 6,000 homes and buildings were destroyed. Terrorised families began to take refuge in churches, public buildings and squares - and these refugee centres later evolved into the internally displaced camps, which were to become home to approximately 150,000 people.

World Bank, Country Assistance Strategy, June 2005, p. 7.
 The data in this section are taken from sections of the Timor-Leste Economic and Social Development Brief, World Bank, Dili, August 2007.

# Building the Nation: Achievements and Challenges

#### The Events of 2006 (cont.)

With its own security forces in conflict with each other and with street battles between youth gangs becoming widespread in Dili, the Government requested an international intervention force to restore order and provide security. A serious political crisis also developed, with Prime Minister Mari Alkatiri increasingly under pressure from all sides - from the President, the Catholic Church, the opposition, and even from members of his own party. Alkatiri eventually resigned on 26 June 2006. José Ramos-Horta was appointed by Parliament as his successor, on 8 July 2006. The country slowly began to function again, with a new UN mission charged with helping to rebuild institutions, provide significant support to policing, promote reconciliation and assist in the holding of the 2007 national elections.

To a certain extent, the 2006 crisis had its roots in ideological and strategic differences within the pre-1999 resistance movement, differences that were not addressed adequately in the period leading up to and after independence. These differences create tensions within the security sector. The differences had festered for many years, but came out into the open in 2006, expressed most notably as a division between westerners (*loromuno*) and easterners (*lorosae*).

The resulting conflicts were fuelled in Dili by the actions of youth gangs, a fall-out of the extremely high rates of youth migration into the capital, accompanied by similarly high rates of youth unemployment.

For details of the 2006 events, see the *Report of the United Nations Independent Special Commission of Enquiry for Timor-Leste*, United Nations High Commissioner for Human Rights, Geneva, October 2nd, 2006, information from which has been used in this box.

#### BOX 3

The economic and social impact of the 2006 crisis was severe. At the political level, the fragility of a number of important state institutions was readily apparent, notably in the security, justice and defence sectors – despite the marked UN involvement within some of them. In the economic sphere, progress that had been made during the 2002-2005 period was set back dramatically. The non-oil economy contracted by 5.8 percent, delivery of social and welfare services was severely restricted, and unemployment worsened. Data for 2007 indicate that per capita income in the non-oil economy was approximately 20 percent lower in 2006 than in the year of independence, 2002. Substantial numbers of internally displaced people (IDPs) – at one stage numbering approximately 150,000 people – lived huddled together in temporary camps, in poor conditions, fearful of returning to their villages.

The 2006 crisis has been viewed by some as a defining moment in the post-independence history of Timor-Leste. Undoubtedly, the crisis resulted in changing perceptions of Timor-Leste internationally. For some commentators, the country came to be assessed as likely to succumb tothe 'resource curse' – exhibiting a combination of low per capita income levels, poverty conditions, incidence of conflict and problematic governance, all characteristics of a country within the 'bottom billion'6. The fact that the country had done much to set in motion policies to avoid the 'resource curse' tended to be overlooked. Despite the many improvements that have been made since the end of 2006, the label has remained, and one still finds references to Timor-Leste as a country with a strong possibility of falling victim to the resource curse and its attendant problems<sup>7</sup>.

<sup>6</sup> This latter phrase has been used notably by the writer Paul Collier, as a basis for categorizing together 'fifty or so failing states' that contain the world's poorest people. See Paul Collier, The Bottom Billion: Why the Poorest Countries Are Failing And What Can Be Done About It, Oxford University Press, 2008. For an assessment of views on Timor-Leste and the resource curse at this time, see Matts Lundahl and Frederik Sjoholm (2006), "The oil resources of Timor-Leste: Curse or blessing?", Stockholm School of Economics, Working Paper number 229.

<sup>7</sup> For an assessment of the likelihood of Timor-Leste falling victim to the resource curse, see La'o Hamutuk Bulletin, Volume 9, November 2008, in which the editorial presents a detailed analysis of this likelihood occurring.

Faced with the 2006 setback, subsequent governments – both Fretilin and its successors – attempted to address what they saw as the main contributory factors to the crisis, by focusing on particular priority areas. Thus, the present coalition government, Alianca Maioria Parlamentar, led by Prime Minister Xanana Gusmão, has focused on the following national priorities: improving public safety and security, enhancing social protection, addressing the problems faced by youth, tackling unemployment, improving social service delivery, and promoting clean and effective governance. Focus on these issues in 2008-09 was followed by the establishment of working groups in the priority areas.

During 2009, national working groups specified and developed strategies in each of the priority areas, as a basis for developing a Medium-Term Strategic Framework, leading into the design of a second NDP. This process continued in 2010, with the formulation by the Government of the NDP, entitled the Strategic Development Plan (SDP), serving as a development blue print for the years 2011-2030. Developing the non-oil economy is a major focus of the SDP. As stated in the Plan Summary: "A major aspect of the SDP is to invest the oil revenues in the economy, in order to boost living standards, non-oil GNP per capita, and productivity"8. The summary of this Plan has already been made available, and this summary has constituted the basis for discussions between the Prime Minister, the Government, donors, stakeholders, and – most importantly – in meetings held in villages throughout the country during 2010. Following these discussions, the Government is moving towards the formulation of a complete Plan, to be finalised by early 2011.

Consequently, the 2011 TLNHDR is timely. The Report examines:

- · The current state of human development in Timor-Leste;
- The key challenges to be met;
- How these challenges can best be addressed in the coming years.

A fundamental issue for the country is – and will continue to be – the way in which the revenue from petroleum funds can best be utilised to promote the development of the non-oil economy, and in particular the rural sector – home to 80 percent of the country's population, 41 percent of whom it was estimated recently are living in poverty. The TLNHDR will focus particularly on examining these interlinked issues. In doing this, it aims to:

- Give as accurate a description as possible of the achievements of the country thus far in meeting its development goals.
- Generate discussion on the appropriateness and relevance of the various strategies available for the development of the non-oil economy, and particularly for the rural sector.

With this background, this chapter discusses two main areas:

- Firstly, on the achievements of Government, post 2006, in managing the recovery through the adoption of strategies addressing a set of selected national priorities.
- Secondly, on the main challenges to be addressed by the present and subsequent Governments in the coming years, to establish a basis for sustainable growth, human development and poverty reduction.

<sup>8</sup> From Conflict to Prosperity: Timor-Leste's Strategic Development Plan 2011-2030 - Summary, April 7th 2010, Office of the Prime Minister, Dili.

#### **National Priority Areas for Development**

#### 2009

#### **Agriculture and Food Security**

Increasing and intensifying rice cultivation for local consumption.

#### **Rural Development**

Improvements in infrastructure and the promotion of initiatives such as mini-markets, development of agricultural co-operatives, facilitating access to micro-finance and temporary job creation via the rehabilitation of rural roads.

#### **Human Resources Development**

Improving the quality of basic and technical professional education, and training youth for entry into the labour market.

#### Social Protection and the Provision of Social Services

Ensuring the sustainable re-integration of internally displaced people into their communities via relocation assistance and recovery packages; cash transfer programmes for vulnerable households, the disabled, veterans and IDP families, focusing on housing provision; strengthening the delivery of community health services.

#### **Security and Public Safety**

Reforming the Army and Police Force via an enabling legal framework, institutional development and the provision of improved training; progressively handing over control of districts from UNPOL to the Timor-Leste National Police Force (PNTL), combined with the development of a National Directorate for the Prevention of Community Conflict, to promote co-ordination between local groups in community policing.

#### **Clean and Effective Government**

Improving civil service management; establishing an anti-corruption commission; promoting the decentralization of government; ensuring government accountability, transparency and integrity in the handling of funds; promoting

#### **Access to Justice**

greater aid effectiveness.

Improving access by vulnerable groups to the justice system; strengthening the justice system via strategic sector planning; improved regulation of the sector; introducing fundamental legislation—such as Penal and Civil Codes, Juvenile Justice Laws, Law on Domestic Violence; Capacity-building; promoting private sector development via the implementation of land and property registration.

#### 2010

#### **Roads and Water**

Improving the roads network; expanding urban and rural access to improved water and sanitation; fostering private sector growth.

#### **Agriculture and Food Security**

Increasing food crop production, diversification and quality to boost rural incomes; promoting sustainable and efficient forest resource management.

#### **Human Resources Development**

Institutional strengthening of quality education and training for all; enhanced participation in education, training and initiatives that contribute to community development.

#### **Access to Justice**

Institutional development; promoting private sector development; improving access to justice for women.

#### Social Services and Decentralized Services Delivery

Social protection and a strengthening of disaster response; improving access to quality health services; strengthening health management and support services.

#### **Good Governance**

Improving aid effectiveness and the quality of statistical services to strengthen the macroeconomic framework; improving government accountability, transparency and integrity; promoting decentralization and local government reforms.

#### **Security and Public Safety**

Defined roles for Timor-Leste's main security organs and institutions; sustainable F-FDTL Defence management, professional staffing; institutional reform implemented in the Police and Security Directories.

BOX 4

#### **Success thus far in Meeting National Priorities**

Despite the setbacks of 2006, Timor-Leste has managed to recover and achieve high rates of growth, largely due to increased oil prices, particularly during 2007-8. The growth rate of GDP per annum, prior to 2006 – from 2002 to 2005 – averaged 3.2 percent. The 2006 crisis adversely affected growth, and the GDP contracted by 5.8 percent. By the end of 2007, based on Timor-Leste Government data, however, the growth rate increased substantially and a 7.8 percent rate of growth of GDP was achieved. This was followed by a growth rate of 12.8 percent in 2008 and 12.2 percent in 2009. The Government figure for 2009 differs somewhat from other estimates – notably for example from that of the World Bank (WB), which in a recent update, estimates a growth rate of 7.4 percent in 2009. Most recently, the Asian Development Bank (ADB) estimated the growth rate for 2009 at 5 percent<sup>10</sup>. Despite these differences in estimates, nevertheless, they all provide evidence that substantial gains have been made since the 2006 crisis.

Since 2006, the economy has thus undergone a fairly rapid expansion, due to the growth in industry and services and – more importantly – to increases in government spending. Public spending was initially directed to addressing key problem areas emerging from the 2006 crisis, and more recently to boosting food production, facilitating rural development and improving the infrastructure. This expenditure has enabled the Government to fund important and much needed initiatives, some through unconditional cash transfers. Notable among these initiatives are:

- Funding the return of an estimated 150,000 internally-displaced people (IDPs) to their villages, assisting them with resettlement packages and cash transfers for housing repair. The sums involved have been substantial; US\$ 20 million was allocated initially in the 2007 transitional budget. This assistance continues, for example, with the provision in late 2009 of payments of US\$ 500 to each household, for assets lost during the 2006 crisis.
- Addressing long-standing grievances of disaffected groups by providing pensions to veterans (*Falintil* soldiers who fought for independence) and to the *peticionários*.
- Addressing the needs of vulnerable households the elderly, disabled and female-headed households – via cash transfers.

#### **Cash Transfers in Post-Conflict Countries**

Proponents of cash transfers cite their potential to contribute to local economic growth and poverty reduction. Evidence from peaceful low and middle-income countries suggests that if well designed and linked to complementary services and programmes, poverty reduction and local multiplier effects can be achieved through cash transfers. A number of fundamental pre-conditions need to be in place for this to occur at scale, including considerations of the value of the transfer, institutional capacity to ensure predictable and timely delivery, and adequate coverage of the poor. These are more difficult to meet in post conflict contexts with low institutional capacity, limited complementary basic services, unpredictable and fluctuating levels of aid and competing demands for scarce natural resources.

Implementing cash transfers in post-conflict countries presents both challenges and opportunities. Some are similar to those in peaceful low-income countries. However,

while poverty reduction is the overarching goal in both conflict and peaceful countries, cash transfers in conflict-affected countries and countries emerging from conflicts may have two further explicit objectives: to diffuse potential future tension and conflict by channelling resources to specific target groups, and to create or reinforce the legitimacy of the government and the compact between government and citizens.

See: R. Slater, "Cash Transfers: Growth and Graduation", Project Briefing No. 29, Overseas Development Institute (ODI), London, 2009. Also, Rebecca Holmes, "Cash Transfers in Post-Conflict Contexts", Project Briefing No. 32, ODI, 2009.

BOX 5

<sup>9</sup> Emerging Stronger from the Crisis: East Asia and Pacific Economic Update 2010, World Bank, Washington, 2010. 10 Asian Development Outlook 2010: Macroeconomic Management Bevond the Crisis. Asian Development Bank. Manila. 2010.



Additional Government expenditures have focused on the promotion of rural development through the creation of 'mini-markets' to encourage the sale of food and locally produced goods, and on facilitating access to micro-credit for cultivation and the development of small-scale businesses in the rural sector. Funding has also been directed towards improving service delivery in health and education, and to improving access to justice. Most importantly, in 2009, the focus moved firmly towards the infrastructure and energy sectors, with 2009 designated as the 'Year of Infrastructure' – constructing and improving roads, bridges, ports, dams and basic sanitation. Initially, a substantial amount of the infrastructure budget in 2009 was directed to the construction of two oil-fired power plants and an accompanying system of transformer stations, to provide electricity to all districts. Although much of this was eventually re-allocated to finance 808 small-scale physical projects, mostly at the district level, the oil-fired plants project remains an important part of the Government's infrastructure development plan.

The decision to construct heavy oil plants has generated extensive debate, and this issue is assessed later in the report<sup>11</sup>. The Government's decision to exceed the Estimated Sustainable Income level (ESI) of three percent withdrawal from the Petroleum Fund has also generated debate. To preserve the real value of the country's petroleum wealth, withdrawals from the Fund are guided by the concept of sustainable income<sup>12</sup>. Withdrawals in 2008 and 2009 exceeded the three percent level, to fund infrastructure development and to create an 'Economic Stabilization Fund' to subsidize food imports, in response to a dramatic increase in the price of food imports, particularly rice<sup>13</sup>. The implications of such developments, particularly in relation to ESI level expenditure are assessed later, notably in the discussion of the use and management of petroleum revenues (Chapter 3), and in presenting a Macro-Economic Framework for achieving the MDGs in Timor-Leste (Chapter 5).

The economic and social initiatives outlined above have been accompanied by essential reforms of the security and defense sectors, and by the holding of fair and free elections under difficult conditions, particularly in the post 2006 period. Additionally, in 2009, the Government formulated much-needed programmes for decentralizing decision-making to the districts. Substantial progress has been made since 2006 in such areas.

Since independence in 2002 – and as illustrated in the post 2006 initiatives – the economy has been driven by the public sector, funded largely by petroleum revenues and assisted by ongoing donor contributions. In 2008, for example, of the US\$ 2.57 billion revenue, US\$ 2.51 billion came from petroleum revenues. In 2009, the projections were total revenue of US\$ 1.35 billion and petroleum revenue was of the order of US\$ 1.25 billion, which resulted in a total of US\$ 5.37 billion being accumulated in the Petroleum Fund by the end of 2009; by the end of 2010, total revenue was estimated at US\$ 6.7 billion. In 2008, donors committed US\$ 236.4 million of which US\$ 223 million was disbursed, and in 2009 US\$ 309.5 million was committed, of which US\$ 287.4 million was disbursed. Total Government expenditure stood at US\$ 450.1 million. Since 2007, the growth in public expenditure has been particularly rapid, reaching 59 percent of the non-oil GDP in 2007, 106 percent in 2008 and 101 percent in 2009. Thus far, the private sector has played only a minor role, with investment averaging 4.6 percent of non-oil GDP in the period from 2002 to 2007, and increasing a little to reach five percent in 2009.

<sup>11</sup> This issue is discussed in Chapter 4 of the Report.

<sup>12</sup> For each year, ESI is calculated as three percent of the sum of the Fund balance and the present value of expected future petroleum receipts. Withdrawing more than the ESI requires the Government to provide Parliament with a detailed explanation of why it is in the long-term interests of the country, and the Government is also required to submit a report estimating the impact on future ESI, that is certified by the independent auditor.

13 There undoubtedly was a need to respond, under the conditions then prevailing. Food prices increased dramatically in early 2008, in some areas reaching 200%.

<sup>13</sup> There undoubtedly was a need to respond, under the conditions then prevailing. Food prices increased dramatically in early 2008, in some areas reaching 200% increases in April of that year, compared with 2007. In addition, the country's stock of rice was extremely low, and securing supplies externally became essential.

#### **Challenges for the Coming Years**

Despite this progress in addressing needs in priority areas, there remain major challenges to be addressed in the coming years.

#### **Developing the Rural Economy**

Although there has been increased growth in some sectors of the non-oil economy, thus far this has had little impact on the agricultural sector. A third of all households in Timor-Leste rely exclusively on subsistence cultivation and most households regularly experience food shortages in any given year. Agriculture currently accounts for only one fifth of GDP. The sector's productivity is extremely low, with output per worker being less than one tenth of that in the industry and service sectors. Development of the agricultural sector requires substantial improvements in productivity, investments in value-added and export commodities, provision of market information, a reduction in the sector's vulnerability to food shortages, diversification of cultivation, the development of processing industries, and the creation of small-scale rural industries based on enhancing existing skills.

The Government has made progress in some of these areas since 2007. For example, Government data indicates that the total area under rice cultivation increased by 45.2 percent from 2007 to 2009, and output increased by 73.8 percent. Similarly, the total area under maize cultivation increased by 17.5 percent, and the output of maize increased by 21.8 percent, during the same period<sup>14</sup>.

#### **Reducing Poverty and Facilitating Employment**

Until recently, the stagnation of the rural economy contributed substantially to the persistence of poverty in Timor-Leste. The National Directorate of Statistics (Direcção Nacional de Estatístca - DNS), estimates that between 2001 and 2007 the absolute poverty line increased from US\$ 0.52 to US\$ o.88 per person, per day, based on current prices. This estimate uses total consumption of a household as the measure of poverty<sup>15</sup>. Using this new estimate for the absolute poverty line, the DNS estimated that the percentage of poor increased from 36 percent to 50 percent, over the 2001 to 2007 period. Thus, in 2007 one out of every two people in Timor-Leste had an income that was below the poverty line. Evidence for the period 2008 to 2009 – based largely on reports from the Ministries of Agriculture, Economy and Development, and Health, together with reports from non-governmental organizations (NGOs) working in the districts and from observations by those working in the President's Office on supporting small-scale poverty reduction village projects - suggests that in most districts the incidence of poverty has declined, particularly as a result of the cash transfers that have been implemented by the Government. Further evidence from the recent 2009-10 Demographic and Health Survey supports this trend. This evidence accords with predictive estimates made by the World Bank, indicating poverty incidence at 41 percent in 2009<sup>16</sup>. However, as yet there is insufficient data to establish this decline conclusively17. Even with these probable recent gains, however, poverty remains widespread.

Poverty conditions are influenced strongly by the uneven development of the non-agricultural sector of the non-oil economy. Whilst sectors serving the international community (such as security, hotels, restaurants and retail services) and more recently, those benefiting from infrastructure

<sup>14</sup> These data are taken from the Directorate of Agribusiness (2008) *Maize Commodity Profile*, Ministry of Agriculture and Fisheries, Timor-Leste Government, Dili, 2008

<sup>15</sup> This means that in December 2007, the typical cost of attaining the basic minimum of 2100 calories per person, per day, and meeting a small number of basic non-food needs, was US\$ 0.88. See Timor-Leste Survey of Living Standards.

<sup>16</sup> The World Bank bases its prediction on an econometric model derived from TLSLS 2007 data which is then applied to data derived from the 2009-10 Demographic and Health Survey. See A 2009 Update of Poverty Incidence in Timor-Leste using the Survey-to-Survey Imputation Method, World Bank, Dili, 2010.

<sup>17</sup> This awaits the final results of the surveys, most notably the 2010 National Census, and a further household survey to be undertaken possibly at the beginning of 2011. A Demographic and Health Survey was undertaken in 2009-10, and the results have been made available to the public in December 2010. For purposes of drafting the National Human Development Report, we have incorporated the available data from on Timor-Leste Demographic and Health Survey, 2009-10, Preliminary Report. National Statistics Directorate and Ministry of Finance. Dili. March 2010.

Suilding the Nation: Achievements and Challenges

investment (construction, transport import/export services wholesale and retail) have expanded, other sectors have grown more slowly. Most importantly, recent developments in these sectors are as yet not capable of fully absorbing the numbers of young people entering the labour market annually, particularly in Dili. Recent estimates indicated that whilst 15,000 young people enter the labour market annually, a mere 400 new jobs are being created18. The latest Timor-Leste Labour Force Survey 2010 gives a rather lower figure, with unemployment at 3.6 percent. The Survey, however, also concludes that there are a significant number of people in "vulnerable employment" 9 - 176,000people aged 15 and over (70 percent across all sectors as a proportion total employment). This level of "vulnerable employment" is particularly crucial for Dili, with its agglomeration of post-secondary education institutes and the high levels of youth in-migration that it attracts. The private sector employs approximately only eight percent of the labour force.<sup>20</sup>. Responding to these employment needs, from 2007-9, the Government funded intensive labour schemes employing 40,000 Timorese annually. Additionally the 2009 Pakote Referendum infrastructure development programme created 64,000 short-term jobs in the rural sector<sup>21</sup>.

#### Tackling Poor Roads and Generating Employment in Ermera

'School was out in Ermera, but for 17-year-old Natalia de Jesus de Nascimento, there was no time to waste, as she got to work on fixing the seven kilometres or so of road linking her village, Lehu, with the outside world. "It was my own choice to come here. I wanted to contribute to the development of the village," she said, on a sweltering day.

All around, young men and women were armed with hoes, shovels, pickaxes and crowbars. De Nascimento and her 20 or so fellow workers are part of a Government project that is tackling two of Timor-Leste's biggest problems: bad roads and high unemployment. The aim of the project, which began last year, is to generate more than a million days of employment, by getting rural communities to mend and establish routine maintenance of the country's rural roads. It is targeted at young people. The project identifies the roads most in need of repair, based on criteria such as the number of people living along the routes, while the feasibility of doing the work depended on the building materials being within easy reach.

"The road is important, so that people can go to the local market and get to the river to collect sand and other building materials," said community contractor, Simian Luis Pereira, 23, who manages the workers on this project. "Some of the workers are still high school students," said Pereira, who as a skilled worker earns US\$ 5 per day. "This project can help them save cash to use for their education." The US\$ 2 per day that the workers earn for fixing their roads keeps them above the poverty line and makes for a welcome injection of cash into their communities. Lehu village is home to about 1,000 people, most of whom farm taro, pumpkins, bananas, cassava, corn and coffee.

A short drive away from Ermera, 150 men and women of all ages were in the final stages of rebuilding 11 kilometres of road in Bazartete, part of Liquica district. There are 600 households spread over three villages along the road. The work, which began in April, has seen the road transformed from a rocky, pot-holed nightmare into a waterproofed wonder. All along the newly smoothed stretch of road there are houses in various stages of being done up, using materials transported along the road.

"Ambulances can now get to people in need, while trucks and microlets (small minibuses used for public transport) are now able to get through, whereas they couldn't do so before," says the head of Maometo, one of the three villages. With so few jobs in rural areas, projects like this are highly valued.

Source: Extracted from: Matt Crook, "Timor-Leste: On the Road to Future Prosperity", Guardian Weekly, 18 November 2008

#### BOX 6

<sup>18</sup> See Background Paper on National Priorities prepared for the Timor-Leste Development Partners Meeting, Dili, 2008.

<sup>19 &</sup>quot;Vulnerable employment" is defined in the Survey as 'those whose status in employment as being own account worker or contributing family member, and who are relatively under precarious circumstances, with no formal work arrangements or access to benefits or social protection programmes'. (See Timor-Leste Labour Force Survey 2010, p. 14)

<sup>20</sup> See Sonny H. B. Harmadi and Rui Gomes (2009) "Shaping Human Development in Timor-Leste through Non-Oil Economy". Technical Paper prepared for the TLNHDR, Dili.

<sup>21</sup> For further details, see The Xanana Government: Mid Term Achievement Report, Dili, 2010.

Building the Nation: Achievements and Challenges

To continue to deal with unemployment in the longer-term, and to create a sustainable basis for development when petroleum revenues have declined, it is vital that the development of the non-oil economy be addressed. This involves a number of major tasks. Currently, there are serious constraints on investing in the non-oil economy. A shortage of factors of production – most notably lack of skilled workers, poor infrastructure and high wages (relative both to the level of development and regionally) combined with the lack of contract enforcement laws, complications in property registration and difficulties in obtaining credit, make Timor-Leste a complex environment in which to conduct business. The most recent World Bank Survey, *Doing Business 2011*, ranks the country at number 174 of 183 reporting countries, in terms of ease of conducting business<sup>22</sup>. The country had the same ranking in the 2010 Report<sup>23</sup>. In the Pacific and Asia region, Timor-Leste is ranked number 24 of 24 countries reporting in the 2011 Survey.

Legislation is planned to address the above constraints. Some of these came on-stream in 2009, notably with changes in the taxation laws and other measures, (discussed in chapter four of the Report), but overall, the situation for investors remains problematic.

#### **Improving Basic Health**

Although there has been considerable improvement since independence, the overall health status of the population remains relatively low when compared to other countries in the region. In crucial areas such as under-five mortality and infant mortality rates, there have been substantial improvements since independence, and particularly since 2007, as outlined later in the TLNHDR. Based on Government data, infant mortality has declined dramatically: during the 1999 to 2003 period, it stood at 68 per 1,000 live births, but declined to 44 per 1,000 live births during the period 2004-2005 to 2008-2009<sup>24</sup>. Until recently, evidence for the country's relatively high maternal mortality rate rested primarily on surveys undertaken some time ago, in 2004, at which time the figure was 666 deaths per 100,000 live births. Recent data from the Ministry of Health gives a figure of 450 deaths per 100,000 live births. Most recently, however, the 2009-10 Demographic and Health Survey gives a rather different figure of 557 deaths per 100,000 live births. There have been substantial increases in recent years in the number of mothers receiving ante and post-natal care, with 86 percent of mothers receiving at least one ante-natal care and 32 percent receiving a post-natal check-up. The incidence of at least one ante-natal care visit by a skilled professional increased from 55.4 percent in 2007 to 86 percent in 2009<sup>25</sup>.

Diseases such as tuberculosis, malaria and respiratory infections remain problematic, although there have been substantial successes in these areas in recent years. For example, data from the Ministry of Health indicate malaria incidence has been reduced from 206 per 1,000 in 2007 to 113 per 1,000 in 2009. Similarly, tuberculosis rates have declined, with incidence reduced from 789 per 100,000 in 2004 to 378 per 100,000 in 2009<sup>26</sup>. Malnutrition remains common particularly among children – 45 percent of children are underweight, with 33 percent showing evidence of stunting and 19 percent of wasting<sup>27</sup>. Whilst access to health services remains a problem for poor households, overall attendance at health clinics has improved substantially in recent years, currently standing at 77 percent for the rural population. Attendance has improved as a result of the use of mobile clinics, but primarily through the implementation of the Ministry of Health's SISCa (Integrated Community Health Services) system, in which village communities work together with local health clinic staff to promote and deliver a basic health package (combating infectious diseases, improving nutrition, maternal and child health, and family planning). This improved level of attendance probably also accounts for the recent improvements in immunization coverage. The 2009-10 Demographic

<sup>22</sup> See World Bank (2010), Doing Business 2011: Making a Difference for Entrepreneurs, World Bank, Washington D.C. The Report covers the period June 2009 to June 2010.

<sup>23</sup> By comparison, in 2007, Timor-Leste was ranked 170 of 183 reporting countries.

<sup>24</sup> See Simor-Leste Demographic and Health Survey, 2009-2010, National Statistics Directorate of the Ministry of Finance, Dili, March/November 2010.

<sup>25</sup> Data provided by the Ministry of Health, Timor-Leste Government, 2010.

<sup>26</sup> Data provided by the Ministry of Health, Timor-Leste Government, 2010. Based on this data from the Ministry, the MDG targets for the detection and cure of tuberculosis have been achieved.

<sup>27</sup> See Timor-Leste Demographic and Health Survey, 2009-10. Data provided by the Ministry of Health, Timor-Leste Government, 2010.

and Health Survey shows an almost threefold increase in the numbers of children 12-23 months considered by the WHO to be "fully immunized", from 18 percent in 2003 to 53 percent in 2009<sup>28</sup>.

#### **Meeting Essential Educational Needs**

The link between educational attainment and poverty reduction was recognized and voiced by Timorese during the course of the 2001 participatory assessments for the NDP. They repeatedly cited the lack of education as the main cause of their poverty. There remains a real hunger for education within the country. Thus far, this has been partially addressed, with improvements in recent years, particularly in relation to primary education. Details of the current state of education are outlined in chapter two.

The TLSLS showed that, in 2007, overall, educational attainment remained low. A substantial percentage of the population (57 percent) remained uneducated to the primary level. Only 14 percent of the population had education to the secondary level. In subsequent years, however, there have been improvements in these areas, as indicated later in the TLNHDR. Successes are continuing in addressing illiteracy; literacy rates for 18 to 24-year-olds increased from 50 percent in 2001 to 85 percent in 2007. Since 2007, the Government has invested heavily in literacy programmes, which are now being implemented in all thirteen districts of the country. Whilst net enrolments in primary education declined from 65 percent in 2001 to 63 percent in 2007, they have increased markedly since then, to 83.2 percent in 2009, according to recent Government data. At the pre-secondary level, the enrolment rate in 2009 was 24.74 percent and at the secondary level, the rate was 11.74 percent<sup>29</sup>.

As outlined later in the TLNHDR, early enthusiasm for education tends to wane with time spent in the education system. Students repeat years, interrupt their studies and start new levels late. This is the case particularly with children from poorer households. There are many reasons for this, most of which are being addressed in current government policies – distance from school, lack of textbooks, use of a language of instruction with which most students are not familiar and which generally is not used on a daily basis outside the school, the lack of trained teachers, overcrowding and pressure on already limited hygiene facilities. These problems – of access, quality and relevance – constitute ongoing challenges for the education sector.

#### **Improving Teaching Standards**

In 2007, 75 percent of Timor-Leste's 12,000 teachers were not qualified to teach, under the standards defined in the country's National Education Act and by the Ministry of Education. Consequently, in 2008 the Government provided intensive training for 3,000 teachers. In 2009, this programme was extended to cover 9,000 teachers. In addition, 617 teachers have completed undergraduate programmes and 36 teachers are currently attending postgraduate programmes. These intensive training programmes are now mandatory for all teachers and are an ongoing initiative.

Information from A Path to Peace and Progress: August 2007 – March 2010. The Xanana Gusmao Government Mid Term Achievement Report, p.52

BOX 7

<sup>28</sup> See *Timor-Leste Demographic and Health Survey 2009-10*, Timor-Leste Government, 2010. 29 Data taken from Ministry of Education. Timor-Leste Government. EMIS Report, 2009.

<sup>29</sup> Data taken from Ministry of Education, Limor-Leste Government, EMIS Report, 2009.

In recent years, Timor-Leste has had one of the highest birth rates in the world, with the fertility rate in some years being as high as 7.4 births per woman. After 2000, and particularly since independence, families have celebrated by having more children. However, this is now becoming a problem, both for the women and for the nation as a whole. A recent 2009 projection by the UNFPA puts the fertility rate at 6.53<sup>30</sup> births and the 2009-2010 Demographic and Health Survey indicates that the rate has declined to 5.7 births, over the period 2005 to 2009. High fertility rates have resulted in a very young population. Currently, the median age in the country is 17.4 years. About 45 percent of the population is younger than 15 years, and 62.9 percent is younger than 21 years. This growth in population is accompanied by a rapidly changing population distribution.

Migration to Dili is a common phenomenon. As much as 42.6 percent of Dili's population was not born in Dili, but has migrated to the capital. These migrants are comprised mostly of teenagers and young adults. The total percentage of lifetime in-migrants increases to 57.2 percent amongst 20-24 vear-olds and to 64 percent amongst 24-29 year-olds. Dili's population in 1999 was 83,921 people. Currently, the population stands at approximately 234,000 people and accounts for 21.97 percent of the total population of the country<sup>31</sup>. These trends are difficult to sustain, both socially and economically, and particularly in relation to employment. Consequently, in the coming years, the country requires a reasonably expeditious mix of policies enabling a reduction in fertility rates and facilitating a reduction in the current high levels of rural-urban migration. This is a major task facing future governments in Timor-Leste.

# **Meeting Basic Energy Needs**

Timor-Leste's first NDP accords a high priority to energy provision. The reasons for this are readily apparent: Use of energy for farming is extremely limited. The current electrification rate for rural households is extremely low, with less than 10 percent of households being connected to local grids that provide an average of six hours of lighting per night. Recent estimates reveal that at least 185,000 households have no access to electricity, except through the use of batteries<sup>32</sup>. For lighting, most of the rural population has to rely on kerosene, plant oils and batteries. Monthly expenditure on these items is high; for example, an average of five dollars per month is required for kerosene alone. Twenty-four hour supply exists formally in Dili and Baucau, although there are high rates of outages in the evening hours. Many diesel generators are not operational, largely due to inadequate maintenance. Household tariffs are below costs and theft of electricity is prevalent. Presently, the country imports all its fossil fuel needs at world-market prices, mainly in the form of refined or secondary petroleum products such as diesel, gasoline, liquefied petroleum gas (LPG) and kerosene.

The present Government is focused on the essential task of delivering adequate supplies of electricity to all districts. A series of studies have recommended a mix of provisioning – progressively substituting imported fossil fuels by solar power, biogas, and hydropower – prior to the eventual piping of natural gas from sea-bed deposits in the coming years. Recently, however, the Government has opted for a quick-fix solution through the building of heavy oil plants, constructed under contract by an overseas company, using imported parts and expertise. While this solution will meet short-term needs, it has the potential to create problems in the coming years, particularly with regard to such crucial areas as pollution and sustainability. This issue is examined later in the TLNHDR.

<sup>30</sup> See http://www.un.org/esa/population/publications/wpp206/WPP2006\_Highlights\_rev.pdf.

<sup>31</sup> Data from the Preliminary Report on the 2010 Census, Government of Timor-Leste, October 2010.
32 These estimates were made in 2008, in Detlef Roy and Lino Correia, Rural Energy Policy for Timor-Leste, UNDP Timor-Leste and the Secretariat of State for Energy Policy, Dili, July 2008, p.11.

# Suilding the Nation: Achievements and Challenges

# Meeting the Environmental Challenges

Timor-Leste faces the familiar set of environmental problems experienced by low-income countries: inadequate water supply and sanitation provisioning; limited facilities for adequate waste disposal; prevalence of indoor air pollution, and the ongoing denuding of its forested areas.

During Indonesia's rule, substantial areas of forest were felled, logged and the timber exported. Additionally, much land was cleared by the Indonesian military in their campaigns against areas held by the independence movement and through large population movements. It has been estimated that forest cover decreased by almost 30 percent<sup>33</sup>. This loss was then compounded in subsequent years by the clearing of land for agriculture, an intensification of slash and burn cultivation, and the cutting of trees for firewood<sup>34</sup>. These factors have all resulted in widespread soil erosion due both to surface erosion and landslides. Denuded hillsides have in turn increased the size and frequency of landslides and flash floods, creating problems for populations in both upland and lowland areas. Consequently, productive agriculture and forest areas are being lost, roads are often difficult to use, water supply for irrigation is becoming silted, and the overall quality of drinking water is problematic in some areas. Although the Government has established protected areas for forest conservation, most watersheds remain under pressure from ongoing exploitation and unsustainable upland management.

Water quality is affected not only by erosion resulting in increased sedimentation and turbidity, but also from biological, chemical and physical pollution of water in urban areas. In most cases, people depend on surface water, the quality of which is particularly poor in the rainy season. A 2007 WHO Survey concluded that approximately 58 percent of the population had access to an improved water source, and 36 percent had access to improved sanitation<sup>35</sup>. Most recent figures from the National Directorate of Water and Sanitation indicate improvements since then, with 66 percent of the population having access to an improved water source and 49 percent using improved sanitation in 2009<sup>36</sup>. Additionally, water shortages are common in many areas in the dry season. Water access has been a focus of Government programmes, designed and implemented with donors and international agencies. Major supply and sanitation projects have been carried out, but sustainability remains a problem, with communities experiencing difficulties in operation and maintenance.

Timor-Leste also has a solid waste problem. Most waste is neither collected nor disposed; it lies on the streets or in dried up streams before being carried to the sea with the rain. Air pollution is also a major concern, particularly for women and children who breathe in polluted air whilst cooking with firewood, or by just being in the kitchen. This is a major cause of the widespread incidence of respiratory disease in the country. It also contributes to chronic obstructive pulmonary disease and lung cancer in adult women. Recent assessments have concluded that 98 percent of households use solid fuels for cooking<sup>37</sup>.

As with other small island states in the Pacific region, Timor-Leste faces considerable risk from the impact of climate change, notably from variations in monsoon winds, strong winds and cyclones, and from climate events such as La Niña and El Niño, shortening the dry season to one to two months. Increased variability of climate is likely to produce increased food insecurity, degradation of forested areas, soil erosion and landslides, and increased risk of flooding in low-lying coastal villages.

<sup>33</sup> See Assessing Environmental Needs and Priorities in East Timor, UNDP, Dili 2001. Additionally, using remote sensing data, the FAO estimated that the country's total forest area reduced by 17 percent from 1990-2005. See FAO, Global Forest Resources Assessment, 2005.

<sup>34</sup> See Timor-Leste: The State of the Nation, Government of Timor-Leste, 2008, Chapter 8.
35 World Health Statistics 2007, World Health Organization, Geneva, 2008. Even though 36 percent of the population has access to toilets or adequate excretal disposal facilities, waste is generally left untreated. In the absence of proper facilities, many households use drains, rivers, fields or gardens. This is leading to biological, chemical and physical pollution of water, with shallow wells often being contaminated.

<sup>36</sup> Timor-Leste MDG Booklet (2010), Timor-Leste Government, Dili 2010, p. 29

<sup>37</sup> See Timor-Leste: Country Environmental Analysis, Sustainable Development Department, World Bank East Asia and Pacific Region, July 2009.

In response to changing climatic conditions, in 2008, the Government adopted an ambitious National Disaster Risk Management (DRM) Policy and is fulfilling its commitments to the United Nations Framework Convention on Climate Change (UNFCC), developing a National Adaptation Programme for Action. The Government has established disaster structures in every district, fortifying sites, rehabilitating roads and bridges and introducing flood control measures. However, its ability to meet its commitments continues to be constrained by a lack of staff capacity, both within Government departments and at the district level. Initiatives in disaster preparedness management are being undertaken by NGOs at the suco level, in a few areas. As yet, however, there is no credible system for monitoring or analysing climate change and its impact<sup>38</sup>.

# **Environmental Concerns need Long Term Commitment**

"The environmental challenges are enormous and cross-cutting. The outlook for the environmental sector in Timor-Leste remains bleak and the capacity to overcome the many existing problems is not very promising in the short to medium term. It requires long term commitment, an integrated approach and co-ordinated programmes by state and civil society organizations to address environmental issues in a concerted and sustainable manner."

Source: Extract from - Timor-Leste: The State of the Nation, Government of Timor-Leste, 2008, Chapter Eight, "The Environment", p.2.

BOX 8

# Sustaining Peace and Security

A crucial precondition for the implementation of the development policies that the Government has adopted is the maintenance of security. The Government has made substantial progress in this area since the near fatal shooting of the President in February 2008. The merger of security and defence under one ministry, headed by the Prime Minister, has been instrumental in producing substantial improvements in security. Armed groups are no longer at large, there is little evidence of tensions on the streets of Dili, and gang violence has receded. The Government no longer faces threats to its survival. It has succeeded in difficult areas such as the return of IDPs, addressing the grievances of petitioners, and ensuring adequate food supplies. Additionally, the National Security Framework has been considerably strengthened by the passage in 2010 of a National Security Law, a National Defence Law, and a National Internal Security Law. These have created the framework for the development of a more integrated approach between the armed forces and the police, and a clearer delineation of roles and responsibilities between and within them.

Yet, a number of underlying issues important for the maintenance of security remain: the justice system requires further capacity-building, and the security sector needs further reform<sup>39</sup>, particularly in relation to accountability and levels of professionalism<sup>40</sup>. Additionally, people's perceptions of the Government are being affected adversely by allegations of emerging corruption. To address this issue, an Anti-Corruption Commission has been established and a Commissioner has been appointed to head it. Additionally, in 2010, the Deputy Prime Minister presented a strategic plan to the Council of Ministers on means for dealing with corruption.

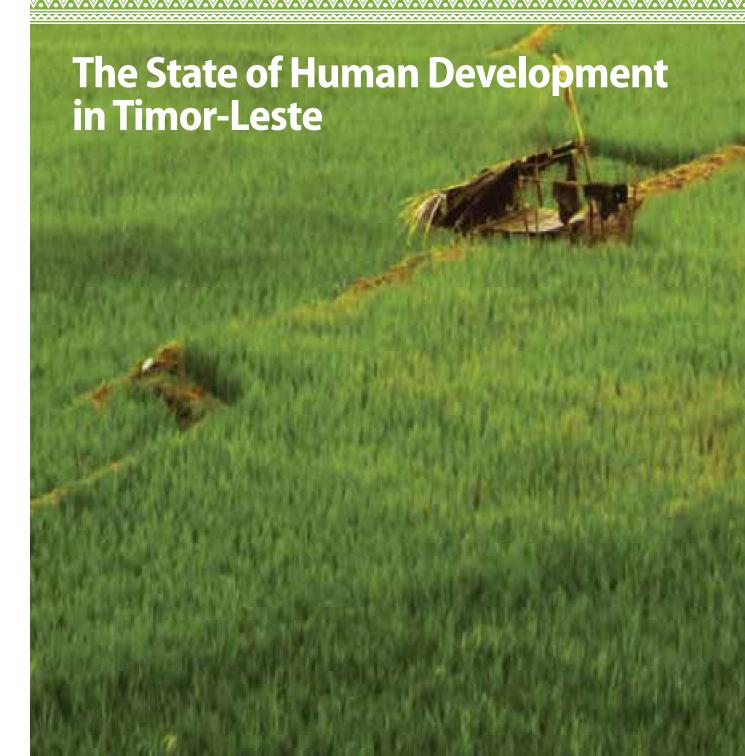
<sup>38</sup> For further analysis of the impact of climate change, see Timor-Leste: Country Environmental Analysis, Asian Development Bank, 2008. Also Reducing the Risk of Disasters and Climate Variability in the Pacific Islands: Timor-Leste Country Assessment, the World Bank, East Asia and Pacific Region, 2008

<sup>39</sup> A perception survey on security issues currently is being undertaken by the Demographic Institute of Universitas Indonesia, together with the Universidade Nacional de Timor Lorosa'e.

<sup>40</sup> For an analysis of the current state of professionalism and accountability within the PNTL, see the Centre for International Governance Innovation (CIGI) (2010), Security Sector Reform Monitor: Timor-Leste, no.2, Ontario, Canada

The Introductory chapter of the TLNHDR has focused on the ways in which governments have addressed the main economic and social problems since the 2006 crisis. It has also outlined the challenges governments will be facing in these areas in the coming years. The second chapter provides a detailed account of the current state of human development in Timor-Leste. In doing so, it also assesses the impact of successive government policies and actions on human development.









# The State of Human Development in Timor-Leste

This is the third National Human Development Report for Timor-Leste. The first report was published in 2002, shortly before independence. It outlined the challenges faced by the nascent country and indicated strategies for improving human development in the main sectors of the economy. The second report, published in 2006, assessed the progress made in human development in the context of the MDGs and examined ways in which human development could be improved via strategies for promoting integrated agricultural development. This third report assesses the state of human development four years on, passing through a crucial period in the history of Timor-Leste marked by the crises of 2006 and 2008 and by the windfall of oil revenues for the nation.

The population of Timor-Leste was estimated at 1.066 million people in 2010. The population has been increasing by 2.4 percent annually since the last census in 2004<sup>1</sup>. About 45 percent of the population is aged 0-14 years, 62 percent is under the age of 24, and only 3 percent is above the age of 65 years. More than three-fourths of the population (77 percent) lives in rural areas. Approximately one fifth of the population (21.97 percent) lives in the capital, Dili. With a total land area of 14,919 square kilometres, population density in Timor-Leste is approximately 70 people per square kilometre.

# **Measuring Human Development in Timor-Leste**

Human development emphasizes the enlargement of people's freedoms to live long, healthy and creative lives on a sustainable basis. By enabling individuals to enrich their lives, human development focuses on empowering people to engage actively in shaping equitable development processes. People are both the beneficiaries and the drivers of human development, as individuals and in groups. There are strong synergies between human development and the Millennium Development Goals. Human development provides a critical lens to consider broader patterns of advance and major challenges. Through a human development lens our attention is drawn to missing dimensions, such as equity, empowerment and sustainability.

The Human Development Index (HDI) is a summary measure for assessing long-term progress in three basic dimensions of human development – a long and healthy life, access to knowledge, and a decent standard of living. A long and healthy life is measured by life expectancy at birth. Access to knowledge is measured by i) mean years of adult education, measured by the average years

<sup>1</sup> The total population figure is the one given in the Preliminary Report on the 2010 National Census, Dili, November 2010.

of education received in a life-time by people aged 25 years and older; and ii) expected years of schooling for children of school-entrance age. The latter is the total number of years of schooling a child of school-age entrance can expect to receive if prevailing patterns of age-specific enrolment rates remain the same throughout the child's life. Standard of living is measured by using Gross National Income (GNI) per capita in PPP US\$2.

In Timor-Leste, the availability of these indicators has been improving in recent years. This has enabled an improved calculation and monitoring of the HDI, as reported most recently in the 2010 Global Human Development Report (HDR). HDI calculations are based primarily on international data from the UN Population Division, the UNESCO Institute for Statistics, and the World Bank. Thus far in the TLNHDR, our analysis of human development conditions has been based largely upon data and information available nationally for the period to 2010. In what follows, in the remainder of this chapter, we report on HDI trends, as presented in the Indices contained in the 2010 HDR.

Timor-Leste's HDI value for 2010 is 0.502, placing it in the medium human development category, with a ranking of 120 of the 169 countries reporting in the 2010 Global HDR. Table 1 below reviews Timor-Leste's progress in each of the HDI indicators, giving values for 2005 and 2010. From 2005-10, Timor-Leste's life expectancy at birth increased by more than two years, whilst mean years of schooling and expected years of schooling remained the same during this period. Timor-Leste's GNI per capita increased by 228 percent during the same period.

# Timor-Leste: Human Development Index Trends, 2005-10

Year	Life expectancy at birth	Expected Years of Schooling	Mean years of schooling	GNI per capita (PPP US\$)	HDI value
2005	59.7	11.2	2.8	1,167	0.428
2010	62.1	11.2	2.8	5,303	0.502

# TABLE 1

Based on 2010 data, Timor-Leste's HDI ranking is above other countries in the Southeast Asian region such as the Lao People's Democratic Republic (122), Cambodia (124), Myanmar (132) and Papua New Guinea (137). Timor-Leste is also ranked higher than most Sub-Saharan African countries, notably Kenya (128), Nigeria (142), Angola (146) and Mozambique (165). Within the medium human development category, Timor-Leste's 2010 HDI of 0.502 is below the average of 0.650, but its overall ranking indicates substantial progress since 2005, when its HDI value of 0.428 placed it within the low human development category. Its ranking at independence, in 2002, was 0.3753. Table 2 below, details HDI progress annually, from 2002-104. Much of this progress is attributable to increases in per capita income boosted largely by oil revenues, and to a lesser extent to the other, non-income areas of the HDI.

<sup>2</sup> The 2010 Global HDR calculates the HDI for reporting countries in a different way to previous Human Development Reports. The changes enable the Index to incorporate new data sets and to strengthen the HDI's statistical integrity. Details of the changes are outlined in Annex Six of the TLNHDR. As a result of these changes, HDI values and ranking in the 2010 Global HDR are not comparable to those presented in previous HDRs. To allow for assessments of progress in HDIs, the 2010 HDR recalculates HDIs for earlier years (1980-2010) for as many countries as data allow using the new methodology. The results of this for Timor-Leste are presented in Table 2, below.

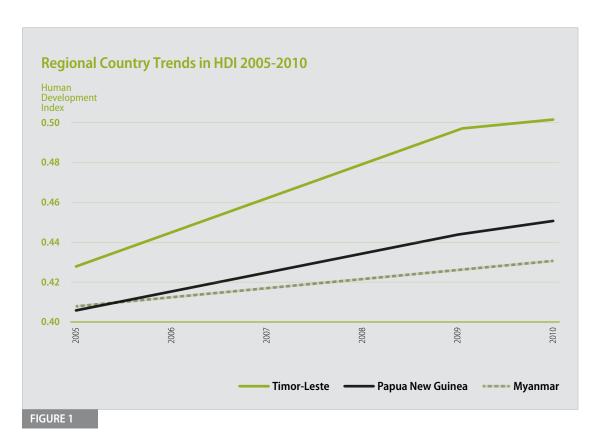
These values are based on the method of calculating the HDI as outlined in the 2010 Global HDR.

Again, these values are based on the 2010 Global HDI method of calculation

Fimor-Leste:	Hulliali D	evelopii	nent inc	iex irei	ius, 200	5-10			
	2002	2003	2004	2005	2006	2007	2008	2009	2010
HDI Value	0.375	0.375	0.401	0.428	0.445	0.471	0.492	0.497	0.502

Long-term HDI progress can usefully be assessed relative to a country's neighbours, both in relation to geographical location and HDI value. In 2005, for example, Timor-Leste, Papua New Guinea, and

to geographical location and HDI value. In 2005, for example, Timor-Leste, Papua New Guinea, and Myanmar had approximate HDI values for countries in the East Asia and Pacific region. During 2005-10, however, their paths diverged markedly, as illustrated in FIGURE 1, below.



# The Inequality Adjusted Human Development Index

The Human Development Index is an average measure of basic human development achievements in a country. As with all averages, the HDI does not provide a means for assessing inequality in the distribution of human development across the population at the country level. The 2010 Global HDR introduces an *inequality-adjusted HDI* (IHDI), a new measure taking into account inequality in all three dimensions of the HDI by 'discounting' each dimension's average value according to its level of inequality. The IHDI is thus a measure of the average level of human development that a country has achieved in the three HDI dimensions, given the existing inequality in distribution of achievements and the level of aversion to inequality which is set at low level of 1. When there is no inequality in the HDI dimensions or no aversion to inequality, the average level of human development is reflected in the HDI. In this sense, the HDI can be viewed as an index of 'potential'

CHAR

human development and the IHDI as an index of actual human development. The 'loss' in potential human development due to inequality is given by the difference between the HDI and the IHDI, and can be expressed as a percentage. Timor-Leste's HDI for 2010 is 0.502. However, when this value is discounted for inequality, the HDI falls to 0.334, a loss of 33 percent due to inequality in the distribution of the dimension indices. Comparisons with other countries in the region show that inequality on the dimension indices is relatively higher in Timor-Leste. For example, the Lao Democratic People's Republic has an HDI of 0.497, falling to an inequality-adjusted HDI of 0.374, (a 25 percent reduction). Cambodia has an HDI of 0.494, inequality-adjusted to 0.351 (a 29 percent reduction), and Vietnam at 0.572, has an inequality adjusted HDI of 0.478 (a 16 percent reduction) Timor-Leste scores higher on the inequality-adjusted HDI than most Sub-Saharan African countries, with for example Kenya at 0.320, Nigeria at 0.246, Angola at 0.242, and Mozambique at 0.155.

# The Gender Inequality Index

The Gender Inequality Index (GII) is another newly introduced index in the 2010 Global Human Development Report and outlines disadvantages for women in four areas: reproductive health, education, empowerment and the labour market. It highlights losses in human development due to inequalities between men and women. The index ranges from 0, indicating that women and men fare equally, to 1, indicating that women fare as poorly as possible in all measured dimensions<sup>5</sup>.

Timor-Leste is not given an overall value or ranking on the 2010 GII, due to the absence of data on secondary education. However, in important areas of the index, it is favourably placed both regionally and internationally. For example, its reported maternal mortality rate of 380 deaths per 100,000 live births puts it well ahead of countries such as Cambodia (540), Lao PDR (660), and Papua New Guinea (470). By way of further comparison, India's rate stands at 450, Kenya's at 560 and Angola at 1400<sup>6</sup>. Regionally, women's labour force participation at 61.6 percent is lower than most other countries, with the exception of the Philippines (50.2 percent), India (35.7 percent), Nigeria (39.5 percent) and South Africa (51 percent).

On the GII, Timor-Leste scores well – as noted earlier – in the area of percentage of seats held by women in Parliament (29.2 percent). Regionally, for example, it is well above Thailand (12.7 percent), Indonesia (11.6 percent) and Japan (12.3 percent). It scores higher than almost all countries in the Middle East. In Europe, it performs better than countries such as Portugal (28.3 percent).

# Gender and Human Development

Women comprise almost 50 percent of Timor-Leste's population. As outlined below, a high proportion of women are illiterate, and they experience high fertility and maternal mortality rates. A significant proportion of women's work is in subsistence cultivation and the informal sector – notably in small-scale trading and home-based industries. Women generally earn less than men. Their ability to participate in productive work outside the household is restricted by the amount of time they have to spend inside the home on domestic tasks – cooking, cleaning and child care. The division of labour between men and women in Timor-Leste is legitimised strongly by traditional patriarchal values, norms and practices, particularly in the rural sector. Successive Women's Parliamentary Caucuses in Timor-Leste have reiterated women's concerns highlighting that they are constrained from realizing their potential and participating in the development process because their views are not taken into account adequately in the design and implementation of policies and programmes, due largely to the persistence of gender stereotypes. Gender inequalities in each of the main areas of human development are outlined below.

<sup>5</sup> The GNI indicators are: maternal mortality rate; adolescent fertility rate; percentage of seats held by women in parliament; population with at least secondary education; labour force participation rate; contraceptive prevalence; antenatal coverage of at least one visit; percentage of births attended by skilled health personnel. See *Human Development Report 2010*, UNDP 2010, p.156.

<sup>6</sup> See Gender Inequality Index, Human Development Report 2010, p.158, UNDP, 2010.

# **Gender Inequalities in Education**

Despite recent progress in reducing levels of adult literacy, women remain less literate than men. The 2007 TLSLS revealed that 43 percent of women (above age 18) could read and write without difficulty, compared with 59 percent of men. Twenty eight percent of men over 45 had attended school, compared with eight percent of women. Similarly, the percentage of the population aged 18 and above who had completed secondary or higher education was higher amongst men than women, 18 percent to 12 percent. In a significant area – ratio of literate males to females, aged 15-24 years, there was a decline from 97 percent in 2004 to 93 percent in 2007, reversing an improvement from the 2001 level of 96 percent. The recent Labour Force Survey 2010 shows that almost 40 percent of the population aged 15 and over had not had any education at all, and another quarter had not gone beyond primary level. Females are markedly worse off than males; 45 percent of females had had no education at all, while for males the figure was 34 percent? More current information in this area awaits the full results of the 2010 National Census, but it is expected that women's literacy will have improved, given the reported high attendance of women at literacy classes in many districts.

Gender differences are less marked at school level. Indeed, at the secondary level the situation is reversed, with girls' enrolment higher than that of boys. In 2007, for example, NER at primary level was 73 percent for girls and 75 percent for boys. The most recent (2009) data from the Ministry of Education indicate a substantial improvement, with girls' attendance at 82.2 percent, compared with boys' attendance at 84.2 percent. At pre-secondary level the net enrolment rates in 2009 were 27 percent for girls and 22.6 percent for boys, and at secondary level, net enrolments were 13.7 percent for girls and 9.92 percent for boys. At the secondary level, therefore, the primary trends are reversed, with more girls remaining in school than boys. At the tertiary level, the situation is again reversed: the ratio of males to females in receipt of degrees or certificates is 2.6 to 1, although in recent years, it seems that an increasing number of female students have entered universities and colleges.

# **Barriers Women Face in Accessing Education**

In 2008, Rede Feto, the National Women's Network established in 2000, gathered information on the experiences of women in the districts - in the areas of justice, media, communication, infrastructure, health, education, economy and employment, political participation and cultural practices.

The study identified the barriers women face in accessing available opportunities. In education, women in the districts stated that cultural stereotypes were the main barrier to women accessing education and training opportunities, since families were more likely to invest in the education of their sons, because they viewed this as being more beneficial economically than investing in the education of their daughters. In addition, limited transport, competing demands on time, lack of information on support available in the sector and security concerns were other constraints identified. Poor conditions in the schools, particularly the lack of bathroom facilities for girls, added to gender-based education inequities. Literacy training venues, timings and the methodologies used were also considered not sufficiently beneficial for meeting women's needs. Women's and girls' access to education were also considered to be hindered by traditional practices of early pregnancy and marriage, coupled with the lack of support from community leaders and school administrators for women and girls participating in education in the same ways as boys and young men.

Information taken from interviews with *Rede Feto* Staff and Members, during an assessment by the Irish Government of its Aid Programme to Timor-Leste, Dili, June, 2008

BOX 9

<sup>7</sup> Timor-Leste Labour Force Survey 2010, Government of Timor-Leste, p. 18.



# **Gender Inequalities in Health**

As detailed later in this chapter, maternal mortality rates have improved considerably in recent years, as has the percentage of births attended by skilled personnel, and access to antenatal care. The latter, however, still has a poverty dimension; A 2007 Study on the Feminization of Poverty<sup>8</sup> concluded that access to both ante and post-natal care increases as women become more educated. In that year, for example, 47 percent of women with little or no education had no antenatal care, compared with 21.9 percent of women with some secondary level education<sup>9</sup>. As outlined in the Penal Code instituted by Parliament in June, 2009, abortions are permitted only in extreme circumstances, when the mother's life is in imminent danger and all efforts to save both the mother and child have been attempted and failed. There is widespread evidence of unsafe abortion techniques, particularly in rural areas<sup>10</sup>,

# The 'Four Toos'

Timorese women attribute their poor health and high mortality rates to the persistence of 'Four Toos'.

- · Too many births;
- · Too short an interval between births;
- Too late to be taken to a clinic;
- · Too long to be taken to the clinic.

Women relate these 'Too many toos' to the prevalence of cultural practices: They have to put their husbands' and families needs before their own needs. Woman state that they are under pressure to have too many children and do not have sufficient say in decisions on how many children they should have, where they should give birth, who should assist with delivery, and how they will regulate their births.

Information from Editors' Conversations with Rede Feto Members, Rede Feto Office, Dili, August, 2008.

# BOX 10

There remain gender inequalities in key areas such as immunization programmes. Girls aged 12-23 months are less likely to have full immunization than boys of the same age (23.4 percent for girls and 29.8 percent for boys). In urban areas the difference is greater: 26 percent for girls and 40 percent for boys. Similarly, girls under-five with malaria are less likely than boys of the same age to receive medicine before being taken to a health facility. The figures are 31.5 percent for boys and 17.6 percent for girls<sup>11</sup>.

# **Gender Inequalities in Work and Employment**

As reported earlier, the Timor-Leste economy is overwhelmingly agrarian, with almost two-thirds of employment in subsistence farming (including agriculture, forestry and fisheries). Other sizeable sectors, including the wholesale and retail trade, provide employment for 27,000, and the education sector employs 11,000 people. In urban areas the agriculture sector is obviously far less important,



<sup>8</sup> Baseline Study on Feminization of Poverty in Timor-Leste: Deprivation of Women Across Sectors, Timor Institute of Development Studies, Dili, 2007.

<sup>9</sup> Subsequent data for later years on age and access is not yet available, but given the improvements in access during 2007-9, these figures – when available – will probably also show improvements since 2007.

<sup>10</sup> See for example, Maternal Mortality, Unplanned Pregnancy and Unsafe Abortions in Timor-Leste: A Situational Analysis, by Suzanne Belton et al, Alola Foundation, supported by UNFPA, Dili, 2009.

<sup>11</sup> These data are taken from the 2007 TLSLS. As yet, more recent gender disaggregated data in this area is not yet available

though there are still 13,000 people who replied that agriculture was their sector of employment. Approximately 17,000 people (with equal numbers of men and women) are employed in wholesale or retail trade in urban areas, and the rest of the employment is spread across a wide variety of sectors<sup>12</sup>. The following table was taken from the Labour Force Survey 2010:

Emplo	yed Persons	s. by Sex	. Industry	and I	Locality
Lilibio	year croom.	o, by Jen	, iiidasti j	ullul	Locuity

	Urban				Rural			Timor-Leste		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
Agriculture, forestry, fishing	9,000	4,000	13,000	79,000	36,000	115,000	88,000	40,000	128,000	
Mining & quarrying	*	*	*	1,000	*	1,000	1,000	*	1,000	
Manufacturing	2,000	1,000	3,000	2,000	4,000	5,000	3,000	5,000	8,000	
Electricity etc.	*	*	*	*	*	*	*	*	*	
Water supply	*	-	*	*	-	*	*	-	*	
Construction	6,000	*	7,000	7,000	*	7,000	13,000	1,000	13,000	
Wholesale & retail trade	9,000	8,000	17,000	15,000	12,000	27,000	24,000	20,000	44,000	
Transportation & storage	6,000	*	6,000	2,000	*	3,000	8,000	*	8,000	
Accommodation & food	1,000	1,000	2,000	*	*	1,000	1,000	1,000	2,000	
Information & communication	1,000	*	2,000	1,000	*	1,000	2,000	*	2,000	
Financial & insurance	*	*	*	-	-	-	*	*	*	
Professional & scientific	1,000	1,000	1,000	*	*	2*	1,000	1,000	2,000	
Administrative & support	5,000	*	5,000	1,000	-	1,000	6,000	*	6,000	
Public administration	2,000	*	2,000	4,000	*	5,000	6,000	1,000	7,000	
Education	3,000	2,000	5,000	8,000	3,000	11,000	11,000	5,000	16,000	
Health & social work	1,000	1,000	1,000	1,000	1,000	2,000	1,000	2,000	3,000	
Arts & entertainment	3,000	1,000	4,000	1,000	*	2,000	4,000	2,000	6,000	
Other service activities	1,000	1,000	1,000	*	*	1,000	1,000	1,000	2,000	
Households as employers	1,000	1,000	2,000	*	1,000	1,000	1,000	1,000	2,000	
International organizations	*	*	*	*	-	*	*	*	*	
Total	48,000	22,000	70,000	123,000	58,000	181,000	171,000	80,000	251,000	

Source: Timor-Leste Labour Force Survey 2010, p. 38.

# TABLE 3

As data on wages and salaries was difficult to collect, the Labour Force Survey 2010 collected only data from those who were employees in main or secondary employment, both in cash and in kind. The data on wages and salaries did not include other forms of incomes, such as remittances, rental income, and bank interest. Table 4 provides detailed information on the monthly wages received by paid employees based on different age groups and sex.

As the table shows, the 70,000 paid employees receive a total of US\$ 12 million dollars per month, which gives an average monthly salary of US\$ 170 per employee. In the total monthly wage bill of US\$ 12 million, male employees receive about US\$ 9 million and female employees almost US\$ 3 million. The table also shows that both male and female employees receive about the same wage.

<sup>12</sup> Timor-Leste Labour Force Survey 2010, Government of Timor-Leste, p. 38.

# CHAPTER

# Total monthly wages in main job, and mean monthly wages received by male and female paid employees in different age groups

	Age group						
	15-24	25-34	35-54	55-64	65+	Timor-Leste	
Number of paid employees reporting wages							
Male	4,000	16,000	31,000	3,000	1,000	55,000	
Female	3,000	5,000	6,000	1,000	*	15,000	
Both sexes	7,000	21,000	37,000	4,000	1,000	70,000	
Total monthly wages received in main job						(US dollars)	
Male	467,000	2,682,000	5,738,000	576,000	71,000	9,534,000	
Female	320,000	1,028,000	1,065,000	278,000	12,000	2,703,000	
Both sexes	786,000	3,710,000	6,802,000	855,000	83,000	12,237,000	
Mean monthly wages reported						(US dollars)	
Male	104	167	187	176	128	173	
Female	111	192	166	437	121	176	
Both sexes	107	173	183	218	127	174	

TABLE 4

Women play a major role in the micro-enterprise sector of the informal economy, where approximately 43 percent of enterprises are female-owned. Anecdotal evidence indicates that women's enterprises are found primarily in areas such as weaving *tais*<sup>13</sup>, tailoring, salt-making, bakeries and handicraft production. Provision of micro-credit by the Government and NGOs has been critical in supporting women in these areas in recent years.

# **Microfinance for Women**

Moris Rasik (MR), which means 'Independent Life' in Tetum, is an NGO operating a microfinance programme in Timor-Leste. It follows a modified version of the Grameen Bank methodology of microfinance, with a primary focus on poor, rural women. The women form five-member groups and are given basic training. They are then amalgamated into village-based centres, of between 20 to 40 women. All financial transactions take place transparently at a weekly centre meeting held in the village, and serviced by Moris Rasik officers.

*Moris Rasik* had an active client base of over 100,000 in 2008. Its portfolio was US\$2.24 million and it held US\$780,000 in client savings. In 2007 it broke even for the first time, and ended 2007 with an operating profit of US\$22,000.

*Moris Rasik* has 12 branches in eight of the western and central districts, including Oecusse. It works in some of the poorest areas of Timor-Leste, in the central mountains and along the southern coast.

Moris Rasik staff are usually drawn from people who have not completed school and have no work experience. They are trained by Moris Rasik to fill professional and management positions.

Source: Moris Rasik: Micro Credit in East Timor, http://www.morisrasik.com

BOX 11

<sup>13</sup> Tais are traditional fabrics, woven by the women of East Timor, which are used in ceremonies, decoration and as apparel.

Throughout Timor-Leste, women spend longer hours than men working in the household, particularly in the rural sector, although time spent by women compares favourably with other countries with large rural sectors in the East Asia and Pacific Region. As the 2007 TLSLS indicates, on average women allocate 50 percent of their time to housework, compared with 36 percent by men. This heavy engagement goes part way to explaining women's limited labour force participation.

# **Gender-Based Violence**

Research conducted in the years following independence concluded that during their lives, almost a quarter of the women (24.8 percent) in the sample had experienced violence by an intimate partner. The definition of violence used in this 2003 survey<sup>14</sup> includes both physical and psychological abuse. The survey reported that 51 percent of the women consulted stated that in the previous 12 months they had 'felt unsafe' in their relationship with their husbands. The survey also reported that women who married young were at greater risk of domestic violence. Many other countries surveyed in subsequent years by UN Agencies and others have higher levels of violence against women than Timor-Leste's 24.8 percent (for example: a WHO survey reported a range from a low of 10 percent in Paraguay and the Philippines, to 67 percent in Papua New Guinea and 69 percent in Nicaragua; another survey in 2005 found the incidence of domestic violence across countries ranged from 15 percent to 71 percent<sup>15</sup>). Data on gender-based domestic violence has not been collected systematically since the early post-independence years, but improvements in collection in recent years indicate a continuation of gender-based domestic violence. Data collected by the Vulnerable Persons Unit of the PNTL shows that domestic violence was the most prevalent crime reported in 2009, with 218 of the 283 reported crimes involving domestic violence<sup>16</sup>. An important feature observed in Timor-Leste - according to reports from both the former Office for the Promotion of Equality (OPE) and NGOs - is the relatively high level of tolerance of domestic violence in the country's rural and urban communities. More recent studies by NGOs such as Fokupers and PRADET, and ongoing monitoring of district conflicts by NGO Belun's 'Early Warning and Response System in Timor-Leste' appear to confirm the outcomes of the 2003 Survey. For example, in the first quarter of 2009, of the 187 incidents of violence recorded by Belun in the districts, 72 (38 percent) were between family members17.

The Timor-Leste Government has taken steps to address the issue of domestic violence. The Law on Domestic Violence, approved by the Council of Ministers in August 2009, ratified by Parliament in May 2010, and promulgated by the President in June, 2010, is founded on a comprehensive definition of domestic violence and sets out in detail the legal processes to deal with it, and also contains references to support services. The police force (PNTL) has collected data on gender-based violence since 2000, feeding into the work of its Vulnerable Persons Unit (VPU), established to assist victims of sexual assault and harassment, domestic violence and child abuse. The Judicial System Monitoring Programme Victim Support Service (VSS) provides legal assistance to victims of sexual violence, following their referral to the police and the Prosecutor's Office. The former office for the OPE, now the Secretary of State for the Promotion of Equality (SEPI) – supported by UNFPA – conducts public-awareness campaigns on domestic violence and its consequences. Additionally, the Community Violence Coordination Meetings group, an umbrella organization bringing together ministerial groups and NGOs, meets every month to share information on cases of domestic violence.

 $<sup>14\</sup> International\ Rescue\ Committee\ Study, \textit{"A determination of the prevalence of Gender-based Violence among conflict-affected populations in East Timor", Dili, 2003.$ 

<sup>15</sup> See Multi-country Study on Women's Health and Domestic Violence, World Health Organisation, 2005.
16 UNDP and UNIFEM, 2010, Parliamentary Briefing No.1: Domestic Violence, Dili, UNMIT, October 13th, 2010. Figures also reported in Susan Harris Rimmer (2010), "Sexual and gender-based violence", Chapter IV, Timor-Leste Armed Violence Assessment Final Report, Small Arms Survey, Graduate Institute of International and Development Studies, Geneva, Switzerland, 2010.

<sup>17</sup> Belun (February-May 2009), *Early Warning and Response System in Timor-Leste*, Trimester Report, Dili, 2009.

Despite these initiatives, however, the chances of women obtaining justice within the legal system often remain limited. The capacity of the justice system to deal with prosecutions brought before it is severely constrained. Furthermore, families and communities often put pressure on women to let the traditional system deal with cases of domestic violence, emphasizing the importance of maintaining community cohesion. This context tends to result in an under-reporting, and therefore an understating of the extent of domestic violence.

# **Gender and Politics**

Since independence, significant gains have been made in promoting gender equality and in strengthening the roles of women in decision-making and public life in Timor-Leste. Women are reasonably well represented in Parliament, with 29.2 percent of seats occupied by women18. In the 2004 - 2005 village elections for suco councils, in addition to filling the three seats allocated for them in each council, women were also elected as village heads in seven of the country's 442 sucos (villages), and as aldeia (sub-village) heads in 22 of the country's 2,228 aldeias. In the recent 2009 suco elections, women increased their representation to 10 suco heads and 37 aldeia heads. Whilst these are modest gains<sup>19</sup>, the significance of women taking up what have been traditionally and culturally male roles reflects a change in attitudes to women's involvement in decision-making. Additionally, if we include the seats reserved for them on suco councils, women currently comprise 1,342 of the 2,994 members of the suco councils<sup>20</sup>.

Women are under-represented in the Civil Service, currently having 29.8 percent of positions. Additionally, they tend to be concentrated in the mid to lower grades. For example, 13.3 percent of women are directors and 16.3 percent chiefs of department. Most are concentrated in the administrative category, where women's representation is 40.1 percent<sup>21</sup>. Gender mainstreaming in public administration is progressing. During the last three years, guidelines have been finalised and staff from key ministries (health, education, justice, agriculture) have been trained in gender analysis. Gender checklists have been developed and tested for these ministries. The Ministry of Health has incorporated gender disaggregation of health statistics into its Health Management Information System, in order to assess the extent of gender differences in access to services, and in morbidity and mortality rates<sup>22</sup>.

<sup>18</sup> The figure for the numbers of women in Parliament is taken from the Human Development Report 2010, Gender Inequality Index, p.158 UNDP, 2010.

<sup>19</sup> Following the 2009 suco elections, 2 percent of suco chiefs were women. See the Timor-Leste MDG Booklet, Timor-Leste Government, Dili, 2010, p.12.

<sup>20</sup> This data, provided by the Political Affairs Section of UNMIT, differs from the Timor-Leste Government figure of women comprising 27 percent of total suco members. See the *Timor-Leste MDG Booklet*, Timor-Leste Government, Dili, 2010, p.12

<sup>21</sup> This data for 2009 is taken from the Monthly Governance Report, October 2010, prepared by the Democratic Governance Support Unit, UNMIT, Dili, Annex 7 to the Report.

<sup>22</sup> These trends are tracked by UNIFEM, Timor-Leste, Dili, from whom detailed information on these areas is available, and from whom this general information was obtained

- 1. Article 17 of Timor-Leste's Constitution assures equal rights and responsibilities for women and men within family, cultural, social and political life. Article 50 of the Constitution confirms protection against discrimination based on sex as well as equality of rights and obligations in work and professional opportunities. The ratification of the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW) in 2002 ensures the commitment of the Government of Timor-Leste to actively pursue policies and measures to eliminate discrimination against women in all areas of public and private life, including the political sphere, the legal framework, the labour market, education and health sectors, and land and property rights. In 2008, Timor-Leste joined the UN's global call for investment in girls and women, which aims to encourage the global community to re-define public investment policies and strategies.
- **2.** The Secretary of State for the Promotion of Equality (SEPI) was established in 2007 by the Government in response to demands for more attention to gender equality issues, particularly from the Second National Women's Congress of 2004. SEPI is responsible for ensuring that a gender equality lens scans public policy, programming and legislation and its implementation.
- **3.** The Council of Ministers approved the Organic Law for SEPI in 2008, which set out a broader mandate and an extended administrative structure from that of the previous Office for the Promotion of Equality (OPE) structure. The OPE produced a strategic plan with the participation of the Government and civil society partner in 2006. Based on the experiences of the initial four years of activities in OPE, five priority sectors were identified to promote the full participation of men and women in economic, social, political and cultural development. The areas are:
- · Promotion of a gender sensitive approach within Government;
- Commissioning of research to influence legislation, policies and programmes;
- Establishment of networks within Government and civil society for dialogue and consultations to enhance the effectiveness of policies and programs;
- Development and implementation of a communication strategy to improve understanding of gender issues across society;
- Development of the institutional capacity of SEPI to lead and support gender mainstreaming.
- **4.** Justice, health, education and agriculture were four sectors considered fundamental to the generation of sustainable progress towards gender equality in public administration. Hence the Council of Ministers approved a resolution for the establishment and strengthening of Gender Focal Points in 2008, both in the ministries and at the district level. This established mechanisms for mainstreaming gender across public strategy, policy and legislation, based on a sound gender analysis of the social, economic, political, family and cultural dimensions of Timorese society.

BOX 12

# **Poverty**

According to the most detailed assessment of living standards currently available, poverty is prevalent in Timor-Leste. This assessment is contained in the 2007 Timor-Leste Living Standards Survey (TLSLS), the results of which were published in September 2008. This survey was carried out by the Directorate of National Statistics (DNS) of the Ministry of Finance. It covered 4,447 households nationwide and provides a rich array of information on living standards in Timor-Leste. The survey focused on consumption poverty, but also examined key areas such as health and education. It found that approximately half the population (49.9 percent) was living in poverty in 2007. A similar survey was undertaken in 2001, thereby enabling detailed comparisons between the two years. No detailed household surveys have been undertaken subsequently. As outlined later in this chapter, Ministerial and sector reports and surveys, together with the results from the 2009-10 *Demographic* 

CHAPTER

and Health Survey and from various reports from the country's districts, suggest that poverty levels may have declined since the 2007 TLSLS to an estimated 41 percent. The Report takes these into account in presenting its picture both of the current state of human development, and of current poverty conditions. Firm and definite statistical evidence of improvements in poverty levels, however, must await a further household survey, which is underway, and the full results of the 2010 National Census<sup>23</sup>. In the meantime, the 2007 TLSLS data is a useful reference point, since it provides detailed information on households and poverty conditions. It provides information on particular aspects of poverty that remain important in determining appropriate policies and strategies for poverty reduction.

# Measuring Poverty in Timor-Leste: A Summary of the Definitions and Methodologies used in the 2007 Household Survey

A household is categorized as poor if its per capita consumption is below the poverty line. The latter is determined by using a cost of basic needs approach, devising food and non-food poverty lines. The food line is specified as a daily intake of 2100 calories per capita, expressed as a bundle of food at median prices. The non-food poverty line corresponds to the average per capita non-food consumption of the population whose per capita total consumption is within plus/minus five percent of the poverty line. The sum of the food and non-food lines is the overall poverty line

Based on these calculations the poverty line for the 2007 TLSLS was set at US\$26.68 per person, per month, or - expressed in daily consumption - US\$0.88 per person, per day. This represented the typical cost of attaining 2100 calories per day, plus meeting basic non-food needs.

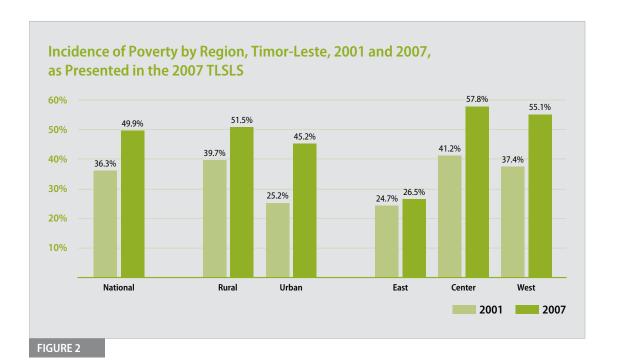
Exactly the same methodology was used to determine the poverty line in the earlier 2001 household survey. The line then was set at US\$0.51 per day, in September 2001, using average national prices.

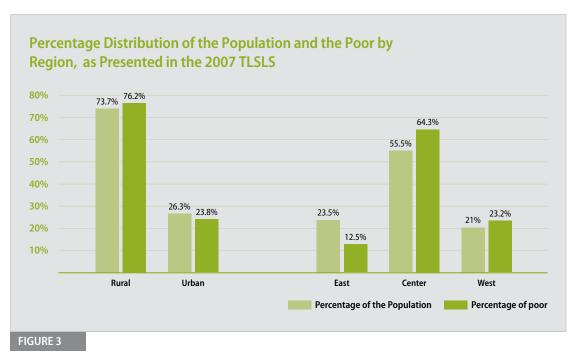
Based on this methodology, the 2007 Household Survey estimated that 49.9 percent of the population was living below the poverty line. This compares with 36.3 percent of the population living below this line in 2001.

# **BOX 13**

The TLSLS 2007 data indicated that the incidence of poverty in Timor-Leste increased between 2001 and 2007, with the proportion of people living below the national poverty line increasing from approximately 36 percent to nearly 50 percent. The increase in urban poverty during the same period was even greater (from 25 percent to 45 percent) than the increase in rural poverty (40 percent to 52 percent). Approximately three quarters of poor households lived in rural areas. In 2007, poverty levels varied between regions, with the central areas being the poorest (57 percent), followed by the western areas (55 percent), and the lowest incidence of poverty was in the eastern areas (27 percent). Poverty levels were at their lowest in the eastern districts of Lautem (21 percent) and Baucau (22 percent), and at their highest in the central districts of Manufahi and Ainaro (both at 80 percent). The number of people below the poverty line in Dili was below the national average (43 percent), but they accounted for 16 percent of the country's poor.

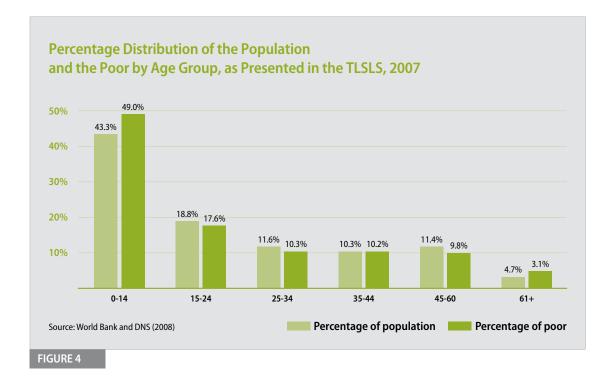
<sup>23</sup> The full results of the 2010 Census will be available in 2011.





According to the 2007 Survey, age is also a crucial factor in determining the incidence of poverty (see FIGURE 4), with children in poor households accounting for 49 percent of the poor. Particularly striking is the fact that children in the o-5 age group account for 21 percent of the poor, relative to their 19 percent share in the population. Whilst youth comprise 17.6 percent of the poor (their share in population is only slightly higher at 18.8 percent), the corresponding figure for the elderly is only 3.1 percent (their share in the population is about 4.6 percent). There is also a gender aspect to the incidence of poverty. Controlling for household size, female-headed households tend to be poorer than male-headed households<sup>24</sup>.

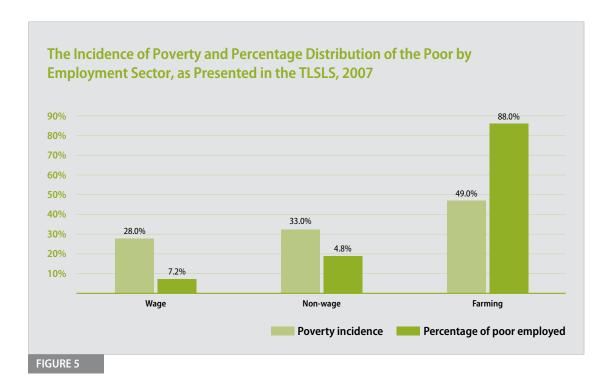
<sup>24</sup> For example, in households with three members, the poverty incidence for female-headed households is 22.1 percent and for male-headed households, 15.0 percent. In households with six members, the figures are 61 percent for female-headed households and 52.8 percent for male-headed households (Data from TLSLS 2007).

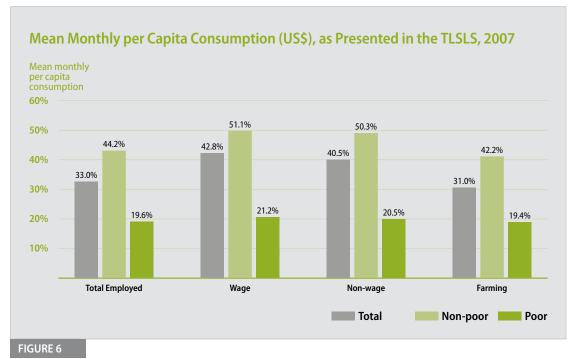


During 2001-07 there was also a significant decline in real consumption per capita – it fell by about 26 percent, resulting primarily from the stagnation of the non-oil economy and the 2006 crisis. In per capita terms, real non-oil GDP declined by 12 percent during the period from 2001 to 2007. This decline in consumption was a major factor contributing to the increase in poverty from 2001 to 2007. The lesson from this period is clear – that growth in the non-oil economy is critical for poverty reduction. This is particularly the case for the rural economy. Those engaged in farming comprise 88 percent of the poor, relying on the agricultural sector for their livelihoods. The Timor-Leste Labour Force Survey 2010 shows that the vulnerable employment rate in 2010 was 70 percent across all sectors, with rates being particularly high in the agricultural sector<sup>25</sup>. The TLSLS 2007 data indicates that agricultural workers consume less than other workers (US\$ 31 per person monthly, compared with US\$ 40 for others). High dependence on low-productivity farming is an important contributor to the incidence of poverty. Hence, the crucial issue underlying poverty in Timor-Leste, based on the evidence from the 2007 TLSLS, is not only the stagnation of the non-oil economy in general, but also more specifically, it is the overwhelming dependence of the population on the farm sector, characterized by low levels of productivity and limited growth.

Additional aspects of poverty detailed in the 2007 TLSLS are vulnerability to death at a relatively early age, exclusion from the world of reading and communications, and lack of access to the provision of services, particularly in the areas of health and education. Data for 2007 indicates an improvement in these three aspects, between 2001 and 2007. The probability of not surviving to age 40 declined marginally, by 0.19 percent, over the six-year period. More adults in the age group of 15 and above can read and write – the illiteracy rate declined from 57 percent to 45 percent over the same period. Levels of access to an improved water source also increased: the percentage of population not using an improved water source declined from 52 percent to 37 percent. However, the nutritional status of children under-five years of age deteriorated: the percentage of underweight children under-five increased from 45 percent to 49 percent, caused by the decline in consumption and increase in poverty.

<sup>25</sup> The "vulnerable employment rate" refers to those whose status in employment is given as being own-account worker or contributing family worker. The percentage of vulnerable employment is obtained by calculating the number of people in this category divided by the proportion of total employment (see definition in Timor-Leste Labour Force Survey 2010, Government of Timor-Leste, p. 14.

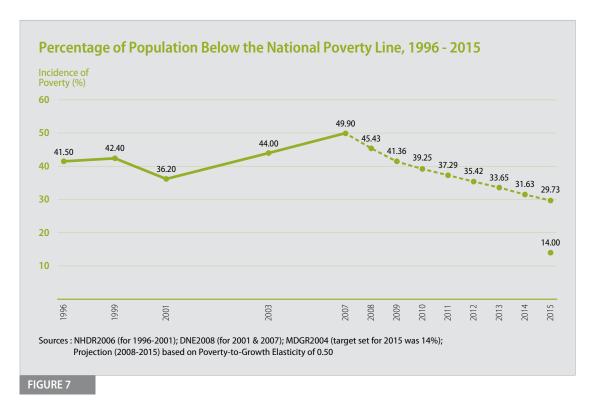




The 2007 TLSLS provides a highly detailed account of poverty in Timor-Leste up to 2007, and particularly in relation to the rural sector. As stated earlier, the next surveys enabling us to track poverty are the full details of the 2010 National Census and a 2011 household survey. The results of the household survey should be available by early 2012 and of the Census in 2011. The TLHDR concludes that it is likely that the incidence of poverty has declined since the 2007 Household Survey. Among the main reasons for this are the Government's policies of cash transfers to vulnerable groups, subsidies on food prices, and the creation of jobs through initiatives funding labour-intensive employment, in areas such as infrastructure development. Government funded intensive labour schemes benefitted 40,000 Timorese annually from 2007-9, and the 2009 *Pakote* 

Referendum infrastructure improvement project created 64,000 short-term jobs in the rural sector<sup>26</sup>. Government data give an economic growth rate of 12.2 percent in 2009, and average per capita incomes in the non-oil economy increasing from US\$ 398 per year in 2007 to US\$ 599 in 2009<sup>27</sup>. Recent figures from the World Bank and the Asian Development Bank estimate somewhat lower economic growth rates for 2009, at 5 percent and 7.4 percent, respectively. Whichever of these growth rates is taken, such improvements undoubtedly will have had a positive impact on 2007 poverty levels.

Based on 14 countries case studies, the World Bank concluded that GDP growth reduces poverty across regions, across times, in both the short and long-term. Hence GDP growth constitutes an indispensable component of any development strategy<sup>28</sup>. Beyond this, however, the case studies also concluded that the linkages between the growth of an economy and poverty reduction are the key issue, and that such linkages are dynamic. The crucial aspects are the extent to which the poor have opportunities to use productively the limited assets they possess, clear definitions of land rights, and market accessibility for farmers/producers. Consequently, one way of understanding the growth-poverty relationship is to apply the poverty-to-growth elasticity approach, enabling us to see the responsiveness of poverty to growth. In this approach, estimates are used to explain the percentage change in a country's poverty rate as a result of a 1 percent change in average incomes, or GDP per capita. Despite the limitations of applying the poverty-to-growth elasticity, combined with the inexistence of a solid database, an attempt has been made to estimate the incidence of poverty for Timor-Leste using the average for the states in the Pacific Rim. Based on the trends evident from the Government reported 2009 and 2010 figures for rates of growth in the non-oil economy, we can project that the percentage of the population living below the national poverty line will fall to 29.73 percent by 2015 or beyond, as shown in FIGURE 7.



<sup>26</sup> Data provided by the Timor-Leste Government, See Timor-Leste Millennium Development Goals Booklet 2010, Dili, October 2010, p. 6

<sup>27</sup> In contrast to non-oil GDP per capita, oil GNP per capita was estimated at US\$ 1,870 per annum, at the end of 2009 (based on Timor-Leste Government calculations presented in the 2010 budget).

<sup>28</sup> For a more detailed discussion, see Operationalizing Pro-Poor Growth Research Program, Pro-poor growth in the 1990s: Lessons and insights from 14 countries. Washington, D.C., World Bank, 2005; also, D. Dollar and A. Kraay. Growth is good for the poor. World Bank 30 April 2001: http://ideas.repec.org/p/wbk/wbwps/2587. html

The data in FIGURE 7 above, are based on the assumption of a moderate-to-high growth rate of 9 percent per annum and on a poverty-to-growth elasticity figure of 0.5 percent. The 14 percent figure is the target set by the Government in 2004. As yet, there is insufficient data to confirm these trends, and – as will be seen in chapter five – the Macro-Economic Framework for achieving the MDGs in the TLNHDR is based on somewhat less optimistic projections compared to those of the Government's. Support for the conclusion of ongoing progress in poverty reduction is provided in a recent World Bank predictive assessment, giving a poverty incidence estimate of 41 percent for 2009<sup>29</sup>. Additionally, anecdotal evidence for the years 2008 and 2009, based on annual 2009 and 2010 reports from the Ministries of Agriculture, Economy and Development, and Health, together with assessments from NGOs working in the districts and from observations by those working in the President's Office on supporting small-scale poverty reduction village projects – suggests that in most districts, poverty levels have fallen<sup>30</sup>.

As members of many households in Timor-Leste have stated repeatedly in their responses to questions asked in participatory assessments<sup>31</sup>, poverty results not only from lack of income and subsequent low levels of consumption, but also from lack of access to services that enable improvements in levels of human development that are essential for improving the quality of life. As in many other developing countries, Timor-Leste's poverty is essentially characterized by malnourishment in terms of protein intake, lack of economic opportunities, isolation from service delivery, and precarious conditions due to susceptibilities to natural disasters, infectious diseases, poor harvests, violence and crime. The two key areas where lack of access is critical are education and health care - in both cases lack of access to such facilities can seriously affect a household's struggle to cope with and get out of poverty.

# **Education**

Since independence Timor-Leste has seen improvements in educational provision and access. The physical infrastructure has improved beyond recognition – many schools have been built and others have been re-built. Alongside improvements in infrastructure, the percentage of children attending primary school remained fairly constant over the period from 2002 to 2007, at about 60 to 70 percent. During this period, the net enrolment rate (NER) (for 6 to 13-year-olds) increased from 65 percent in 1999 to 78 percent in 2004, but then began to decline. Data for 2007 indicate a rate of 63 percent<sup>32</sup>. However, since 2007, enrolments have increased substantially, to 82.7 percent in 2009, with a target of 86 percent for 201033. For pre-secondary level (for 13 to 15-year olds) the NER for 2009 is 24.74 percent, and for secondary levels it is 11.74 percent. Rates are a little lower in rural areas, and for poor households. Gross enrolment rates (GER) are much higher: 113.9 for primary school, 69.2 percent for pre-secondary school, and 38 percent for secondary school. The marked difference between the two sets of data is because children start school late and may spend more than one year in the same grade. Overall, school drop-out rates remain problematic, although improved since independence and particularly since 2007 at the primary level. For example, in 2003, the Ministry of Education reported that only 56 percent of students commencing Grade 2 had reached Grade 5. The 2007 Household Survey reported this at 73 percent. Data for 2009 indicate a figure of 59 percent of children reaching grade 534. Alongside drop-out rates, repetition rates are

<sup>29</sup> As noted in chapter one, the World Bank bases this estimate on an econometric model derived from 2007 TLSLS data which is then applied to data derived from the preliminary results of the 2009-10 Demographic and Health Survey. See A 2009 Update of Poverty Incidence in Timor-Leste using the Survey-to-Survey Imputation Method, World Bank, Dili, 2010.

<sup>30</sup> The annual reports from the key Ministries of Agriculture, Health and Education are cited at various points in the TLNHDR. A detailed account of the Government's perspective on poverty-related MDGs is outlined in the Timor-Leste MDG Booklet 2010. NGO assessments have been provided in discussions between staff of Timorese NGOs and the authors of the TLNHDR. The President's Anti-Poverty unit kindly provided documents on its funded poverty-reduction projects, and also reports from various members of the Unit's staff.

<sup>31</sup> For example, in the participatory assessments undertaken in preparation for the National Development Plan in 2002, and in responses to the 2007 Household

<sup>32</sup> These figures are taken from the 2007 TLSLS and from annual reports from the Ministry of Education covering the period 2002-7.

<sup>33</sup> See Ministry of Education, Timor-Leste Government, EMIS Report for 2008-9.

<sup>34</sup> See Ministry of Education EMIS Reporting for 2008-9, as reported in Timor-Leste MDG Booklet 2010, Timor-Leste Government, Dili, October 2010, p. 10.

high, recorded at 25 percent by the Ministry of Education in 2008-935. As detailed in the 2007 TLSLS, primary, pre-secondary and secondary NERs for children from poor households are 60 percent, 27 percent and 19 percent, respectively, compared with NERs for children from non-poor households which are 73 percent, 44 percent and 27 percent, respectively, for the same three levels<sup>36</sup>.

## These trends have a number of causes:

Despite stated commitments to prioritize education, the share of the state budget going to education remains low, at only 10 percent in 2009, compared for example with levels of 20 percent or more in other countries in the region, such as Thailand and Malaysia. Whilst it is unrealistic currently to increase educational expenditure to such a 20 percent level, due to capacity constraints, nonetheless there remains a case for planning for substantial increases in the coming years

There is an ongoing shortage of teachers particularly for Basic Education. According to the 2008 UNESCO National Education Support Strategy, 1,500 teachers were needed for the country to achieve a student-teacher ratio of 30:137. There have also been problems with the quality of the teaching provided: Many teachers have minimal training and few have formal qualifications. Use of volunteer teachers is common. In 2007, 75 percent of the country's 12,000 teachers were unqualified to teach by the standards set in the National Education Act. Responding to the urgent need for basic teach skills, the Government has provided intensive training for 3,000 teachers in 2008 and for 9,000 teachers in 2009<sup>38</sup>.

Language remains a problem. Portuguese is the medium of instruction, with the local language and then Tetum (the *lingua franca*) used only in the early primary years<sup>39</sup>. Many Timorese do not speak Portuguese. Most estimates variously put the percentage of Portuguese speakers at between 8 and 12 percent of the population, although some reports and commentaries have put this as low as 5 percent and as high as 25 percent40. There is limited reinforcement of the language outside the school, except amongst the older generation and among those who belong to the country's elite, many of whom – particularly those with *diaspora* experience – can speak Portuguese. With the exception of some private schools, textbooks in Portuguese are only available for teachers to share, making official language of instruction difficult. Exacerbating this problem is the additional fact that many of the text books used are in Bahasa Indonesian. Although the Government is committed to training teachers to enhance their proficiency in Portuguese, the language of instruction will remain an issue in the coming years.

At the primary level, children's poor health remains a constraint on attendance. Distance from school and the costs of transport are additional constraints at the secondary level, notably in remote areas. Data from the 2007 Household Survey showed that travel time to primary school in rural areas is about 30 minutes, on average. At the secondary level, the average time taken to reach school is 70 minutes.

In the 2007 Household Survey, the main reason given by students aged between 6 and 17 for non-attendance was 'no interest'. Indeed, amongst the population in the 15 to 24-year age group, almost half (49 percent) said they had no interest in education.

As stated in a recent Governmental assessment of progress towards achieving the Millennium Development Goals, "The challenges of building a new education system in Timor-Leste are monumental". As detailed above, progress has been made in key areas, particularly since 2007.

<sup>35</sup> See Ministry of Education EMIS Reporting for 2008-9, as reported in Timor-Leste MDG Booklet 2010, Timor-Leste Government, Dili, October 2010, p.10.

<sup>36</sup> Accurate gender disaggregated NERs for years subsequent to 2007 are not yet available. 37 See UNESCO National Education Support Strategy: Timor-Leste, Dili, September 2008, p. 21.

<sup>38</sup> See Goodbye Conflict and Welcome Development: Report prepared by the Ministry of Finance for the Timor-Leste Development Partners Meeting, April 2009, Dili, p. 7. This information is taken from the *Timor-Leste MDG Booklet*, Timor-Leste government, Dili, 2010, p.10.

39 The National Education Policy devised in November 2010 requires that teaching begin in the local language, followed by Tetum, and then by Portuguese.

<sup>40</sup> The UNDP Timor-Leste Human Development Report 2006 gives a figure of 5 percent, whilst various reports from the National Institute of Linguistics, earlier, in 2001, claimed that the percentage of Portuguese speakers was 25 percent. A report from the Asia Foundation in 2001, the Asia Foundation Survey of Voter Knowledge, found that 27 percent of those aged 35-50 were Portuguese speakers, and 11 percent of those under 25 spoke Portuguese. The figure of 8-12 percent is derived from discussions by TLNHDR authors in 2008-9 with teachers and scholars, notably at the Unversidade Nacional de Timor-Leste. The exact number of Portuguese speakers is not known, and research is required urgently in this area to reach firm conclusions. The relations between Portuguese, Tetum and Timor-Leste's other indigenous languages and their relations with education currently are under review again, notably in the recent First Meeting of the National Languages of Timor-Leste, held in Dili in August 2010.

Hopefully, the recent, January 2010, introduction of a free and universal education system with its nine years of compulsory education will go a considerable way to enabling further improvements<sup>41</sup>.

# **Education: The People's Choice**

In the 2002 Civil Society Consultation, involving 38,293 Timorese in almost every suco in the country, education was chosen by more than 70 percent of the people, as the most important area requiring improvement, both for their own livelihoods and for the country's development.

Timor-Leste's Constitution guarantees every Timorese the right to a quality education, promoted through the establishment of a public system of universal and compulsory basic education that is free of charge.

Education was a cornerstone of the National Development Plan, and the current National Education Policy (2007-2012) emphasizes building the country through quality education and training that is capable of meeting the needs of society.

Timor-Leste has also completed a Strategic Plan for Universal Primary Completion, outlining the means for achieving completion by 2015.

# **BOX 14**

Levels of basic literacy have improved since independence. In 2001, the literacy rate for the 15-to-24-year age group was 50 percent, and since then it has risen to 72.5 percent in 2004 and 81 percent in 2007<sup>12</sup>. A similar trend can also be seen for the adult population as a whole, with adult literacy increasing from 36 percent in 2000 to 47 percent in 2004 and 58 percent in 200743. Literacy figures for the post-2007 period are not yet available. The ratio of literate women to men was 97 percent in 2004, decreasing slightly to 93 percent in 2007, according to the 2007 Household Survey. Literacy programmes have been effective in targeting youth, particularly in rural areas. Projects within these programmes since 2007 have involved 250 ongoing classes in 13 districts in the National Literacy Programme, also covering adults. Additionally, in recent years there has also been a highly effective ongoing two-month Literacy Programme, organized in co-operation with the Cuban Government. By 2009, 45,285 students had completed literacy programmes, and estimates for the end of 2010 are that the programmes will have reached 118,560 people.

# Health

Timor-Leste has made substantial progress in important health areas since independence, as measured by key indicators. The under-five mortality rate improved from 144 deaths per 1,000 live births in 2001 to 130 in 2004 and further declined to 97 in 2007<sup>44</sup>. The recent 2009-2010 Demographic and Health Survey indicates a further improvement, to 64 deaths per 1,000 live births in 2009. Similarly, the infant mortality rate has declined from 98 per 1,000 live births in the 2004 Census to 77 per 1,000 in 2007<sup>45</sup>. The recent 2009-2010 Demographic and Health Survey shows a further substantial improvement, to 44 per 1,000 live births in 2009. These figures are relatively high for the Southeast Asian region, but compare favourably with almost all Sub-Saharan African countries. Children still die of preventable diseases such as pneumonia, malaria, diarrhoea and measles. Overall, however, there have been substantial improvements, due to the marked increases in immunization rates since independence - a notable achievement by the Ministry of Health. WHO full immunization

<sup>41</sup> To achieve an MDG target of 100 percent access and ability to complete by 2015, the net enrolment ratio in primary education will need to increase by 4 percent annually, and completion rates increase substantially – by 40 percent. The net enrolment target is achievable, but the completion target unlikely to be achieved, by 2015. The Strategic Development Plan requiring 100 percent completion by 2025 would seem to be a more realistic objective. 42 Based on reporting from the 2004 Census and the 2007 Household Survey.

<sup>43</sup> Data from WB Development Indicators, 2009 Table 2.22, p. 124 and *The Millennium Development Goals*, Timor-Leste, Government of Timor-Leste, Dili, 2009. 44 These figures are taken from the 2001 Timor-Leste Household Survey and the 2007 TLSLS. The 2001 figure is also reported in the East Timor Human Development Report, 2002, Ukun Rasik: East Timor – the Way Ahead, UNDP, Dili, p. 13.

<sup>45</sup> By way of contemporary historical comparison, the figure for 1990 was 138 per 1,000 live births.

rates for children aged 12-23 months improved significantly, from 18 percent to 27 percent in the four-year period from 2003 to 2007. Recent data show a further marked improvement in 2009, with coverage now at 53 percent. Set against these advances, there remains the ongoing problem of malnutrition. In 2008, the average monthly prevalence of severe malnutrition was 21 percent<sup>46</sup>. Malnutrition particularly affects children – 45 percent of children are underweight, and 33 percent show evidence of stunting and 19 percent of wasting<sup>47</sup>. There has been a considerable improvement in the number of children under-five sleeping under mosquito nets – from 21.2 percent in 2007 to 45.5 percent in 2009<sup>48</sup>, resulting in a decline in the incidence of malaria. The 2009-2010 Demographic and Health Survey reports that in the two weeks preceding the survey, only 6 percent of children had suffered from malaria<sup>49</sup>. In relation to other indicators, as with infant and child mortality rates, there has been an overall improvement in life expectancy at birth; the 2002 figure was at 49.3 years, in 2005 it was at 59.7 years and in 2007 at 60.7 years 50. The latest available figure, for 2009, shows a further improvement, to 62.1 years<sup>51</sup>.

In the important area of maternal mortality, there have been substantial improvements. In 2004, the ratio was at a high regional level of 666 deaths per 100,000 births. The Ministry of Health reported recently a figure of 450 deaths per 100,000 live births for 2008-9, with this improving to 380 deaths per 100,000 live births in 2010<sup>52</sup>. According to the recent 2009-10 *Demographic and Health Survey*, the maternal mortality ratio improved slightly less, at 557 per 100,000 live births. Accessing maternal health care has also improved. Based on data collected in 2009, the percentage of women having at least one antenatal care visit was 86 percent, compared with 55.4 percent in 2007, and 42.5 percent in 2001<sup>53</sup>. The percentage of deliveries assisted by skilled health staff increased from 19 percent in 2003 to 29.6 percent in 200954. The Government has responded to the shortage of trained midwives by establishing the Nursing and Midwifery School at the National University, in 2008. Similarly, it has enabled pregnant women to gain improved access to maternal services via the development of Community Integrated Health Service Clinics at the suco level.

# **Giving Birth in Hospital**

"Giving birth at home or in a hospital is very different. At home you feel the pain, no joke, and the betel leaf and areca nut placed on the mother's skin splits. Maybe the baby is born, maybe not. Those who give birth in a hospital are given injections so that their contractions are not painful, and they are served and looked after by the staff. During delivery they look after you so that contractions aren't painful. After the birth, they bathe the baby and put it...to sleep somewhere... and they also give hot water to the mother to bathe herself, as well as food and milk. The mother feels content because she and her baby are well looked after by the staff."

Adolescent woman, Lautem, in response to questions for a survey on health care. Cited in Timor-Leste: Health Care Seeking Behaviour Study, University of New South Wales, Australia and Ministry of Health, Timor-Leste, 2009

# **BOX 15**

The ongoing development of suco level health facilities is essential. Timorese in rural areas usually cite distance and (in some remote areas) lack of transport as reasons for not being able to attend clinics. In the 2007 Household survey, distance was cited as the major reason for not visiting a clinic when ill. This was the main reason stated by 48 percent of rural inhabitants, for not attending clinics. The comparative figure for those living in urban areas was only 13 percent.

<sup>46</sup> Annual Health Report, Ministry of Health, Timor-Leste Government, 2008

<sup>47</sup> See Timor-Leste Demographic and Health Survey, 2009-10, p. 21 48 See Timor-Leste Demographic and Health Survey, 2009-10, p.19.

<sup>49</sup> The figure cited here refers specifically to the proportion of children under 5 who took anti-malarial drugs during this period. In the strict sense, therefore, it may not be an accurate representation of the number of children actually suffering from malaria during this period. 50 These data are taken from Annual *Human Development Reports*, UNDP, for each of these years.

See Human Development Report 2010. The Real Wealth of Nations: Pathways to Human Development, UNDP, New York, p. 145.

<sup>52</sup> This most recent figure comes from the 2010 Human Development Report, p.158, UNDP New York, 2010. This figure is based upon United Nations Department of Social and Economic Affairs data. For further details see the 2010 Human Development Report, "Primary data sources for the Human Development Index: Life

<sup>53</sup> See Timor-Leste MDG Booklet 2010, Timor-Leste Government, Dili, 2010, p. 17.

<sup>54</sup> See Timor-Leste MDG Booklet 2010, Timor-Leste Government, Dili, 2010, p17. The data come from Demographic and Health Surveys undertaken in 2003 and 2009.

# **Distance discourages Attendance at Heath Clinics**

'Long distances to health facilities - such as a 24 kilometre round trip for villagers walking from Citrana aldeia (sub village) to Baocnana (sub-district), Oecusse - discouraged attendance for non-urgent conditions and preventive activities, such as antenatal care and immunization. Informants claimed that the long journey, up-and down-hill, to the health post could cause deterioration in a person's condition. For mothers carrying infants, the journey could be exhausting (for example leaving an aldeia in Ossuala at 3am to arrive at the closest health post, located at Loilubo, by 7am or 8am, in Baucau). Long distances also discouraged attendance especially when people suffered from severe ailments, as the patient was too weak to undertake the journey. This situation was described as 'hein deit atu mate' - 'just waiting to die'. An ill-person could only make the journey to a distant health facility, when he/she had sufficient strength to do so.'

From: Timor-Leste: Health Care Seeking Behaviour Study, University of New South Wales, Australia and Ministry of Health, Timor-Leste, 2009, pp. 26-7.

**BOX 16** 

To meet these needs, since 2008 the Ministry of Health has made substantial improvements in the delivery of health services locally via the used of mobile clinics, and as a result of the implementation of its SISCa (Servisu Integradu da Saude Comunitaria – Integrated Community Health Services) system, in which village communities work together with health clinic staff to promote and deliver a basic health package (combating infectious diseases, improving nutrition, maternal and child health, and family planning). SISCa is owned by the village community. Members organize themselves to promote basic health, working together with the health staff of the clinic. Village groups and local health staff also collect data on health conditions prevailing in the village, enabling a better understanding of local health conditions, leading to improvements in the provisioning of local health care. SISCa is currently being implemented in all 13 districts and 442 villages of Timor-Leste.

Data for 2007 showed that Timor-Leste had a high average birth rate; as high as 6.53 births per woman, between the age of 15 and 49 years. Based on this data55, the country has one of the highest birth rates of the 177 countries reporting (above Chad at 6.2 and Uganda at 6.4, but below Afghanistan at 6.6 and Niger at 7.1). In rural areas, the birth rate is often higher, with families having on average one more child than in urban areas. Recent (2009) United Nations Department of Economic and Social Affairs (UNDESA) projections estimate an average rate of 6 for 2010-1556. Recent data, as reported in the 2010 Demographic and Health Survey, give a lower fertility rate, of 5.757. This rate is still high and problematic, both for the nation's sustainable development and for women's health. Only 34 percent of births are spaced by three years. In a recent health care seeking survey<sup>58</sup>, 21.3 percent of men and 19.3 percent of women considered seven to eight children to be the 'ideal' number of children for a family. As might be expected, contraceptive prevalence is low: only two of every ten childbearing age couples currently use contraception methods – mostly via injectibles – according to the 2007 Household Survey. The more recent 2010 Demographic and Health Survey gives a similar figure – 22.4 percent of married women in the 15 to 49-year age group using contraceptive methods. Although low, the latter figure is a marked improvement from that given in the previous (2003) DHS survey, of 10 percent<sup>59</sup>.

<sup>55</sup> As presented in the 2009 Global Human Development Report. The 2010 Global Human Development Report does not provide figures for annual average birth rates, but only total rates for the period 1990-1995, and —as noted below—a projection for 2010-15. The Report also provides figures for average annual population growth rates for the years 1990-1995 and projections for average annual growth rates from 2010-2015. Timor-Leste receives a projection of 3.4 percent annual growth for 2010-15, and a projected fertility rate of 6 for this period, based on estimates from the United Nations Department of Social and Economic Affairs (INDESA)

<sup>56</sup> See the *2010 Human Development Report*, p.186, UNDP New York, 2010.

<sup>57</sup> See Timor-Leste Demographic and Health Survey, 2010, p. 7.

<sup>58</sup> See *Timor-Leste*: Zwi, A.B., et al *Health Care Seeking Behaviour Study*, Ministry of Health and AusAlD, Dili, 2009, p. 41. The 2010 Human Development Report predicts that Timor-Leste's fertility rate will increase by 6 percent annually from 2010-15. There are only two other countries with higher predicted rates, Afghanistan (6.3) and Niger (6.9).

<sup>59</sup> See *Demographic and Health Survey*, Timor-Leste Government, Dili, 2010, p. 9.

CHAPTER

HIV/AIDS is a growing concern for Timor-Leste. According to the Ministry of Health's data monitoring system, between 2003 and June 2010, there were 198 confirmed HIV positive cases, including 22 deaths. 51 new cases detected in 2009 were in the population age range 2 - 44 years, and 53 percent were women. In a recent 2010 HIV prevalence and behaviour survey<sup>60</sup>, the HIV rate among pregnant women receiving antenatal care (ANC) was 0.68 percent; 2.76 percent among female sex workers; and 1.33 percent among men who have sex with men (MSM).<sup>61</sup> Knowledge of HIV in high risk groups was high, at around 80 percent, but condom use with regular partners was low at 15 - 20 percent. A majority of MSM have casual and regular female partners, increasing the potential for HIV transmission from high to lower risk groups. Additional risk comes from increased drug use, with 10-20 percent of high risk groups having injected drugs in the last 12 months. The HIV rate among pregnant women and the behaviour patterns of members in high risk groups could enable HIV to spread within the Timorese community. It is estimated that once the HIV rate in pregnant women, currently at 0.68 percent, reaches 1 percent, it may become generalized within the population. HIV related health services are available, but without widespread information and awareness creation, Timorese will be less likely to utilize available HIV services. Moreover, the capacities of doctors, nurses and midwives to implement the National Programme for the Prevention of Mother to Child Transmission of HIV remain limited. The Government aims to increase awareness of the risk of the spread of HIV/AIDS and methods for its prevention, targeting in particular high-risk groups, and more generally, young people. It has devised a Strategic Development Plan for STI/HIV/AIDS for 2011-2016, supported by the Global Fund to Fight HIV/AIDS, TB and Malaria. An effective allocation of resources and implementation of this Plan is crucial.

# From Cuba to Timor-Leste - Training the Doctors of Tomorrow

Through agreements signed between the Timor-Leste and Cuban Governments, there are 300 Cuban health workers in Timor-Leste. The majority of the Cuban doctors work in small clinics at the sub-district level, providing the core of a rural doctor-centred health service. They provide the personnel for immunizations, TB treatment and skilled assistance at childbirth. They have also introduced the practice of house visits, at the village level. Between 2004 and 2008, Cuban doctors carried out 2,720,444 consultations in Timor-Leste, of which 1,013,127 were house visits. They attended 17,352 childbirths and completed 19,099 surgical operations.

The longer-term element in the Cuban programme comprises Timorese medical students, who their Cuban trainers call 'the doctors of tomorrow'. Cuba has provided 1,000 scholarships to students from East Timor, for medical training in Cuba.

In the period 2003 to 2006, students travelled to Cuba for training, but since then training by Cuban staff has also been based at the National University, in Dili. In 2008, there were close to 700 Timorese students of medicine studying in Cuba, and another 150 students in Timor-Leste.

 $For details see \ 'Cuban \ Medical \ Collaboration: Democratic \ Republic \ of Timor-Leste', Dr \ Ernesto \ Guevara \ de \ la \ Serna, Dili, July \ 2008.$ 

BOX 17

# **Employment**

The rate of unemployment in Timor-Leste declined from 9.9 percent in 2000 to 6.7 percent in 2007. According to the 2007 TLSLS the figure was higher in urban areas, at 12.7 percent, compared with five percent in rural areas. Waged employment was affected dramatically by the 2006 crisis. Of the total number of people receiving wages, the percentage receiving them from a private company, enterprise or co-operative declined from 28 percent in 2001 to 10 percent in 2007, whilst those receiving them from the government or the public sector and armed forces declined from

<sup>60</sup> The 2010 Integrated Biological and Behavioural Survey conducted by the National HIV programme in the Ministry of Health. This was done between January and July 2010. The final document is not yet finalized and available from the MoH.

<sup>61</sup> From this data it can be concluded that HIV prevalence rate is either increasing in both the ANC population and high risk groups or that the national response has become more adept at finding HIV cases, as a result of increased access to HIV services.

40 percent to 37 percent; those receiving wages from state-owned enterprises declined from 10 percent to four percent of the total waged population.

Since 2007, the level of waged employment has improved substantially. The recent *Timor-Leste Labour Force Survey 2010*, the first conducted in the country since the restoration of its independence, shows a lower overall unemployment rate of 3.6 percent for 2010. This figure is comparable to that of other Southeast Asian countries. In 2010 urban unemployment was 6.9 percent and rural unemployment 2.2 percent. The 2010 Survey also provides figures for male unemployment, at 3.1 percent, and female unemployment at 4.6 percent.

This rate of unemployment may be considered very low, but it is important to bear in mind the definition of work used in the Survey. According to the Survey, 'a person doing as little as one hour-work (paid or unpaid) during the reference week' is regarded as being employed. As a matter of fact, most people cannot afford to be unemployed and not to do any work at all. Hence, the unemployment rate should not be considered as a key indicator. The Survey used additional indicators, such as the underemployment rate. and the vulnerable employment rate to describe the state of the labour market. The Survey shows that those in "vulnerable employment" consist of 176,000 people. This figure represents 70 percent of total employment across all sectors. The survey also found that there is an "inactive" population 55, comprising over half a million people (200,000 males and 300,000 females). Fifty percent of young people under the age of 20 are considered to be "inactive". Those falling outside the "inactive" category are at school or in training and carrying out family duties (292,000 people). Also of importance is the high rate of government employment – the Government currently provides almost a quarter of all jobs (24 percent). The NGO sector also has a significant proportion, nearly one in 10 jobs, although this figure includes 'volunteers' who may or may not be paid a salary.

The Government's recent assessment of progress towards attaining its MDGs, estimates that 15,000 new job seekers enter the market annually<sup>66</sup>. The situation for the younger age group (15 to 24-year-olds) is particularly critical. Recent estimates show that 90 percent of the unemployed are in this age group<sup>67</sup>.

Youth unemployment remains a crucial problem facing the Government. It has three major causes: lack of job opportunities due to the weak state of the non-oil economy; lack of appropriate skills when job opportunities become available; and lack of means for connecting employers with available job seekers<sup>68</sup>. The immediate challenges for Timor-Leste are to create jobs, foster the skills needed to fill these jobs, and to match job seekers to the needs of employers. This situation is particularly crucial for Dili, with its agglomeration of post-secondary education institutes and its high levels of youth in-migration. In 2008-9, short-term measures were put in place by the Government to provide employment. For example, an Income Generation Programme was launched at the *suco* level to improve infrastructure by using local labour<sup>69</sup>. Similarly, as noted earlier in the TLNHDR, the *Pakote Referendum*, a substantial infrastructure and capital works programme implemented in 2009 to rebuild roads, bridges and schools, resulted in the creation of 64,000 short-term jobs in the rural sector, according to Government data<sup>70</sup>. However, to tackle unemployment in the longer-term, and to create a viable, sustainable basis for development when petroleum revenues have declined, the development of the non-oil economy is vital. The TLNHDR will address this issue in its outline of strategies for developing the non-oil economy, in Chapter 4, specifying what has been done, and

<sup>62</sup> See Timor-Leste Labour Force Survey 2010, Government of Timor-Leste, p. 59.

<sup>63</sup> Underemployment occurs when people do not have full-time, continuous work, and are usually only employed temporarily or seasonally.

<sup>64</sup> The "vulnerable employment rate" refers to those whose status in employment is given as being own-account worker or contributing family worker. The percentage of vulnerable employment is obtained by calculating the number of people in this category divided by the proportion of total employment (see definition in Timor-Leste Labour Force Survey 2010, Government of Timor-Leste, p. 14.

<sup>65</sup> The economically inactive population comprises all those who are neither employed or unemployed, due to conditions such as –attending educational institutions, being retired from employment, being engaged in family or household work.

<sup>66</sup> See *Timor-Leste MDG Booklet 2010*, Government of Timor-Leste, October 2010, p. 6.

<sup>67</sup> See Timor-Leste MDG Booklet 2010, Government of Timor-Leste, October 2010, p. 6.

<sup>68</sup> See e.g. Timor-Leste's Youth in Crisis: Situational Analysis and Policy Options, World Bank, Timor-Leste, Dili, September 2007.

<sup>69</sup> This National Income Generation Programme is organised by the Government in co-operation with the World Bank. It aims to employ 50,000 Timorese annually, for 60 working days, over a four-year period. See A Path to Peace and Progress, August 2007—March 2010: The Xanana Gusmão Government: Mid Term Achievement Report.

<sup>70</sup> Data provided by the Timor-Leste Government, see *Timor-Leste Millennium Development Goals Booklet 2010*, Dili, October 2010, p.6. See also *The Xanana Gusmão Government: Mid-Term Achievement Report*, Dili, 2010, p.60.

what can be done by both Government and donors to create jobs, develop appropriate skills and training, and to try and match labour supply with demand.

# **Food Security and Nutrition**

Food security and nutrition is a critical component of human development. The results of the 2007 TLSLS show that more than 70 percent of the population had insufficient food for at least one month, the figures being almost 80 percent in rural areas and approximately 50 percent in urban areas. The number of people who faced insufficiency of food for at least one month in the year was critical in the districts of Oecusse (92 percent of the population), Ainaro (98 percent of the population), Liquiça (99 percent of the population) and Ermera (100 percent of the population).

Food insecurity is clearly reflected in the poor nutritional status of children and women, which has been a serious problem in Timor-Leste for many years. For example, anthropometric data on height and weight based on the Demographic and Health Survey 2009-10 shows that 58 percent of children under age 5 are stunted, and 33 percent are severely stunted. The Survey also shows that 19 percent of children under age 5 are wasted, and 7 percent are severely wasted. The weight-for-age indicator shows that 45 percent of children under age 5 are underweight and 15 percent are severely underweight? Similarly, the nutritional status of women is a reflection of food insecurity. A woman's nutritional status does not only have important implications for her health and for the health of her children, but also "in reduced productivity, an increased susceptibility to infections, delayed recovery from illness, and heightened risk of adverse pregnancy outcomes," according to the Survey. For example, the Survey found that 29 percent of women were malnourished during the time of the Survey, which is an improvement from 38 percent in 2003. Women's nutritional status is a serious public health concern in Timor-Leste.

# Hunger in Timor-Leste: A Global Comparison and a Response

The Global Hunger Index (GHI) is a multidimensional approach to measuring hunger.

It incorporates three hunger related indicators:

- The proportion of undernourished population as a percentage of the total population;
- The prevalence of low body weight among children under the age of five;
- The mortality rate of children under the age of five.

The Index ranks countries on a 100-point scale, with 0 being the best score (no hunger) and 100 being the worst, though neither of these extremes is achieved in practice. Values less than 4.9 reflect low hunger, values between 5 and 9.9 reflect moderate hunger, values between 10 and 19.9 indicate a serious problem, values between 20 and 29.9 indicate an alarming situation, and values of 30 or higher are extremely alarming.

Timor-Leste was ranked at number 70 of the 84 developing countries reporting in 2009. It scored 25.4, putting it within the 'alarming' category. Its ranking was above Zambia (72), Ethiopia (79) and, and slightly below Angola and Mozambique (jointly ranked at 68).

The data used in estimating Timor-Leste's raking on the GHI are from the years 2005 for undernourishment, and 2007 for weight and mortality rate.

Responding to the reality indicated by this data, the Timor-Leste Government has made substantial progress since 2007 in these areas. By 2009, for example, the number of underweight children had been reduced from 48.6 percent to 45 percent, and the under 5 mortality rate from 97 per 1,000 live births in 2007 to 64 per 1,000 live births in 2009. The country has already achieved its MDG targets both for under-five and for infant mortality rate, in advance of 2015.

Source: Data taken from the Demographic and Health Survey 2009-10, Timor-Leste Government, Dili, 2010, The Global Hunger Index, 2009, published by the International Food Policy and Research Institute, Concern Worldwide and Welthungerhilfe, Bonn, Washington and Dublin, 2009.

**BOX 18** 

<sup>71</sup> See Demographic and Health Survey 2009-10, Government of Timor-Leste, 2010, p. 150.

Strategies to cope with food shortages at times compromise the nutritional status, health, productivity and welfare of the people. For example, in the 2007 TLSLS, the five most cited strategies to cope with the shortage of food among those with one month of low food consumption were to eat less food (94 percent), switch from rice to maize (91 percent), sell livestock or assets to purchase food (43 percent), eat less meat or vegetables (33 percent) and borrow money from friends or relatives (16 percent). Urban dwellers are more likely to eat less meat or vegetables and borrow money from friends or relatives, when experiencing food shortages than their rural counterparts (50 percent versus 29 percent and 20 percent versus 14 percent, respectively). Meanwhile, rural dwellers are more likely to sell livestock or assets to purchase food during food shortage than urban dwellers (44 percent versus 35 percent).

During 2008, faced with increasing prices for food imports and food shortages within the country, resulting from the global food crisis in that year, the Timor-Leste Government created a stabilization fund, increasing expenditure beyond ESI levels to subsidise the prices of imported and domestically cultivated rice. This undoubtedly prevented impending food shortages. It also provided short-term incentives to farmers to expand rice cultivation. In the longer term, however, the practice of Timorese farmers generating cash by selling rice at subsidized higher prices and then meeting family needs by buying rice at subsidized (lower) prices is clearly unsustainable. Expansion of rice cultivation has also been facilitated since 2008 by investments in irrigated rice cultivation attempting to increase productivity on larger landholdings.

# **Factors influencing Food Security in Timor-Leste**

Oxfam Australia has been supporting development in Timor-Leste since 1975 by aiming to improve people's access to basic services, ensuring marginalized groups have the opportunity to take part in decisions that affect their lives and addressing the root causes of conflict to build lasting peace. In 2008, Oxfam carried out a food security baseline survey in Timor-Leste to give the European Commission food security program implementing partners a clear understanding of the food security situation in the seven targeted districts in Timor-Leste (Manatuto, Liquiça, Manufahi, Bobonaro, Oecusse, Covalima and Lautem), in order that they could implement an effective and targeted food security program.

Food security in Timor-Leste traditionally is associated with declining agricultural yields due to late and insufficient rainfall, drought and locust damage to maize and rice crops. The results of the Oxfam Timor-Leste Food Security Baseline Survey showed that these adversities lead in some districts to a 'normal' two to three month hunger period, with very little food prior to maize harvesting. In some districts, such as Covalima, reduced maize and rice crops prolonged the food shortage period to between five to six months.

Farm land production is influenced by rainfall, soil fertility, weed burden, variety and slope. In Oecusse, for example, 70 percent of farm land is situated on moderate to steep slopes which may be vulnerable to erosion, surface run-off and strong winds. In addition, land reparation, soil fertilization, planting methods and crop management abilities of the farmers are limited. Distribution of and access to higher-yield seeds is also inadequate. Furthermore, natural disasters (late and short rains, strong winds, flood, landslides, soil erosion and bush fires) negatively affect farm-land production and consequently the economy and food security of Timorese households.

BOX 19

# **Achievements thus Far and Challenges Ahead**

Timor-Leste has made substantial progress since independence in most areas of human development. In recent years, it has also reduced the numbers of its population living in poverty. Despite this progress, however, Timor-Leste still has more of its population living below the CHAPTER

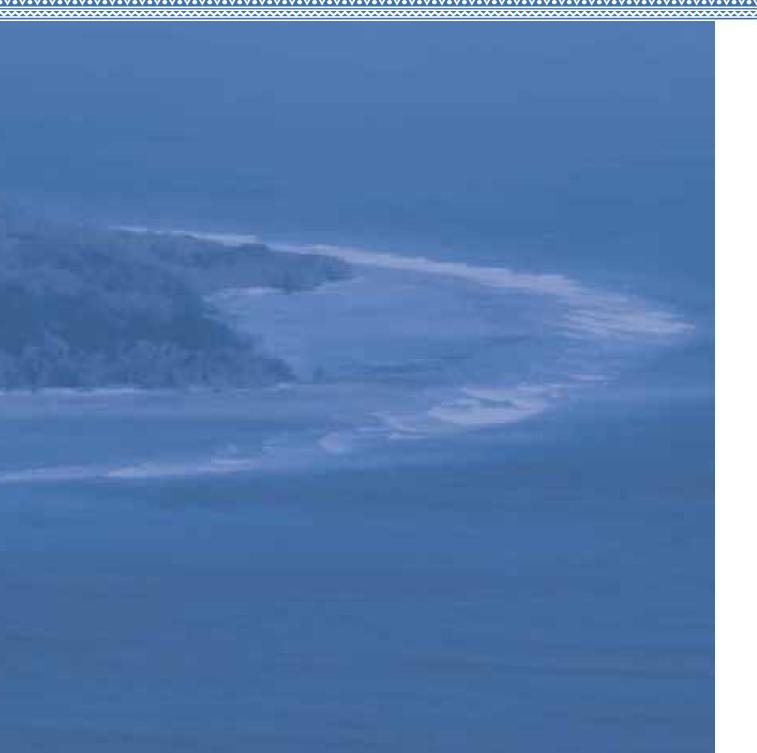
poverty line than all other countries in the East Asia and the Pacific region – although, as noted earlier, its poverty levels compare favourably with most Sub-Saharan African countries and with other countries in the Medium Human Development category such as Kyrgyzstan, Nicaragua and Moldova. Problems also remain in health and education. Continuing to develop policies to address youth unemployment is essential. An over-riding concern for the country is to continue with, and further develop its strategies for alleviating poverty. Addressing this and related areas such as the provision of food security will be a priority for the Timor-Leste Government in the coming years. Continuing to tackle poverty requires the further development by the Government of its strategies and enabling frameworks for improvements in areas such as agricultural productivity, increasing agricultural output, diversifying into new crops, promoting processing, livestock rearing and the development of small-scale production and marketing in the rural sector. It also requires the further development of labour intensive employment, in areas such as infrastructure, construction and transport, along with attracting investment into the non-oil economy. Ongoing poverty reduction also necessitates the development of successful targeting of poor households in development programmes and projects.

In the next chapter, the TLNHDR looks briefly at how Timor-Leste has created and managed its Petroleum Fund, comparing this with relevant experiences of other resource dependent, low and middle–income countries. It assesses the country's potential to avoid the resource curse, in the short-run and in the longer-term. Subsequently, the TLNHDR examines how Timor-Leste's petroleum wealth can be utilized most effectively to develop the non-oil economy, and in particular, the rural sector.



# **The Petroleum Fund and Human Development in Timor-Leste**





# The Petroleum Fund and Human Development in Timor-Leste

Timor-Leste is in a unique situation. Nearly a decade since independence, it is emerging out of conflict and has found wealth in oil revenues. The overall level of human development in a number of areas is still low and the oil revenues has to be utilized effectively to promote a sustainable development of the non-oil economy. It has thus far managed its oil revenues with a reasonable level of prudence, via its internationally recognized Petroleum Fund, which collects revenues and evens out oil-financed spending from year to year.

These contrasting facets of Timor-Leste's situation create an obvious political and policy challenge that has taken a particularly visible form since the Government's 2008 mid-year budget rectification, which proposed to more than double both spending and transfers from the Fund. Subsequently, the 2009 budget also proposed to withdraw an additional US\$ 181.2 million, beyond the Estimated Sustainable Income (ESI)¹ level of US\$ 407.8 million. This additional amount was devoted largely to infrastructure development. In 2009, total expenditure was less, at US\$ 104 million above ESI, but a 2010 budget rectification proposed an expenditure that was US\$ 309 million above ESI². The 2011 Budget proposes expenditure at ESI levels for 2011, but above ESI levels in 2012, increasing from US\$ 412 million above ESI to US\$ 526.1 million above ESI in 2015³.

These decisions on levels of expenditure in relation to the Petroleum Fund raise a crucial question which will continue to be addressed in Timor-Leste in the coming years, namely: how can large accumulations of public financial wealth in a country with persistent poverty best be managed and used, both economically and politically? In addition to decisions on expenditure and ESI levels, discussions are ongoing in other areas, particularly with the decision in the September 2009 Budget and the Financial Management Law, which empowers the Minister of Finance to take out external loans in the name of the Government, conditional on parliamentary approval of the loan amount. Most recently, the summary of the Government's *Strategic Development Plan 2011-2030* concludes that the present calculation of ESI is too conservative, underestimating wealth accruing from past and future petroleum revenue. This assessment enables the *Plan* to call for a recalculation, with expenditure going above current ESI levels in the coming years. In 2010, the Government also began to transfer some of the Petroleum Fund from US Treasury Bonds into other government bonds and

<sup>1</sup> For each year, ESI is calculated as three percent of the sum of the Petroleum Fund balance and the present value of expected future petroleum receipts. Withdrawing more than ESI requires the Government to provide Parliament with a detailed explanation of why it is in the long-term interests of the country, and also a report estimating the impact on future ESI that is certified by the independent auditor.

<sup>2</sup> This level of expenditure for 2010 was maintained, according to data in the 2011 Budget document. See State Budget 2011 Budget Overview, Book 1, Part 4: Expenditure, Table 4.2 Expenditures and Fiscal Envelope, 2010-15, Timor-Leste Government, November 2010. The 2011 Budget remains within ESI levels by using US US\$ 141 million from earlier withdrawals from the Petroleum Fund.

<sup>3</sup> These figures are taken from State Budget 2011 Budget Overview, Book 1, Part 4: Expenditure, Table 4.2. Expenditures and Fiscal Envelope, 2010-15, Timor-Leste Government, November 2010. The 2011 Budget remains within ESI levels by using US\$ 141 million from earlier withdrawals from the Petroleum Fund.

equities<sup>4</sup>. This issue is raised in the draft summary of the *Strategic Development Plan*, which also proposes that expenditures can be financed not only by increased withdrawals from the Petroleum Fund, but also by multilateral and unilateral loans and – in the longer term – by the issuance of Government debt<sup>5</sup>.

# Development and the 'Resource Curse'

Several recent studies have suggested that for many developing countries, oil and gas wealth is, paradoxically, a development 'curse' (see BOX 20). Specifically, they have suggested that oil and gas wealth in many cases can be accompanied by poor rates of economic growth, high levels of poverty, a higher than average risk of conflict and a higher than average risk of authoritarian rule.

# Oil and Gas Wealth and Development - the Connections

Recent studies suggest that oil and gas wealth is associated with five development problems:

- 1. Low economic growth: In Sub-Saharan Africa, countries rich in minerals grew more slowly than those not rich in minerals in the 1970s (Wheeler, 1984). Oil exporting countries performed worse than countries dependent on the export of non-petroleum raw materials, in terms of economic growth, 1970-89 (Sachs and Warner 1995).
- **2.** Countries rich in point source resources grow more slowly than countries with diffuse natural resources (Isham et al 2002), (Sala-i-Martin and Subramanian 2003).
- **3.**Poverty and Inequality: Oil wealth and non-fuel mineral wealth are associated with poverty and low levels of human development (Ross 2003).
- **4.**Conflict: The incidence of civil war is related to levels of mineral wealth (De Soysa 2000). The likelihood of civil war rose sharply in countries that produced oil and gas between the early 1970s and the late 1990s (Ross 2006).
- **5.** Authoritarian Rule: A series of studies has suggested that natural resource wealth is associated with an increased likelihood that the country will have authoritarian rather than democratic rule (Jenson and Wantchekon 2004).

These findings need to be treated with caution: whilst they provide evidence that oil and gas wealth is correlated with various adverse development outcomes, they have not proven that the former cause the latter; and a few studies have produced findings that suggest that oil and gas wealth may actually have beneficial effects vis-à-vis development (e.g. Davis 1995; Smith 2004). Nevertheless, the overall weight of evidence so far is that, unless they are managed well and used efficiently, oil and gas wealth will not automatically translate into human development.

# BOX 20

International experience also suggests that the impact of the resource curse can be alleviated by political and social factors that can either reduce the negative impact of oil and gas wealth or reverse these impacts altogether. A key determinant of whether or not resource-rich countries and oil and gas-rich countries, in particular, fall victim to the resource curse is the institutional capacity of the state – that is, the extent to which the state apparatus is staffed by skilled personnel and the presence of institutions that ensure corruption free and efficient operations.

<sup>4</sup> In 2009, the Bank for International Settlements (BIS) was appointed as the Fund's first external manager. In June 2009, an agreement was concluded with the Bank for International Settlements (BIS) to manage 20 percent of the Petroleum Fund without the US holding restriction. The investment portfolio within the Fund currently includes Government bonds issued by Australia, Japan, EU and the UK, in addition to bonds issued by Supranational Organisations such as the European Investment Bank and the World Bank. Additionally, 4 percent of the portfolio currently is allocated to global equities, with the 2011 Budget stating that there be an increased exposure to equities in the coming years. See State Budget 2011 Budget Overview, Book 1, Part 5: Revenues Section on Petroleum Fund, Timor-Leste Government, Dili, November 2010. Any Government strategy to further diversify the Petroleum Fund portfolio will require amendments to the Petroleum Fund Law, which themselves will require Parliamentary approval.

<sup>5</sup> See Strategic Development Plan, Timor-Leste Government, Dili, 2010, Chapter 2, p. 35, section 2.7.1, Public Finance.

Firstly, the institutional capacity of the state shapes how well a resource-rich country manages its economy. Some scholars<sup>6</sup> have argued that oil and gas-rich countries are characterized by 'rentier' states – that is, states that receive regular and substantial amounts of 'unearned' income in the form of, for instance, taxes on natural resource exports or royalties on natural resource production. Such states tend to have a low degree of institutional capacity. With large amounts of unearned income to spend, they tend to develop greater capacities to distribute resources than to regulate and supervise the economy. At the same time, because such states do not need to tax their citizens in order to fund their activities, they tend to be unresponsive to citizens' demands for good economic management. The effect of both dynamics is that many states in resource-rich countries tend to be poor at managing their economies.

A state's institutional capacity to manage the economy is particularly important in relation to two economic challenges associated with the resource curse: (i) whether states in resource-dependent countries get a fair deal from international oil and gas companies in terms of their share of proceeds from the exploitation of resources; and (ii) the macroeconomic challenges associated with resource booms, in particular the 'Dutch disease' (a situation whereby a resource boom leads to appreciation of the real exchange rate, increased demand and higher prices for non-traded goods, and in turn damages the manufacturing sector and other tradable sectors, leading to low economic growth). Oil and gas companies will try to secure as much of the value of a country's oil and gas resources as possible. How successful they are will depend on the institutional capacity of the state: states with a high degree of institutional capacity will be able to resist their demands, while states with a low degree of institutional capacity will not. With respect to the second challenge - as to whether or not oil-rich countries fall victim to the 'Dutch disease' - this depends in large part on the extent to which they invest oil windfalls in public assets (e.g. infrastructure - roads, electricity, water supply, education, health) that raise productivity rather than consumption. This in turn requires good governance and in particular, transparency and reliable public information on the sources and uses of oil earnings, and on the expected flow of oil earnings in the future.

Secondly, the institutional capacity of the state in resource-dependent countries also shapes the likelihood that these countries will experience major conflict and/or civil war. Growth collapse is a key precondition for the emergence of serious conflict. Several studies have argued that such collapse is more likely in countries that have rentier states than those that have developmental states. Commentators<sup>7</sup> have suggested that institutional capacity shapes the likelihood of the emergence of serious conflicts and/or civil war in resource-rich countries by determining both the extent to which state action gives rise to grievances among particular political and social groups and the costs of rebellion.

#### **Weak Institutional Capacity, Corruption and Conflict**

In the context of socio-economic underdevelopment, weak institutional capacity and the corruption of state elites create a permissive opportunity structure for conflict. The high correlation between lucrative natural resources and violent conflict underscores the critical role played by poor governance, not only in fuelling political and economic grievances, but also in reducing the costs of undertaking violent challenges'.

Source: K.Ballantine and J.Sherman, The Political Economy of Armed Conflict, 'Beyond Greed and Grievance: Reconsidering the Economic Dynamics of Armed Conflict' (p.280).

**BOX 21** 

See for example, Macartan Humphreys, Jeffrey D. Sachs, and Joseph E. Stiglitz, Escaping the Resource Curse, Columbia University Press, 2007, where the relations between the "resource curse" and rent-seeking by states are discussed.

See for example, Paul Collier, The Bottom Billion: Why the Poorest Countries are failing and What Can Be Done About It, particularly chapters 2 and 5, where the

relations between rentier states, their levels of institutional capacity and the incidence of conflict are discussed

The Petroleum Fund and Human Development in Timor-Leste

In addition to these two aspects of institutional capacity, commentators have also argued that successful development in resource-rich countries appears to be facilitated by the emergence of a state that has two crucial features. The first is the political dominance of market-based propertied elites, or groups with strong connections to property, rather than traditional elites or leaders of particular ethnic groups<sup>8</sup>. Studies have shown that the former are more likely to pursue economic policies that promote development, within market-based economies9.

The second feature is that the state governs in an inclusive manner. A key issue here is what several authors have referred to as the development of a 'social contract' between a state and the peoples it governs<sup>10</sup>. Social contract theories of conflict suggest that when states rule, or are perceived as ruling unjustly, or when states fail to provide the conditions for development, they forfeit the right to power - and if they do not give up power willingly, society may mobilize against those who hold state power, to try and remove them. International experience suggests that countries with characteristics such as high levels of poverty, low levels of GDP per capita and high levels of inequality are more likely to experience conflict, stemming from weakening social contracts. In a newly independent country, lacking an existing social contract, such conditions can easily result in the emergence of conflict.

International experience thus shows that aspects such as the institutional capacity and social character of the state shape whether or not resource-rich countries fall victim to the resource curse. A key issue, therefore, is the relevance of these issues for Timor-Leste. Are issues such as these likely to restrict or limit the country's ability to manage its oil and gas revenues to promote growth, human development and poverty reduction? Can the dangers they pose be met? How has Timor-Leste coped with such issues so far, particularly in the management of its resources?

# **Petroleum Fund: Performance and Prospects**

Compared with natural resource funds in other countries, Timor-Leste's Petroleum Fund has attracted favourable commentary. It is transparent in its reporting of transfers, balances and investment results; all petroleum revenues are transferred into the Fund. The Fund combines stabilisation and savings objectives in a comprehensive manner, since the amount it authorises to be spent from the Fund is in principle unrelated to temporary fluctuations in oil revenues. Any spending must take place through transfers to the general government budget, approved by Parliament. Responsibility for the Fund is divided among several institutions to provide checks and balances. Finally, reporting is subject to stringent standards of transparency.

See for example – Chaudry 1994, Bevan et al, 1999, Acemoglu et al 2003, Rosser 2006b, 2007, Winters, 1996 in the Bibliography in Annex One to the TLNHDR. See for example, Winters 1996 and Rosser 2007, in the Bibliography in Annex One of the TLNHDR.

<sup>10</sup> See for example, Winters 1996 and Rosser, 2007, in the Bibliography in Annex One of the TLNHDR.

#### The Main Features of Timor-Leste's Petroleum Fund

Timor-Leste's Petroleum Fund is essentially a Government account with the Banking and Payments Authority (BPA) to which the country's petroleum receipts are credited and from which debits can be made to finance the state budget. It was established with the Petroleum Fund Law and operates according to the following key principles:

#### Management

The Fund is managed prudently in accordance with the principle of good governance for the benefit of current and future generations. The Government is responsible for overall management and the BPA is responsible for operational management.

#### Income

All Timor-Leste's revenue from petroleum operations is paid into the Fund and the Fund also retains all investment income (net of management expenses).

#### Investment

Assets are invested abroad in established financial markets, with at least 90 percent in U.S. dollar denominated fixed income instruments. Up to June 2009, based on a management agreement between the Ministry of Finance and the BPA, the Fund was restricted to holding U.S. Government securities tracking the benchmark Merrill Lynch 0-5 year bond index. After this date, a second management agreement was concluded with the Bank for International Settlements (BIS) to manage 20 percent of the Fund without the US holding restriction. During 2009-10.the investment portfolio within the Fund was diversified, and currently includes Government bonds issued by Australia, Japan, EU and the UK, in addition to bonds issued by Supranational Organisations such as the European Investment Bank and the World Bank. Additionally, 4% of the portfolio currently is allocated to global equities, with the 2011 Budget stating that there be an increased exposure to equities in the coming years.

#### Withdrawals

Transfers from the Fund can only be made to the single state budget account. The amount transferred in any fiscal year can only take place after the publication of the budget law and cannot exceed the appropriation specified therein. Transfers are also contingent on the Government providing Parliament with a report specifying the ESI and a certification of that amount by an independent auditor.

#### Savings policy

To preserve the real value of the country's petroleum wealth, withdrawals from the Fund are guided by the concept of estimated sustainable income (ESI). For each year, ESI is calculated as three percent of the sum of the Fund balance and the present value of expected future petroleum receipts. Withdrawing more than ESI requires the Government to provide Parliament with a detailed explanation of why it is in the long-term interests of the country, and also a report estimating the impact on future ESI that is certified by the independent auditor.

#### Reporting

The BPA publishes monthly reports on the performance and activities of the Fund. The Government submits an annual report to Parliament with an audited financial statement. Details on revenue receipts and composition of the investment portfolio are fully disclosed.

#### **Oversight**

An Investment Advisory Board advises the Minister of Finance on the overall investment strategy and management of the Fund. An independent Consultative Council, with members (each elected for five years) advises Parliament on the performance and operation of the Fund and also on budget appropriations and whether these are being used effectively to the benefit of current and future generations. Since the Council is an advisory body, however, Parliament and Government do not have to accept its advice.

#### **Transparency**

As specified in its founding document, Fund management has to be carried out with the highest standard of transparency. Quarterly and annual reports are made public, as is the advice of the Consultative Council (within 30 days of having been provided to Parliament). Minutes of Investment Advisory Board meetings are routinely posted on the BPA website.

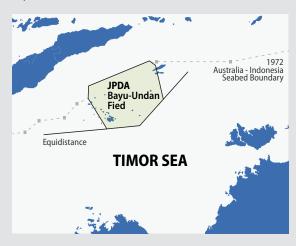
Sources: MOPF~(2004), formulations~in~the~Petroleum~Fund~Law,~No.~9/2005, and~subsequent~years.

BOX 22

#### **Timor-Leste's Petroleum Resources**

With oil and gas seeping out of the ground in many places throughout the country, Timor-Leste's hydrocarbon potential has long been surmised. Major production only commenced recently, however, and much of the territory is still unexplored.

To date, commercial hydrocarbon extraction has been limited to the Joint Petroleum Development Area (JPDA) in the Timor Sea, which is shared with Australia. The largest field there and the only one currently in production is Bayu-Undan, which became operational in early 2004. Operated by Conoco Phillips, it produced about 175,000 barrels of oil equivalent per day in 2009. This includes condensate and natural gas liquids (butane and propane) as well as natural gas that is piped to a processing plant in Darwin, Australia. Production from Bayu-Undanwill decline annually as the reserve is depleted.



Based on conservative estimates, projections in the Government budget have production levels gradually tapering off, before coming to an end in 2022. The JPDA also includes the Elang Kakatua (EKKN) field, which has now ceased production but yielded a total of 32 million barrels of oil during the period 1998 to 2007.

Upstream revenue from the JDPA is shared with a 90/10 split between Timor-Leste and Australia, according to the Timor-Sea Treaty, signed at the Prime Ministerial level in May 2002, ratified by the Australian Government in March 2003, and implemented from April 2003. Oil companies pay 'first tranche petroleum' (akin to royalties) and 'profit oil' (a tax component that applies after the contractor has recovered eligible capital outlays) to a regulating body that divides payments with the agreed split. In addition, companies pay taxes directly to the two governments, according to their individual tax regimes, with payments to the two Governments being 90 and 10 percent, respectively. Remaining revenue projected for the lifetime of the Bayu-Undan project in the 2010 budget is US\$11.45 billion.

The next field to be developed is likely to be Kitan, a discovery in the JDPA that is estimated to contain 34.6 million barrels of extractable oil and will probably come into production in 2011. Kitan will have a life of approximately five years. Estimates of the revenue from the field have ranged from US\$700 million to US\$1.2 billion, based on varying oil prices during 2010.

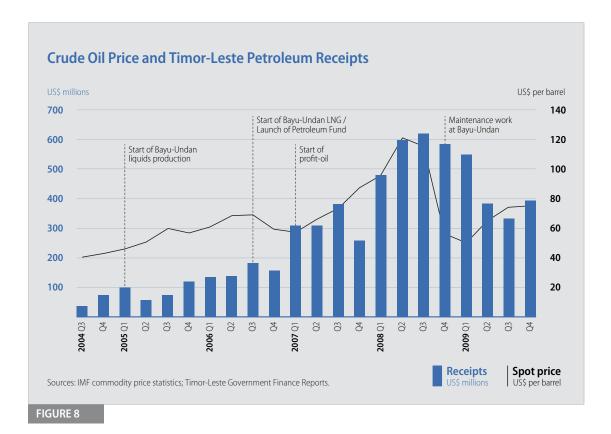
Another much larger field is Greater Sunrise, which straddles the eastern boundary of the JPDA. A development plan for Greater Sunrise has yet to be agreed upon and there remains uncertainty regarding the project, with debate centring on the location of the required gas liquefaction plant. If development moves ahead, production could start around 2015. According to a separate treaty, Government proceeds from Greater Sunrise upstream will be split 50/50 between Timor-Leste and Australia. Estimates are very tentative, but Timor-Leste's total take would probably be approximately US\$ 13 billion.

In Timor-Leste's exclusive jurisdiction, there is ongoing exploration in off-shore acreage between the southern coast and the JPDA. This could lead to a major find but, as typical for such exploration, the probability is not high. Finally, there is potential for onshore production although that has still to be explored. Revenue from onshore production is not expected to be as large as that from off-shore fields but could have a greater direct impact in the form of jobs and local support services.

From Tobias Rasmussen, "Timor-Leste's Petroleum Fund: Achievements and Challenges", Technical Background Paper for the 2011 TLNHDR.

BOX 23

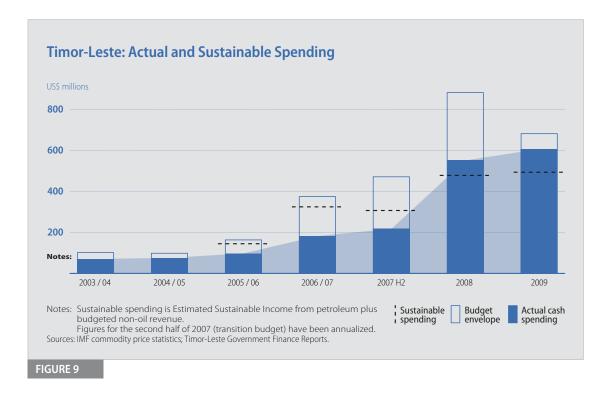
The Petroleum Fund has grown enormously, relative to the size of Timor-Leste's economy. From its inception in September 2005 to end-2006, receipts averaged about US\$ 50 million a month. Following the onset of 'profit oil', income jumped to a monthly average of some US\$ 100 million during 2007 and then doubled again to over US\$ 200 million per month, in mid-2008. For 2009, the average monthly income was approximately US\$ 140 million. Altogether, since its inception to end-2009, petroleum receipts amounted to US\$ 5,979 million and investments made by the Fund returned another US\$ 403.5 million. Given an opening balance of US\$ 205 million, total outgoing transfers to the budget of US\$ 1,208 million by 2009, and management fees of US\$ 4.6 million, the Fund reached a total value of US\$ 5,377 million in December 2009 (FIGURE 8).



The estimated value of the Fund by the end of 2010 is US\$ 6.9 billion, with projected increases to US\$ 8.17 billion by the end of 2011, US\$ 9.82 billion in 2012, and US\$ 14.60 billion in 2015. Thus far, therefore, petroleum receipts have far exceeded expectations. In the 2002 NDP, revenue from Bayu-Undan was estimated at between US\$ 1.8 billion and US\$ 3.2 billion over the entire project life up to 2021, much less than has already been received. The higher actual receipts were largely the result of soaring oil prices, coupled with a progressive tax regime, with production volumes also somewhat higher than expected. Projections in the NDP were based on crude oil prices of about US\$ 18 per barrel, a prudent but reasonable assumption at the time, given spot prices of about US\$ 25 per barrel. As it turned out, however, oil prices surged to almost US\$ 150 per barrel at one point in mid-2008. Prices subsequently dropped sharply to below US\$ 50 per barrel in late 2008 and were at just below US\$ 74 per barrel in June 2010. These lower prices eventually fed through to somewhat lower Petroleum Fund receipts. Nevertheless, based on an average crude price of about US\$ 56 per barrel, the 2009 budget projected another US\$ 11 billion in remaining petroleum revenue, and the 2010 budget projected US\$ 13.2 billion. Based on a projected forecast of US\$ 68 per barrel for 2011 and US\$ 71 per barrel in 2012, and an average rate of return on Fund investments of 4 percent, the

<sup>11</sup> Analysis presented in the 2009 budget shows that a permanent US\$ 10 per barrel reduction in the price of crude reduces ESI by US\$ 85 million (21 percent). This high degree of sensitivity is a consequence of a regime in which the average effective tax rate for Bayu-Undan rises with intrinsic profitability.

Government estimates that the Fund will increase to US\$ 14.6 billion by the end of 2015 and to US\$ 31.7 billion by the end of 203512.



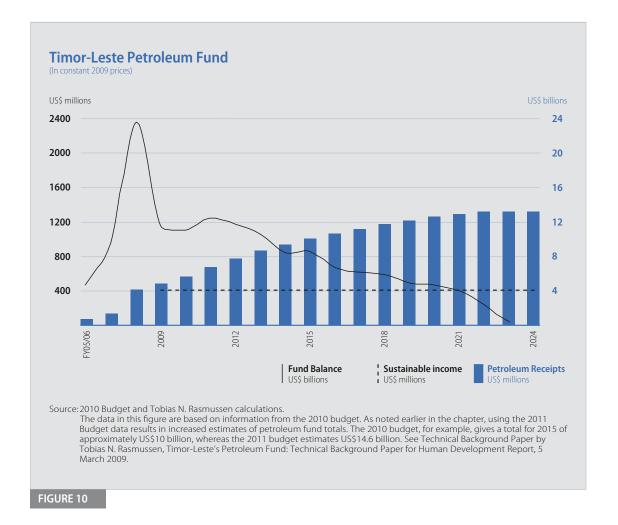
As projected receipts grew so did ESI, from US\$ 103 million (30 percent of non-oil GDP) in the FY 2005/06 budget to US\$ 396 million in the 2008 mid-year budget. In the 2009 budget, ESI was estimated at US\$ 407.9 million, and at US\$ 502 million in 2010. ESI for 2011 is estimated at US\$ 734, increasing to US\$ 762 million by 2015<sup>13</sup>. Government expenditure also increased sharply although with some lag, displaying lower rates of budget execution as opposed to the proposed budget. Prior to 2008, transfers to finance the non-oil budget deficit were smaller than what was available. In 2009, the budget appropriated more than ESI, and the final withdrawal was US\$ 102 million in excess of ESI. The 2010 budget proposed expenditure at ESI level, to undertake additional expenditures, particularly for infrastructure development. A Budget Rectification in June 2010 proposed to increase expenditure to US\$ 309 million above ESI, and this was implemented during that year. The 2011 Budget proposed expenditure at ESI level for 2011, with withdrawals above ESI of US\$ 418 million in 2012, increasing to US\$ 526.1 million in 2015<sup>15</sup>.

<sup>12</sup> It should be noted that in the 2011 Budget calculation of ESI, the Government has changed its methodology for calculating ESI in the long-term. Formerly, the Energy Information Administration's (EIA) Low Case scenario was used. The calculation in 2011 uses the average of the EIA's Low and Reference case as the basis for ESI calculation.

<sup>13</sup> See State Budget 2010 Budget Overview, Book I, Part 4: Expenditure, Table 4.2, Timor-Leste Government, November 2010.

<sup>14</sup> Budget execution until 30 November 2010 indicates that expenses paid in cash were 60.5 percent and 30.5 percent in obligations and commitments. The implication is that more than 30 percent of the proposed budget was not actually executed in 2010 (See Report and Opinion by Committee on Economy, Finance and Anti-Corruption for the Proposed Law No. 42/II, The State Budget for 2011.)

<sup>15</sup> See State Budget 2010 Budget Overview, Book I, Part 4: Expenditure, Table 4.2, Timor-Leste Government, November 2010.



In June 2009, Petroleum Fund investments mirrored the target set out in the management agreement. The portfolio tracked the Merrill Lynch index within the specified tolerance limits and the return on the Fund was virtually the same as the benchmark. In June 2009, the first external manager was appointed, the Bank for International Settlements (BIS), enabling the Fund to invest in additional government bonds, notably in Australia, Japan, UK and the Euro Zone, in addition to bonds issued by Supranational Organisations such as the European Investment Bank and the World Bank. From its inception to December 2009, the Fund earned an average annual rate of return of 4.4 percent<sup>16</sup>. This is a remarkably strong performance, considering that global financial markets suffered losses of historic proportions, with the S&P 500 producing a negative 6.8 percent total annualized return, during the same period. In a very turbulent period 2008 to 2009, the Fund benefited enormously from being invested in one of the few asset classes that increased in value. Reflecting the conservative mandate, results have also been fairly consistent, with just two quarters of negative returns. The 2011 Budget predicts ongoing returns at a similar annual level, of around 4 percent, to 2015<sup>17</sup>.

<sup>16</sup> Based on U.S. consumer prices, which rose at an average annual rate of 2.1 percent between August 2005 and December 2008, that implies a real rate of return of 3.5 percent, more than the 3 percent assumed in the calculation of ESI. Timor-Leste's own consumer prices rose at a higher 6.3 percent rate, however, suggesting that the Fund failed to earn enough to maintain its purchasing power when measured in domestic goods. In addition, almost half of the Fund's return in 2008 was the result of market revaluation due to the decline in U.S. Treasury rates, pointing to a lower return going forward given the current portfolio composition.

<sup>17</sup> See State Budget 2010 Budget Overview, Book I, Part 5: Revenues, Tables 5.8 and 5.9, Timor-Leste Government, November 2010.

### **Outlook for the Fund**

The two most recent budgets, for 2010 and 2011, outline continued large increases in the Petroleum Fund. As stated earlier, current forecasts are for the Fund to increase to US\$ 14.6 billion by the end of 2015, and to US\$ 31.7 billion by the end of 2035. These projections are, however, highly sensitive to underlying assumptions. The Report has already noted the SDP proposals to increase expenditure beyond ESI levels. If, as indicated in the 2011 Budget documents, the Government plans to withdraw US\$ 418-526 million more than ESI from the Fund annually from 2012 to 2015, the amount in the Fund will be less than the US\$ 14.6 billion forecast for 2015. Additionally, projected petroleum receipts are for Bayu-Undan only and thus may be based on conservative assumptions regarding volume. Revenue could thus be much larger if new fields enter production or if oil prices are higher. At the same time, there is equally downside risk from lower prices or production disruptions at Bayu-Undan.

Given current achievements – which are substantial – an important issue for the future of the Petroleum Fund is the pace of withdrawals. Cash spending exceeded ESI in 2010, and this situation may recur. Based on the strategies presented in the SDP and on expenditure proposals in recent Budget documents, in future years, withdrawals may be above ESI<sup>18</sup>.

From an overall welfare perspective, withdrawing more makes sense and is advisable, if the spending generates a social rate of return that is greater than what is earned on keeping money in the Fund. However, that may not always be easy to achieve. Oil-rich countries have a poor record on securing productive public investment, with some cases of vast amounts wasted on failed projects<sup>19</sup>. Moreover, even where high return projects are identified, channeling too many resources into the domestic economy may create inflationary pressures and erode competitiveness throughout the economy20.

# The Petroleum Fund, Human Development and Poverty Reduction

In decisions to spend at or above the ESI, or to take out loans which may have to be repaid from the Petroleum Fund, the Government must focus on what for Timor-Leste is a crucial issue: how can this expenditure contribute to human development? One way is obvious, and has been stated above. The Fund must be used for clear and limited macroeconomic objectives to avoid the instabilities, distortions and corruption that commodity revenues can bring. The Fund must secure a stable and transparent stream of revenues to the Government budget, and the budget is the place to deploy these funds for human development purposes. Beyond this, however, the Fund can also be viewed in a more direct development way. In this case, the fund investments or the authorized disbursement from it can be driven by human development considerations - spending can meet current needs (by financing consumption), and should be directed to specific sectors seen as key contributors to human development. This approach seems to have inspired the current Government's budget increases in 2008, 2009, 2010 and 2011 given its objective to trade rice at subsidized prices through a new fund (the Economic Stabilization Fund), and its other proposed capital expenditures (on power plants, for example). If such an approach is adopted, international experience suggests that – in general – strategies need to be carefully designed so as to achieve appropriate development sector targeting without undoing the macroeconomic function the Fund must keep fulfilling. There must also be a clear conceptual distinction between what in such an approach goes to finance consumption versus development-friendly investments. Bearing this in mind, a number of strategies are worth evaluating when considering the best ways in which annual contributions from the Fund, or loans whose repayment is based on wealth from the Fund, can most appropriately fund human development.

20 See Corden and Neary, 1982



<sup>18</sup> These proposals are outlined in the State Budget 2010 Budget Overview, Book I, Part 4, Expenditure. Timor-Leste Government, Dili, November 2010.

<sup>19</sup> See Salai-i-Martin and Subramanian, 2003

These strategies are as follows:

#### 1. Investing financial capital directly into the domestic economy, via portfolio investments.

Many poor developing countries suffer from a drastic lack of physical capital, and in Timor-Leste this is particularly serious, following the widespread destruction of the Indonesian occupation and the substantial sums subsequently necessary for ongoing repair and rehabilitation. Consequently some analysts recommend investing accumulated natural resource wealth domestically to 'kill two birds with one stone' – safeguarding the wealth in profitable investments and providing financial capital to the domestic economy.

Overall, however, this can be a problematic strategy. Firstly, the perceived possibility of 'two goods for the price of one' may be somewhat illusory in Timor-Leste, since the amount of financial capital the country can productively put to use remains limited by investment opportunities and institutions for the efficient allocation of capital. In recent years there have been substantial improvements in budget execution. For example, actual expenditure improved from 55.5% in 2007 to 88.9% in 2009<sup>21</sup>. However, a recent IMF assessment highlighted problems in relating budgeting to planning, and commented on problems of weak capacity in line ministries. It also noted the lack of scrutiny or evaluation of capital projects by the Ministry of Finance<sup>22</sup>.

Secondly, any sizeable component of the Petroleum Fund's financial portfolio that was invested domestically would be largely illiquid and highly volatile, thus negating the savings and stabilization role of the Fund. Thirdly, it would set up irresistible incentives to corrupt the decision process as to which investments the Fund should make, since those with contacts or ability to pressure civil servants and politicians would try to have cheap capital directed their way.

This is not to say that the wealth originating from oil cannot be reinvested into the non-oil domestic economy; it certainly should. However, that evaluation must begin with an assessment of the right investment and financing needs for particular projects in the country, rather than at the opposite end – of how much money oil has generated that needs to be invested. The best way to do this, therefore, is not through portfolio investment of the Fund's assets, but through transfers to the capital expenditure parts of the state budget, as already happens today. As noted above, however, there remain planning and capacity constraints on this process<sup>23</sup>.

#### 2.Creating special purpose funds

Some Natural Resource Funds allocate a portion of their spending to specified categories of expenditures. For example, Ecuador's oil revenue law sets aside a fixed percentage for infrastructure spending and to finance lines of credit for agriculture, industry and the micro-enterprise sector.

Such funds act as 'Development Funds', whose role is not only, or primarily to save and stabilize commodity revenue, but to promote sectors identified by policy-makers as being critical for the country's development priorities. For example, Timor-Leste's Government's 2008 mid-year budget revision included an embryonic version of such a model, with its proposal for a US\$ 240 million Economic Stabilization Fund to trade rice to the population, at subsidized prices.<sup>24</sup>

While the arguments for such special-purpose funds (or earmarked percentages of the overall fund's disbursements) are straightforward, development funds risk generating similar problems as the previous suggestions for domestic financial investments. If, on the one hand, earmarking or partitioning part of the fund for development spending is a way of exceeding the limit otherwise put on payouts from the Fund, then naturally the fund no longer insulates the domestic economy from oil revenue fluctuations (nor does it protect savings for future generations). If the additional

<sup>21</sup> See IMF Democratic Republic of Timor-Leste: Public Finance Management-Performance Report. IMF Country Report No. 10/341, IMF Washington D.C., November 2010, pp. 19-20.

<sup>22</sup> See IMF Democratic Republic of Timor-Leste: Public Finance Management-Performance Report. IMF Country Report No. 10/341, IMF, Washington D.C., November 2010.

<sup>23</sup> Capacity-building needs and possible strategies that can be used for addressing them are outlined in Chapter 4.

<sup>23</sup> Capacity volunting needs and possible strategies that can be used to addressing them are outlined in Chapter 4.

24 In relation to this, it should be noted that the Economic Stabilisation fund was ruled unconstitutional by the Timor-Leste Court of Appeal.

The Petroleum Fund and Human Development in Timor-Leste

funds can actually be spent, this larger funding stream must be directed to truly productive public goods<sup>25</sup>. The risk is that they will simply finance consumption in an unsustainable manner, or worse, be diverted for private purposes. Even if, on the other hand, the payouts from a separate development fund are constrained to respect the same overall spending limit, a multiplication of funds, accounts, and budget processes can only reduce transparency and therefore the protection against mismanagement or malfeasance.

A better alternative to a special-purpose development fund may be to strengthen the distinction between the consumption and the capital investment sides of the budget – in particular with a view to conceptually separating capital investments for the human development infrastructure – and allow disbursements from the Petroleum Fund under different rules to the two parts of the budget. Thus the Fund's financing of Government consumption could be strictly limited, while financing of the human development investment could allow larger transfers, subject, for instance, to an approved multi-year investment program. Examples of this are outlined in the draft summary of the SDP and more specifically in the 2011 Budget proposal for setting up funds to finance large-scale, multi-year capital investments in infrastructure and human development<sup>26</sup>. This requires a system for continuously monitoring that the appropriations do in fact effectively build the human development infrastructure.

#### 3.Direct distribution

An alternative method of transferring wealth to improve living conditions is by financing direct cash transfers to the population. The simplest method is to divide a specified portion of the withdrawals from the Fund into equal monthly cash payments to all adult citizens. Accounts can be set up for citizens, using local government district offices<sup>27</sup>. At monthly or quarterly intervals, the same sum can be transferred to every account. This way of making cash available to citizens as a 'citizens' wage', because of its transparency and simplicity, minimizes the risk of some people not getting their share.

Such a direct distribution system brings several benefits. Despite recent increases in infrastructure expenditure, many citizens of Timor-Leste, especially in rural areas, have not as yet seen many benefits from public spending. This is in part because the Government's public infrastructure investments for development remain limited by its capacity to implement its spending commitments. This capacity will improve, but in the short-term, until it does improve, cash payments could be an immediate and effective way to help the poorest of the poor. As a remedy to the food price crisis, it is superior to governmental trading of rice at subsidized pricing, which experience suggests is threatened by inefficiency and the diversion of rice for the black market. Moreover, a per capita distribution of cash increases monetization and boosts local demand in the districts, both factors that are likely to help local small business to develop to fill the needs that people will now be able to pay for. In this way, a modest, but regular and well-planned influx-of-cash can jumpstart economic development at the very bottom level. The Timor-Leste Government has already made cash transfers to veterans, petitioners, IDPs and vulnerable groups (single mothers, orphans, the elderly and the disabled), and in 2009 these payments accounted for 15.6 percent of State expenditure. Assessment of the impact of these transfers may indicate that they have had the desired effect of jumpstarting economic development in some areas. If this is the case, the Government could consider continuing and extending this strategy. In line with this, for example, the General State Budget for 2010 increased the current pension cash transfer to the elderly from US\$ 20 to US\$ 30, per month<sup>28</sup>.

These three strategies harness Fund revenues more directly in the service of poverty reduction than the conventional function of saving revenue and stabilizing spending allows. They can provide a basis for discussions on expenditures in the coming years, whether they are at or above ESI levels.

<sup>25</sup> Ways in which this can be done are outlined in Chapter 4, in relation to specific strategies suggested for developing the non-oil economy and the rural sector, in particular

<sup>26</sup> See Timor-Leste Government, 2010, Strategic Development Plan 2011-30 (Draft Summary Document), Dili. See Also, State Budget 2010 Budget Overview, Book I, Part 4, Expenditure. Part 6: Financing, Timor-Leste Government, Dili, November 2010.

<sup>27</sup> Ideally, this could best be achieved by use of postal services, but currently these have only an extremely limited coverage in Timor-Leste.

<sup>28</sup> Pension cash transfers were made to 187,587 elderly people in 2008-2009, according to data from the Ministry for Social Solidarity. See MSS Annual Reports for 2008, 2009.

In these discussions, however, it is important to recognize that natural resource funds are not particularly good vehicles for the implementation of development policies. They have typically been designed to ensure macro-economic stability by insulating public expenditure decisions from highly volatile fluctuations in commodity revenue streams. This model may be politically frustrating in the face of urgent development needs. If this is deemed to be the situation in Timor-Leste, then there are a number of options available for integrating the Fund more directly with human development and economic growth-promoting policy. Of these options, Timor-Leste may well want to avoid financial investments of the Fund's assets domestically. It may also wish to avoid setting up special 'development funds', but if a reliable multi-year public capital investment programme is prepared, such as the proposed Infrastructure fund, the Government could consider lifting the allowable transfers from the Fund to the budget. This should not be done without effective constraints to ensure that transfers are really directed towards public investments and not to increased consumption. The Fund can more immediately promote poverty reduction and local economic growth by financing equal per capita cash payments to adult citizens.

The Fund has been managed successfully thus far, and debates on expenditures have been conducted with a similar degree of commitment and efficiency. The extent to which this will continue depends however, upon the political situation in Timor-Leste. As outlined earlier, international experience indicates that succumbing or not to the 'resource curse' depends heavily on the character of the state and its institutional capacity, in addition to the implementation of good policies.

Several commentators<sup>29</sup> have suggested that Timor-Leste faces a risk of falling victim to the economic dimensions of the 'resource curse' because the state lacks both the institutional capacity and a social basis conducive to sustaining economic growth and diversification. Such approaches raise a number of issues, as outlined below. After presenting these issues, the TLNHDR goes on to assess their relevance. The issues are as follows:

#### 1. The Institutional Capacity of the State

It has been argued that administration lacks the required number of skilled people and regularised administrative procedures<sup>30</sup>. Efforts at capacity building have not been particularly successful, despite heavy donor commitment and support in this area. Additionally, in the recent period, allegations of corruption have begun to be made against government officials, possibly indicating the emergence of the 'rentier' problem. With the decline in donor influence due to the increasing importance of petroleum revenues, the Government may be tempted to manage its petroleum funds less efficiently, using these for political gain or short-term, quick fix solutions to meet immediate problems.

#### 2. The Social Character of the State

It is argued by some that the State in Timor-Leste lacks a social basis conducive to growth and peace, largely because it is dominated by a political elite, is still relatively centralized, and is not very inclusive<sup>31</sup>. Additionally, there is an ongoing risk from the political expression of regional differences. With a decline in the UN presence and in donor influence, domestic political and social groups will play a greater role in shaping state action. Regional differences emerging in 2006 could become more formally institutionalised, and become a basis for a regular emergence of political conflicts affecting the State's ability to function adequately. The government may tend to side with one ethnic group rather than another, reducing the potential for inclusive policy-making. This potentially could create the basis for a recurrence of conflict.

<sup>29</sup> See for example, Andrew Rosser, "Timor-Leste's Vulnerability to the Resource Curse: An Assessment", University of Adelaide, 2009. Also, S. Sahin, "Building the State in Timor-Leste", Asian Survey, no. 47, (2), 2007. The issue is also discussed in the various contributions in D. Shoesmith(ed), The Crisis in Timor-Leste: Understanding the Past Imagining the Future, Charles Darwin University Press, Darwin, 2007.

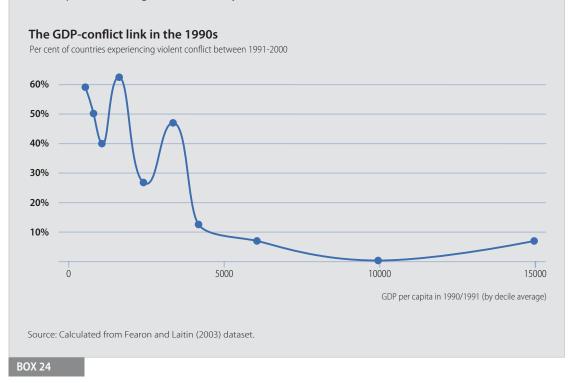
<sup>30</sup> This issue and the various perspectives on it are discussed in Andrew Rosser, "Timor-Leste's Vulnerability to the Resource Curse: An Assessment", University of Adelaide. 2009.

All See for example, Andrew Rosser, "Timor-Leste's Vulnerability to the Resource Curse: An Assessment", University of Adelaide, 2009, where these issues are

A state with these social characteristics and with weak institutional capacity may reduce the Government's ability to address the impact of "Dutch disease", managing oil and gas revenues in the interests of growth, human development and poverty reduction, and in managing distributional tensions and grievances. Under these conditions, serious conflicts may reappear, resulting in the country entering what commentators have termed the 'conflict trap'.

#### Human Development and the 'Conflict Trap'

Escaping the 'conflict trap' is one of the most critical challenges facing the least developed nations today. Countries with low human development experience more civil conflict than those with higher levels of human development, but conflict itself retards human development thus, for some countries, generating a cycle of violence and developmental failure. The association between low levels of national income and the incidence of violent conflict is probably one of the most firmly established findings of the economic literature on conflict. The figure below shows the strength of this link over the decade of the 1990s. More than half the countries with a GDP per capita of US\$ 2,000 or less in 1990/91 experienced some form of civil war between then and the year 2000; less than one fifth of countries with GDP per capita over this mark experienced conflict. Moreover, conflict in poorer countries has typically been longer lasting and more intense than in countries with higher levels of GDP; on average, each country below the US\$ 2,000 mark in 1991 spent a third of the subsequent ten years in conflict; countries above this mark, spent on average less than one year of the decade in conflict.



#### Timor-Leste and the Resource Curse

What relevance do these arguments about the nature of the State and the 'resource curse' have for Timor-Leste? How likely is it to succumb to the 'conflict trap'? There is growing confidence within the country that there has been substantial progress in addressing these issues which impacted on stability in 2006 and a repetition of the events of that year currently seems unlikely. How valid is this expectation?

#### From a positive perspective:

- 1. With regard to financial management, as outlined earlier, there is clear evidence that the Petroleum Fund has been managed well thus far, with efficiency, transparency, and reasonable functioning of checks and balances. Discussions on budgetary issues and on expenditures in relation to ESI levels generally have been conducted openly and informed decisions reached.
- 2. In addition, since the 2006 crisis, the Government, together with the donors and development agencies has devised strategies for addressing the conditions that gave rise to the issues that contributed to the onset of the crisis. Improvements have been made to security, measures have been introduced to reduce youth employment, service delivery has been improved, safety net provisions have been devised for petitioners, displaced families and vulnerable households, and food security prioritized.
- 3. Furthermore, there is little evidence that the east-west division is becoming institutionalized politically. Two years after the near fatal shooting of the President, security has improved markedly. Armed groups are no longer at large. The atmosphere on the streets of Dili is no longer tense.
- 4. Tension between the PNTL and F-FDTL has been reduced markedly since 2006.
- 5. The government and the opposition have focused on the need to maintain political stability, and to channel political differences through established democratic institutions and processes.

However, an examination of Timor-Leste's history since 1999, particularly those factors which contributed to the events of 2006, and an examination of the literature dealing with conflict and development, demonstrates that there are still some areas that will require further effort.

- 1. Criticisms have been made, both in Parliament and by NGOs and civil society organizations, of the ways in which decisions have been taken by the Government on expenditure issues. For example, both the Opposition in Parliament and NGOs have stated that there was only limited discussion on the Government's 2009 decision to transfer funding from the construction of oil-fired power stations to finance a series of mini infrastructure projects presented in the 'Referendum Package'. Similarly, as noted above, whilst the September 2009 Budget and Financial Management Law empowers the Minister of Finance to take out external loans in the name of the Government, important issues such as conditions and terms of repayment are currently not subject to parliamentary approval, as is the case in some other countries. The latter is an important issue, since moving the country towards borrowing money from foreign governments and institutions is a departure from past practice and has implications for the country's future development. Under Article 20 of the Petroleum Fund Law, the Fund cannot be used as collateral for borrowing. However, once money has been transferred from the Fund to the Treasury, it can be used for any purpose included in the Government budget. Since approximately 98 percent of Timor-Leste's income comes from petroleum revenues, and since debt repayments have first claim on the budget, it is likely that money transferred from the Petroleum Fund will then be used to repay debts. The Government revised the existing Petroleum Law in 2010, and the amendments to the Law have yet to be approved by Parliament. The aim of the amendments is to further diversify the Fund portfolio. In such discussions, it is crucial that stakeholders be fully involved, and that the long-term interests of the country remain uppermost in any reformulation. This is similarly the case with current moves to establish a National Petroleum Company, participating in joint ventures exploring and exploiting petroleum resources in Timor-Leste<sup>32</sup>.
- 2. Issues of transparency have come to the fore recently, as a result of the emergence of allegations of corruption within Government. Timor-Leste currently is ranked 127 on Transparency International's



<sup>32</sup> Once established, the National Company will be able to participate if commercial quantities are discovered by companies currently drilling. The Company cannot be involved in the existing Bayu-Undan and Kitan fields, nor in developing the Sunrise field, since these all predate the formation of the National Company. The State Secretariat for Natural Resources has already organised a workshop for civil society organisations and government officials to assess the relevance of national oil company experiences in countries such as Mexico, Norway and Indonesia.

The Petroleum Fund and Human Development in Timor-Leste

Corruption Perception Index, an improvement on its 146 rank in 2009, but somewhat worse than its 2006 rank of 111. Regionally, at 24, it is ranked above countries such as Cambodia and Laos at 30, and Myanmar, ranked bottom at 33, but below Indonesia, at 2033. Corruption allegations are being addressed through the Anti-Corruption Commission which in 2011 will begin to investigate cases brought before it<sup>34</sup>. Tackling corruption requires a clear specification, not only of the tasks of the Anti-Corruption Commission, but of other bodies involved in addressing corruption<sup>35</sup>. It will also require extensive capacity-building within the Commission itself. Recently the Government has created a Civil Service Commission to set standards and impose controls over civil service actions, particularly with regard to hiring, promotion and the misuse of power. An Audit Court is yet to be established, to enhance audit procedures. While there is a strong intention by political leaders to address allegations of corruption, dealing with these requires that tasks be clearly delineated and institutions become effective in dealing with this problem area. Procurement is also of particular importance as an area where increased transparency, enhanced competition and greater adherence to regulations are essential. Recently, the Government has begun to address this via the establishment of a Procurement Commission<sup>36</sup>.

As attested by the experience of other middle and low-income countries, the spread of corruption can have adverse effects on the perceived legitimacy of governments. In a situation in which there are marked disparities in living standards, a high incidence of poverty, and high youth unemployment rates, the perception of corruption often acts as a focal point around which protests can coalesce. Consequently, for Timor-Leste, it is crucial that the Government continues to address corruption in a systematic and meaningful manner.

- 3. One of the main factors in the events of 2006 was the open hostility within and between the security forces. Since then there have been major developments within the security sector. PNTL and F-FDTL are continuing their implementation of measures to address the weaknesses evident in 2006 - relating, amongst others, to disciplinary issues and to issues of command and control. Prevention of any re-emergence of divisions will require both a continuing commitment from external actors not to politicize the security sector and a continuing commitment to impartiality from police and military. Although legislative efforts have been made to clarify the roles and responsibilities of the PNTL and F-FDTL, further training and clarity are required in the implementation of this legislation, in order to prevent misunderstandings which could be politically manipulated. Coherence of the security forces depends heavily on a small number of respected individuals, although efforts are being made to institutionalize relationships through measures such as new promotions and training regimes. Civilian oversight mechanisms also require further strengthening.
- 4. The large youth population is a potential future human resource which can contribute to the country's development. However, if youth are dissatisfied because of lack of access to education, lack of job opportunities or feelings of disenfranchisement, then they could be a potential source of political instability. Youth gang violence, such a marked feature of 2006, does continue, although at much lower levels. These violent incidents are often driven by highly localized dynamics such as control over neighborhood and village economic resources (access to jobs and markets for example), political grievances inherited from older generations, disputes over issues such as land ownership and control, and perceived lack of formal justice for crimes, leading to cycles of violence as youth seek to mete out their own justice in the streets. Given the associational level of gangs, these conflicts can spiral beyond their area of origin. Past events in Timor-Leste show that political uncertainty and dissatisfaction can be amplified by youth gangs.

<sup>33</sup> Timor-Leste did not report prior to 2006. There are four sources of data for Timor-Leste's ranking on the Index in 2010: The Asian Development Bank's 2008 Country Performance Rating, the World Bank's 2008 Country Policy and Institutional Assessment, and the World Economic Forum's Global Competitiveness Reports for 2009 and 2010.

<sup>34</sup> In early 2010, a Commissioner was appointed, and during the year a Deputy and senior staff have been recruited.

<sup>35</sup> Until his recent resignation, Vice Prime Minister Mario Carrascalao was tasked with promoting good governance and addressing corruption, but the relations between his remit and the work of the Anti-Corruption Commission were never fully clarified.

36 The Procurement Commission was established by law in January, 2010. A further consideration of the legal framework for recruitment is being undertaken

subsequently, focusing on areas such as rules for supplier participation, conditions of contract, dispute resolution and codes of conduct.

5. The capacities of, and the policies around, the formal justice sector can also have an impact on stability. Despite documentation, by the Comissao de Acolhimento, Verdade e Reconciliacao (CAVR), of atrocities and abuses committed, it remains the case that most perpetrators have not been brought to justice, or have had their sentences commuted or pardoned altogether. The UN Secretary General has repeatedly expressed concern that prolonged delay in delivering justice may further adversely affect public confidence in the rule of law<sup>37</sup>.

#### **Reflections on Justice and Accountability**

"Justice, peace and democracy are not mutually exclusive objectives, but rather mutually reinforcing imperatives. Our experience in the past decade has demonstrated clearly that the consolidation of peace in the immediate post-conflict period, as well as the maintenance of peace in the long-term, cannot be achieved unless the population is confident that redress for grievances can be obtained through legitimate structures for the peaceful settlement of disputes and the fair administration of justice."

Former UN Secretary-General, Kofi-Annan, in "The Rule of Law and Transitional Justice in Conflict and Post-Conflict Societies", 2004

"As painful and inconvenient as justice may be, we have seen that the alternative – allowing accountability to fall by the wayside- is worse."

Archbishop Desmond Tutu cited in The World Today, January 2010 (66/1), November 2009, p. 17, International Institute for Strategic Studies, London

"Ten years onwards and we stand firm on our demand for justice.... The feeling of distrust will continue to linger since the criminals are not being brought to justice but given amnesty. Hence this will only give the impression that crimes can go unpunished."

Statement published by the late Manuel Carrascalao and his family on the 10 year commemoration of the violent attack by pro-Indonesian militias on his home, during which his son and at least 11 others were killed.

BOX 25

- 6. Resentment can also be fuelled by perceptions that the country's fundamental problems of poverty and unemployment are not being forcefully addressed. As outlined earlier in this report, poverty levels remain high, and youth unemployment is severe. This situation, combined with perceived increasing levels of inequality between Dili and those living in the poorer urban and in the rural areas of the country, creates an ongoing basis for resentment and potential protest, which can be harnessed by political parties and local political groups.
- 7. One issue which will be important in the coming years, in addressing potential areas of resentment and conflict, is the extent to which the political system can become more inclusive, enabling participation in decision-making to be extended from Dili to the districts. In 2009, laws were drafted for Parliament on the election of community leaders (*suco* chiefs and councils) and on the organization of local government, and on territorial organization. The first municipal elections were scheduled to be held in 2010, leading to the establishment of four municipalities. These have now been postponed to 2013. The process of decentralization, once it occurs, will be an important step forward in the promotion of increased political participation in Timor-Leste. If successful, it will ensure that municipal representatives play a part in both local and national decision-making, and that service delivery can be tailored to local needs and overseen by locally based officials.

However, as has been stressed repeatedly in the documentation on decentralization, a key issue is that of capacity constraints; local governments will be new institutions and local officials will need training to manage them; training will also be needed for those implementing service delivery locally; central ministries will need to develop capacities to monitor municipal performance and

<sup>37</sup> See Reports of the Secretary-General on the United Nations Integrated Mission in Timor-Leste: S/2011/32, S/2010/522, S/2010/85, and S/2009/504.

track municipal activities. As Government documentation stresses repeatedly, this will require substantial resources and supplementary assistance from development partners and agencies. This raises another problem area – that of capacity building.

8. The ability of the Government to deliver on its policies depends to a large extent on the capacities of its civil servants. As many Timorese have noted, despite over 10 years of a UN Mission and the presence of donors providing substantial funding for capacity-building via training, the capacity of Timorese to manage and administer has not been enhanced to the extent that was envisaged at the outset<sup>38</sup>. A number of Timorese have taken advantage of scholarships to study overseas. In some areas this has been relatively successful – notably in the health sector and in particular the medical training provided in Cuban institutes. Overall, however, capacity-building has often been expensive and has benefited only a small number of people. In-country training in the public sector often has involved international consultants and advisers being placed in ministries and government agencies for periods ranging from several weeks to several years, to advise and assist key personnel, providing on-the-job training. In this 'one-to-one' approach, however, the line between advice and implementation has often become blurred, with advisers spending much of their time carrying out line functions. Additionally, the quality of advisers has been variable; only some have had the expertise of imparting skills to their counterparts. An alternative approach pursued in recent years by the Government, of 'one-to-many' training appears to have resulted in the transmission but not the successful retention and use of skills. Consequently, the Government may wish to devote greater attention to the work environment in the public sector, to try and ensure that staff are encouraged to practice and develop their skills via the provision of job security, merit-based recruitment and performance based promotion<sup>39</sup>. The problems of capacity-building in the public sector are mirrored in the private sector and in civil society, where the focus also has been on capacity development rather than on retention and utilization. In the private sector, however, the situation is even more difficult, given the lack of job opportunities to use the skills acquired through training.

# **Promoting Pro-Poor Economic Growth**

Based on the successful management of its petroleum revenues thus far, the Government faces the ongoing challenge of how best to use the annual wealth provided by these revenues to promote pro-poor economic growth and human development. Meeting this challenge requires the devising of appropriate strategies for developing the non-oil economy. Only by doing this can a sustainable basis be created for meeting the two most pressing concerns confronting the country –reducing its high levels of poverty and providing employment for its citizens. In the decisions that are taken on expenditure at or above ESI levels, on the desirability of taking out external loans, and on which areas of expenditure are to be prioritized, the need to develop the non-oil sector in ways that promote pro-poor growth and enhance human development remains paramount.

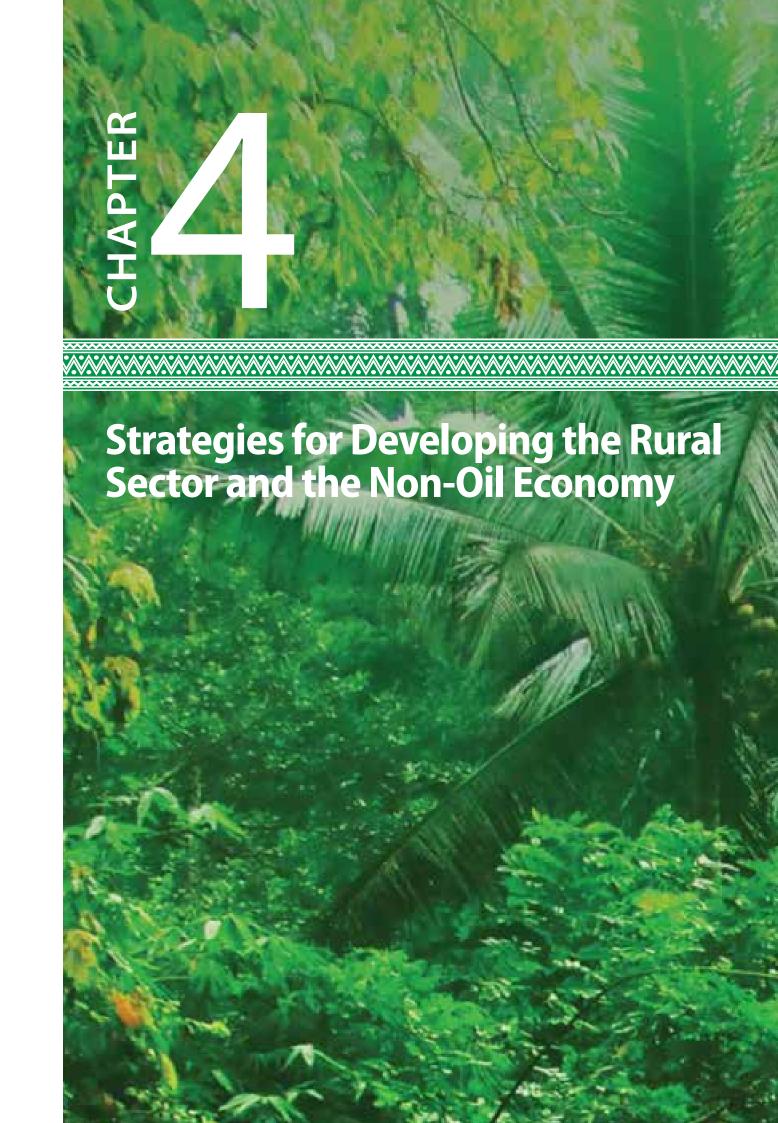
The Government has made important progress to stabilize and to develop the country. It is being more inclusive. Its institutions are not divided along ethnic or regional lines, and in recent years it has succeeded in reducing the potential for divisive conflict. Timor-Leste has not succumbed to the resource curse – as many commentators predicted. However, the potential for conflict remains, and can be fuelled by resentment generated, in particular, by high levels of poverty and unemployment. These sources of resentment can best be addressed by a meaningful development of the non-oil economy – by reducing poverty in the agricultural sector, by improving rural livelihoods and by

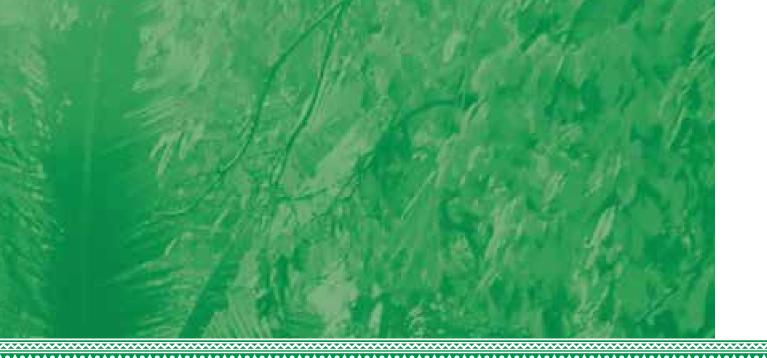
<sup>38</sup> The National Development Plan of 2002 presented a strategy for capacity building in the public sector, -the Capacity Development for Governance and Public Sector Management Programme- developed by the National Planning and Development Agency, and endorsed by the country's Transitional Government Cabinet in 2001. The Programme outlined 75 areas for development, implementation of which was regarded as crucial for institutional and human resource development. For each area, the Programme provided strategies for strengthening capacities in policy development, co-ordination and the core skills required for management. The extent to which capacity has been built in the public sector is outlined in chapter four.

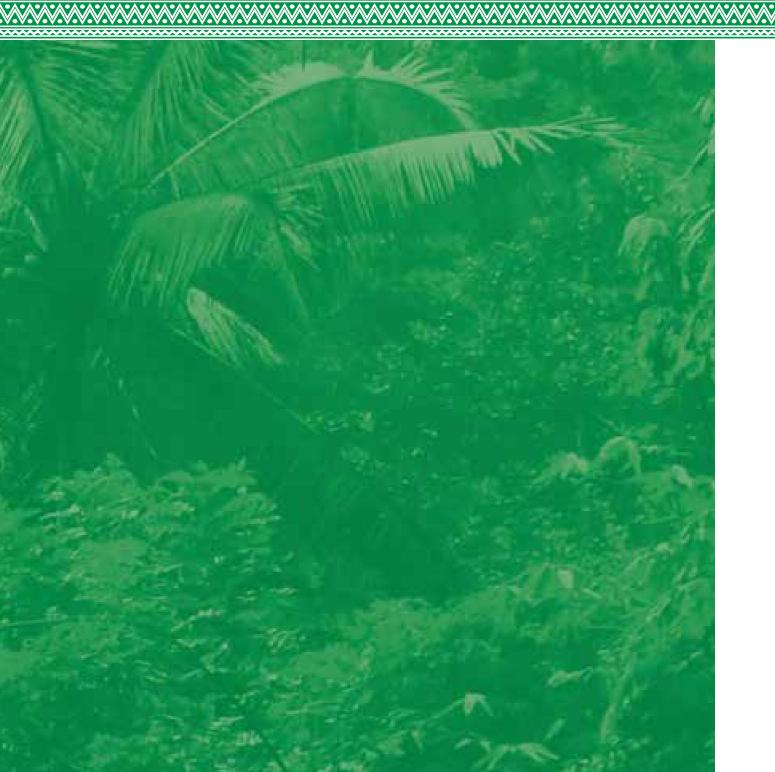
<sup>39</sup> Suggestions for improving capacity-building and training in these areas are presented in Chapter 4 of the TLNHDR.

generating employment in the non-agricultural sectors. Focusing on these sectors will also enable the development of a sustainable basis for the country's future – creating a non-oil economy, whose growth in future years can combine with the wealth generated from the petroleum economy to create substantial improvements in living standards. The following chapter turns to the fundamental issue of appropriate strategies and policy options to achieve this.









# CHAPTER CHAPTER

# Strategies for Developing the Rural Sector and the Non-Oil Economy

The agricultural sector provides livelihoods for around 70 percent of the population of Timor-Leste¹. Most of the people survive largely by subsistence farming. Their incomes are supplemented minimally by wages from urban areas and from the very small number of enterprises established in rural areas, as well as from Government cash transfers. Given existing levels of poverty and the relatively low level of human development, it is vital that the non-oil economy and particularly the agricultural sector be developed as a matter of urgency.

Strategies to develop the non-oil economy should focus on specific areas: improving agricultural productivity; diversifying cultivation; facilitating rural markets; developing agricultural processing; enabling marketing for crops with export potential; facilitating the growth of the non-agricultural economy, with the government and donors addressing current constraints and supporting appropriate and sustainable investments in specific areas.

#### The Rural Sector

Timor-Leste's rural population is divided almost equally between men and women, with a substantial percentage (54 percent) below the age of 20. As noted earlier, poverty incidence is higher in rural than in urban areas: according to the 2007 TLSLS, about 52 percent of the rural population then lived in poverty, compared with poverty incidence of 45 percent in urban areas. Given the likely reduction in overall poverty levels noted earlier in the TLNHDR<sup>2</sup>, levels of rural poverty probably have been reduced since 2007. However, substantiating evidence for this conclusion awaits the full results of the 2010 Census and the forthcoming household survey.

Cultivation is overwhelmingly devoted to subsistence crops for household consumption. The most prevalent crop is maize, grown by 80 percent of families, with very little of the crop being traded. Rice is cultivated in a number of areas, again largely for home consumption and only 25 percent of output is traded. Average yields for both crops are low<sup>3</sup>, and most families face serious food shortages each year<sup>4</sup>. Additional food crops such as cassava, potatoes, and peanuts are cultivated

2 As discussed in the Section on Poverty in chapter two of the TLHDR

<sup>1</sup> The recent 2010 Census gives a figure of 70.4 percent for the rural population.

<sup>3</sup> Average yield for maize is 1.16 tons per hectare, and for rice 1.61 tons per hectare. (Data from MAF *Directorate of Agribusiness*: profiles for maize and rice, 2009). The average yield for irrigated rice is three tons per hectare, based on estimates made by the Ministry of Agriculture at the end of 2009.

<sup>4</sup> The World Food Programme concluded in April 2010 that approximately one-third of Timor-Leste's population regularly experience food shortages, notably towards the end of the two lean seasons between harvests, October-November and February to March-April 1st, 2010 (World Food Programme News, April 1st, 2010). Based on the information in the 2007 TLSLS, on average, rural households then suffered 3.8 months without enough rice and maize, compared with two months for urban households. See TLSLS, 2007. A 2006 World Food Programme (WFP) Comprehensive Food Security and Vulnerability Analysis also concluded that about one third of the population regularly experienced food shortages.

in small amounts, with smaller areas being devoted to crops such as *mung* beans, watercress, coconut, candlenut (walnut), fruits and several spices. Subsistence conditions, a reliance on a limited number of crops, and regular food shortages result in poor nutrition, particularly for children. In 2007, 49 percent of children under-five were underweight. A UNICEF survey in 2008, found that 46 percent of children were underweight and 49 percent of children chronically malnourished<sup>5</sup>. The Timor-Leste 2010 Demographic and Health Survey similarly concluded that 45 percent of children are underweight, 33 percent show evidence of stunting, and 19 percent of wasting. The prevalence of underweight children is higher in rural areas<sup>6</sup>.

For most households, opportunities for employment outside the subsistence sector are limited. Evidence from the TLSLS, for example, shows that very few Timorese move out of their *sucos* to work in urban areas – only 4.3 percent left for more than one month, and population mobility between *sucos* was less than one percent. Itimited opportunities for off-farm employment exist in the countryside, in specific areas such as coffee processing. Coastal villages practice basic in-shore fishing, but mostly for local consumption.

Access to transport and public facilities is more limited in rural than in urban areas. It takes, on average, one hour to reach the nearest clinic and bus stop, and 30 minutes to reach the nearest primary school<sup>8</sup>. The quality of roads is poor, due largely to lack of regular maintenance. Many roads are extremely difficult to travel during the wet season, and many bridges are in a poor state of repair. There are post offices in Dili and Baucau, but no postal services elsewhere. Investment in rural infrastructure remains critical for the development of the rural sector, as recognised in government initiatives described later in this chapter<sup>9</sup>. Access to finance remains a problem for the rural sector. This is compensated to a limited extent by the presence of a number of successful micro-enterprise groups, run mostly by women<sup>10</sup>, and is being addressed by Government banking initiatives, as described later in this chapter.

For most households in Timor-Leste, farming is extremely precarious, with difficult decisions to be made as to how to use the limited resources available. Farming is a risky occupation, with dire consequences if the wrong decisions are taken. Agricultural development requires diversification and changes in current cropping patterns, which farmers are understandably reluctant to take, given the risks involved. They require support and incentives to move into new areas. In addition, most of the population has very limited assets, constraining the possibility of making such changes. Consequently, strategies for developing the agricultural sector must aim to assist farmers in improving their asset base, both directly and via the creation and development of enabling frameworks. How can this be achieved? How can the Government, donors, agencies and NGOs assist in building up farmers' assets and promoting strategies for the growth of the rural sector? How can increases in agricultural productivity, crop diversification and processing and marketing assistance for agricultural commodities be provided? How can risks from natural and other disasters be managed, and safety nets secured in adverse conditions? How can levels of entrepreneurship and enterprise skills be enhanced? We examine the constraints that the people and the Government face in these areas and suggest ways in which these may be overcome.

<sup>5</sup> Cited in Health Alliance International, 2008, Maternal and Child Health in Timor-Leste, Dili and Washington, D.C.

<sup>6</sup> Timor-Leste Demographic and Health Survey, 2009-10, 2010, p. 150.

<sup>7</sup> Further post-2007 updated information on population mobility is not available. However, this should be known once the full results of the 2010 Census are published, in 2011.

It should be noted, however, that these travel times are relatively good when compared with other low-income small countries with similar mountainous terrain. The data is taken from the 2007 TLSLS.

<sup>9</sup> See section on Infrastructure, below.

<sup>10</sup> Examples of these micro-enterprises were cited in chapter two, in the section on gender inequalities in work and employment.

# **Addressing Constraints of Rural Development**

#### Infrastructure

Roads are vital for the rural economy. As much as 90 percent of passenger traffic and 70 percent of freight movement is by road. However, road connectivity is poor and the quality of the roads is also sub-standard.

Post-independence, the country was faced with the challenge of damaged road surfaces. Road conditions deteriorated further in subsequent years due to lack of maintenance. Emergency efforts focused on repairing only the most severely damaged sections of the road network. Adverse conditions were compounded by rains, unstable geo-technical conditions in mountainous areas leading to frequent landslides, and by the deforestation of the hillsides<sup>11</sup>. A detailed study carried out some years ago (2005) showed that 44 percent of the paved roads and 89 percent of the unpaved roads were in poor condition. <sup>12</sup> Until recently, repairs have been localised and conditions little improved. Communities' access to school and health facilities, as well as their ability to trade has been severely limited by lack of accessibility to vehicle-passable roads.

In recent years the Government has prioritized expenditure on road improvements, given the additional importance of road repair and maintenance in providing short-term employment in rural areas. The Government declared 2009 the Year of Infrastructure Development, with the focus of expenditure on roads, bridges and improvements in electricity supply. The Government has been assisted by donors in its plans for improving road infrastructure, notably by the ADB, whose country partnership strategy (2009-2013) focuses on transport infrastructure development. Given the funding available for road improvement in the coming years and the concerns of local communities to be involved in road repair and maintenance, it is likely that conditions will begin to improve. Already, in 2009, 81.3 kilometres of new rural roads had been completed.<sup>13</sup>

Improving the road network alone, however, will not solve connectivity and accessibility unless road transport services also are improved. Almost all passenger and freight services are privately owned. The Government has passed laws and approved road codes to provide safer and cleaner transport, but these regulations are seldom enforced. For example, fare levels set by the Government are largely ignored. Transporters generally set high fares for travel in rural areas, and the quality of the service provided is poor. It is hoped that an improved network and enforcement of regulations will result in more competitive fares and improved transport services in rural areas. Improvements in this area are critical for enabling the development of the rural economy.

Access to safe water and adequate supply of water are other services that are crucial for both the cultivation and consumption needs of the people. Water supply remains problematic. Currently, there are 400 water systems in the country's 64 sub-districts, but many of these are not functioning due to lack of repair and maintenance. Spare parts often are not readily available. Insufficient training has been provided for the maintenance of the new systems built since independence. At present, this problem is being addressed by the provision of training courses for community members. Despite heavy rainfall for several months of the year, little rainwater is captured, collected and stored, and even less of this rainwater is treated by simple and easily constructed purification systems. Access to safe water currently is available for 66 percent of the population. Many villagers have to walk some distance to obtain water. For example, the 2007 TLSLS found that on average women in the countryside spent 4.3 hours per week fetching water, not all of which was safe for consumption.

<sup>11</sup> Ministry of Infrastructure/ Asian Development Bank, Preparing the Road Network Development Plan, RDTL 2009.

<sup>12</sup> Technical Assistance to East Timor for Transport Sector Improvement. ADB Manila, 2005

<sup>13</sup> Additionally, in 2009 maintenance was undertaken on 52.38 km of national roads and 147 km of district roads, according to data provided recently by the Ministry of Infrastructure.

<sup>14</sup> A water system refers to a system installed to take water from a particular source.

<sup>15</sup> See Timor-Leste MDG Booklet, Timor-Leste Government, Dili, 2010, p. 22. The situation has improved since 2007, when TLSLS data gave a figure of 63.1% with access to a safe water source. The household survey of 2001 gave a figure of 48 percent.

# **Learning to Design Community Water Systems**

Julmira da Silva and Ana Manuela da Cruz are at a training course in basic plumbing at the National Centre for Employment and Vocational Training. It is a new course and both of them, public servants from Timor-Leste's National Department for Water and Sanitation, are part of the first intake. Both women are enthusiastic about building a water pump and piping system, which they have helped to design. Practical skills are exactly what they want. "This training is giving me more confidence to do my job which is helping my community to access and maintain clean water facilities," says Julmira.

Over a period of four months, the students on the course learn about basic plumbing and pick up sufficient skills to help develop and maintain a community water and sanitation system. Armed with these basic skills, the students then work in the villages, transferring their knowledge, particularly to village women, since recent experience suggests that sustainability is more likely to be achieved with increased women's participation in village water management.

Source: Taken from AusAID, Focus, February - May 2009.

BOX 26

Access to improved sanitation facilities increased from 10 percent in 2001 to 35 percent in rural areas in 2007 (compared with 79 percent access for the urban population). Data from the Government for 2009 show a further improvement, to 49 percent for rural areas. The MDG for Timor-Leste's rural areas has been set at 55 percent for 2015. As noted above, the two most significant causes of infant and child deaths in Timor-Leste are respiratory infections and diarrhoea, both of which are linked directly to lack of improved sanitation and access to safe water.

#### **Energy Availability**

Since independence, Timor-Leste has experienced severe problems in electricity supply, and this has been a major handicap for rural development. Outdated and archaic equipment has been poorly maintained and demand has been constantly increasing - particularly in Dili, where meters are bypassed by many consumers and costs cannot be recovered. Electricity is diesel generated, imported and expensive. Approximately 22 percent of the rural population has access to electricity, compared with 82 percent of the urban population. Rural electricity provision is particularly expensive, since customers are spread over a wide area and have low consumption patterns. Currently, only about 45,000 households have access to electricity, with 26,000 of these in Dili and 7,000 in sub district towns. Overall, outside Dili and Baucau, less than 10 percent of households are connected to local grids, providing power for about six hours per night. Hence most rural households rely for lighting on kerosene, candles, plant oils and batteries. Due to transport constraints, the price of kerosene is generally higher in rural than in urban areas. In recent years, use of firewood has been severely restricted, in an attempt to control high levels of deforestation 17.

Timor-Leste's energy problems can be addressed in a number of ways, which can be combined in an integrated energy policy. The country's large offshore oil and gas reserves eventually should enable it to substitute imported fuel with its own fuels landed at cost. However, the practical realization of this is some years away and in the meantime the country could turn to other sources – supplementing diesel-generated power with sources such as solar power, hydropower, biogas, agricultural fuels and waste, oil and gas seeps and wind power.



<sup>16</sup> See SAS, Government of Timor-Leste, 2010.

<sup>17</sup> Information and data on electricity provision in this section is taken from A Strategic Framework for Rural Development in Timor-Leste, 2010-2020 (First Draft), Timor-Leste Government. October 2009, pp.15-16.

In principle, biogas could be used more extensively for cooking and lighting in rural households, although in many areas the average number of cattle per household is too low to provide animal residues for sufficient biogas production, for basic cooking and lighting<sup>18</sup>, even allowing for the use of additional solid organic material. Capital costs would also be fairly high, since equipment and components – at least initially – would have to be imported. On the positive side, however, the domestic electricity needs of most rural households are extremely small (approximately 25 kilowatt hours (kWh) per month), and in areas such as Suai, Maubara, Lospalos, Viqueque. Bobonaro and Cailaco adequate cattle provision exists. Consequently, increased use of biogas for households could be piloted in areas with availability of cattle. Larger-scale community facilities could also be set up, providing cooking gas for schools and health centres. However, pursuing such options requires the ongoing development of research programmes to address biogas possibilities, and incentives need to be given to households to extend their use of biogas<sup>19</sup>.

Timor-Leste is endowed with several potential hydroelectric power sites, in the eastern and more mountainous areas, notably at Lake Ira-Lalaro, in the far east of the island, with a substantial capacity of 13-28 megawatts and 189 gigawatt hours (GWh) per year<sup>20</sup>. One small plant has already been constructed and another four are under consideration.

Solar electric systems are already in use, ranging from stationary solar modules to household systems, community centre installations, health centre supply and solar powered pumps. Solar electricity is capable of providing basic electrical services – mostly lighting – to approximately one third of rural households. Solar thermal energy systems have been installed in a number of localities, but deployment is still at an infant stage. Thus far, wind energy resources have not been tapped21. Experiments with wind power on neighbouring Indonesian islands indicate that small wind battery chargers could be used at higher altitudes, but initial set up costs appear to be high.

Additional sources of energy can be provided from home-grown, locally available plant oils, coconut oils and castor beans. Oils from such sources can be fed into diesel engines. It may also be possible to harvest gas from natural gas seeps in a number of rural areas, as is being explored currently in Uatalari, on the south coast, where a pilot project has demonstrated the possibility of using gas seeping from the ground to generate electricity<sup>22</sup>.

Given these available energy sources, it is possible for Timor-Leste to develop an integrated energy policy with the following components:

- Piloting the increased use of biogas in districts that already have the resources for this;
- Developing hydroelectric power sites;
- Increasing use of solar power units for basic rural household needs;
- Using donor, NGO and local expertise to explore the potential of wind energy and
- Use of locally produced oils.

Such sources are suitable for meeting basic household needs in rural areas, and for generating the power required for local facilities in some areas. To meet the needs beyond basic heating and lighting requirements and to provide an ongoing, 24 hour supply for Dili and Baucau there could be a continuing reliance on imported diesel oil until the gas and oil resources from the Sunrise field come on stream, hopefully within five years - provided of course that agreement to do so can be reached between the Timor-Leste Government and the petroleum companies leasing the Sunrise field.

<sup>18</sup> On the issue of biogas and its possibilities in Timor-Leste, see Detlef Loy and Lino Correia, Rural Energy Policy for Timor-Leste, UNDP, Dili, 2008.

<sup>19</sup> In the Government's current Biogas Action Program, six units have thus far been installed, covering 219 families.
20 Gigawatt Hour (GWh): a unit of electricity equal to one billion watt hours (see Abbreviations and Annex Three: Definitions of Terms Used in the Report).

<sup>21</sup> With the exception of a small wind battery charger set up by the Australian NGO, Alternative Technology Organization, in Lequidoe.

<sup>22</sup> In Uatalari, five of 30 gas seeps have been identified as having potential. Distribution lines have been constructed, and it is envisaged that capacity generated will meet the total demand of the village of Uatalari, and possibly that of neighbouring Uatocarbau, totalling 450kWh. The project is financed jointly by the Government and the World Bank

## **Bio-Briquettes: Supporting the Environment and Generating Employment**

Bio-briquettes, a cheap and environmentally friendly fuel, could have the twin benefit of reducing unemployment and deforestation in Timor-Leste.

The rate of unemployment amongst young workers in Dili is about 40 percent. An estimated 17.4 percent of forests were destroyed between 1990 and 2005, and 31 percent of forests are seriously degraded. Trees continue to be felled for fuel, since in many areas there is no affordable alternative.

According to young workers producing briquettes in Dili, three people can make about 750 briquettes a day, which they then sell for two cents each, with a potential for each worker to make four to five dollars per day.

Making the briquettes involves a solution of water, shredded paper, sawdust and coffee husk mixed together, and then shaped with wooden presses before being laid out to dry. The paper comes from local offices, the sawdust from a waste management company, and the coffee husks from Timor-Leste's Co-operativa Café Timor, which has donated space in its grounds for the briquette groups to use as a training centre. The project is supported by Haburas, an civil society group that works on environmental issues.

#### **BOX 27**

Pursuing such an integrated policy appeared to be the Government's main objective until mid-2008, when it announced that, alongside its investments in alternative energy<sup>23</sup>, it also proposed to fund the construction of three oil-based power plants, enabling the provision of continuous electricity to all districts and sub districts within two years. This subsequently was reduced to two power stations and one generating station<sup>24</sup>. This solution, justified by the Government as essential to meet development needs –and particularly the development of the rural sector, has been questioned by some Non-Governmental Organisations (NGOs) and civil society organizations, who have raised a number of questions regarding their viability and suitability (see BOX 28).

In mid-2009, the Government stated that the 2009 budget allocation for the power plants was being reduced, to release money for its 'Referendum Package', funding small scale infrastructure projects in the districts. A few months later, however, it stated that the capacity of the two stations would be increased, and the length of the power lines extended. The President laid the foundation stone for the first power plant, in January 2010. The Government has made a clear decision to address energy needs primarily by focusing on an immediate solution rather than adopting an evolving strategy of supplementing existing generation with the development of alternative energy sources, prior to having access to the use of natural gas supplies from the Sunrise Petroleum field – a solution which could meet its energy needs within a five to 10 year period. The Government has done so because of its strong conviction that the provision of 24 hours of electricity is vital for rural development, in addition to it being a right for every citizen<sup>25</sup>. Given the importance of this development for Timor-Leste, the Government needs to be certain that environmental and social impact assessments have addressed adequately the environmental problems raised by NGOs and civil society organizations. It is vital that the focus on the power plants does not result in any diminution of resources for the development of alternative energy in the areas outlined above, and that the power plants project exists within an overall integrated energy policy.



<sup>23</sup> Alongside its primary focus on constructing the heavy oil-based power plants, the Government continues to invest in alternative energy, notably in biogas programs, micro-hydropower facilities, and solar units. For example, in the Biogas Action Program, six units have thus far been installed, covering 219 families. In the Solar Energy Action Program, solar units have been installed, providing 40-50 watts for 5 hours nightly, for 2,143 families.

<sup>24</sup> One (90 megawatt) power station is to be installed in Manatuto, on the north coast, and the other in Manufahi (60 megawatt) on the south coast. Together with a 30 megawatt generating station in Hera (east of Dili), this will provide Timor-Leste with 180 megawatts of power. The system will also require the construction of a major transmission and distribution network, across mountainous terrain.

<sup>25</sup> Outlining the Government's commitment to the project, the Government's official spokesperson, Agio Pereira, stated: "Society as we know it today has evolved because of electricity and with stable and reliable power across the nation, Timor-Leste will evolve and develop. Access to electricity should be considered a basic inalienable right and the foundation for our economic future". Media Release, Government committed to providing stable and reliable electricity to the nation, Dili, 11 November 2009.

# Are Heavy Oil Power Plants a Viable Solution?

- The proposed power plants will burn heavy oil, using imported engines and generators that have already been in operation for three years. The oil is polluting, the technology difficult to manage and most countries no longer use this technology. Using heavy oil potentially can create acid rain, result in water pollution, and generate toxic solid and liquid wastes, particulate air pollution and greenhouse gas emissions. The oil will have to be imported and will be expensive.
- Each generating station will require back-up power, a port for shipping in the fuel, roads and ports during construction, facilities for safe storage and long-term disposal of toxic solid and liquid wastes, emergency response capabilities, and decommissioning. These costs probably will have to be met by the Government.
- The total power capacity of the three proposed stations will be 180 megawatt (MW), which is
  more than Timor-Leste is likely to require for many years (current peak usage is less than 30
  MW). Once operational, the stations will reduce the need to use and explore alternative
  sources of energy.
- Building the power plants as originally outlined in the 2008 proposal is expensive; the estimated cost is US\$ 381 million. On the assumption that the funding would come from the State budget, the NGO La'o Hamutuk, calculated in 2008, that during the period 2008-2011, the electricity system would consume US\$ 371 million of the capital budget for infrastructure, leaving less than US\$ 62 million for all other infrastructure investment.

Sources: NGO La'o Hamutuk (the Timor-Leste Institute for Development Monitoring and Analysis), Dili: "Heavy Oil Plants: Project without Process", The La'o Hamutuk Bulletin, Vol.10, no.1, June 2009; Power Plant and National Electrical Grid: Mega-project or mega-problem? November 2009; Cornerstone Laid for Hera Heavy Oil Generating Station, January 2010.

**BOX 28** 

#### **Financial Services**

Few financial services currently are provided for the rural sector in Timor-Leste<sup>26</sup>. The Instituição de Micro-Finanças de Timor-Leste has a limited banking licence, and operates on a small scale in Dili, Aileu, Gleno, Maliana and Oecusse<sup>27</sup>. Most of the successful micro-financial operations are being carried out on a relatively small scale by two NGOs, Moris Rasik and Tuba Rai Metin - the former enabling a highly successful development of women's trading, and the latter providing limited finance for small women's groups in Dili, Baucau and Viguegue. The vast majority of rural households face financial exclusion and lack of access to basic financial services such as low-cost deposits, loans and remittances. In its Strategic Framework for Rural Development in Timor-Leste (2010-2020), the Government suggests a number of ways in which current financial constraints can be addressed. One suggested strategy is to establish a National Development Bank. In line with this, in early 2011, the Government approved the creation of the Bank, using both public and private capital to support company establishment and functioning. In its operations it is important that the Bank focus on supporting small and medium enterprises (SMEs), providing specialized re-financing facilities, in co-operation with commercial banks. If considered desirable, and subject to Parliamentary approval, it may be possible that the capital base for the Bank initially mobilize some resources from the Petroleum Fund. The Bank can channel subsidies from the Government to enterprises in the rural sector. It will also be able to specialize in funding for extending agricultural activities, such as the purchase of seeds, machinery, working capital for developing value chains,

<sup>26</sup> In contrast to the limited provision for the rural sector, financing for the urban sector, and particularly for Dili, is expanding. In 2010, there were three foreignowned commercial banks, located in Dili. Based on recent information provided by the Timor-Leste Government's Ministry of Finance, in June, 2009, one of these the Australian and New Zealand Banking Group (ANZ Bank) registered a record trade, with new accounts increasing by 80 percent and lending doubling (it is assumed that this refers to data for the year ending June 2009).

<sup>27</sup> The IMFTL was established by the ADB in 2001.

and expanding storage facilities. Most importantly, the Bank can also promote and underwrite community-based micro-finance organizations in rural areas.

#### Communications and Market Information

Access to telecommunications services in the countryside is extremely limited and expensive. At the end of 2009, only 35 percent of the total population had mobile connections and only 0.2 percent of the people had land lines<sup>28</sup>. There is limited mobile usage by the rural population, largely due to the high cost of calls and due to limited access to electricity. Several reports have concluded that mobile service use could be increased rapidly if prices were reduced<sup>29</sup>. Internet access is also expensive. For example: connection fees are US\$ 35, and the monthly line rental for a dial-up service is US\$ 5 – although rental remains unavailable in most areas, including much of Dili. Peak per minute usage charge is US\$ 0.079, off-peak charge is US\$ 0.019. Fees for dedicated internet services are higher, with activation fees at US\$ 500 and monthly fees ranging from US\$ 500 for 64 Kbps and up to US\$ 3,450 for 512 Kbps. The percentage of Internet subscribers is 0.06 percent of the population. Most of those who enjoy access work in Government offices, international NGOs, private enterprises and other international institutions. Additionally, some schools and NGOs have access, as a result of financial support from donors<sup>30</sup>.

The provider of telecommunication services in Timor-Leste holds a monopoly position, based on a contract signed between it and the Timor-Leste Government in 2002. The concession contract gives *Timor Telecom* (the monopoly provider) exclusive rights to provide telecommunications infrastructure and services until 2018, with the exception of broadcasting and Internet services, which can be provided both by other operators and by *Timor Telecom*. The latter, however, provides the infrastructure for Internet usage. In 2007, the Government discussed creating conditions for the entry of competitors into the telecommunications market, and a law deregulating provision was passed in 2009, resulting in the entry of two additional providers, creating the conditions for challenging the *Timor Telecom* monopoly and providing cheaper, more efficient services.

Timor-Leste has one national public broadcaster, *Televisão Timor-Leste (Televizaum Timor Lorosae)*, broadcasting in Tetum, Portuguese and Indonesian, but few rural households can access television in the home. There are also community radio stations broadcasting in rural areas<sup>31</sup>. Radio coverage in Timor-Leste was estimated recently at approximately 90 percent of the country<sup>32</sup>.

As experiences elsewhere in Asia and Africa have shown, improving conditions in the telecommunications sector brings considerable benefits to the rural sector. Costs of current business operations could be reduced substantially and access to information improved. This would assist farmers seeking information about prices and availability of goods and services, and help businesses to communicate with suppliers.

<sup>28</sup> Information from Budde.com.au: Timor-Leste: key telecom parameters, 2008-9. MDG Booklet 2010, Government of Timor-Leste, p. 47

<sup>29</sup> See e.g. World Bank, Timor-Leste: Economic and Social Development Brief 2007, Ch.14 Sector Note: Telecommunications, WB Dili 2007.

<sup>30</sup> The information in this paragraph is taken from the Digital Review of Asia and the Pacific, 2009-10, and in particular from the section of this text on Timor-Leste written by Abdel Pires da Silva.

<sup>31</sup> There are 21 radio stations in Timor-Leste. The main station is Radio Timor-Leste, broadcasting in Tetum, Portuguese and Indonesian. Other radio stations include Radio Kmanek, Radio Falintil, and Radio Renasença. There are also FM retransmissions of RDP Internacional from Portugal, Radio Australia and the BBC World Service (although the latter subject to review by the BBC in 2011). Community radio stations in some areas also broadcast in regional languages such as Fataluku and Tokodede.

 $<sup>32\ \</sup>textit{Timor-Leste Country Profile}, British\ Broadcasting\ Corporation, (BBC), London, February\ 2011.$ 

#### The Cellular Phone in Africa and Asia

- The cellular phone is opening new frontiers in Africa and is reaching large numbers of people, because it is cheap, shareable and easily repaired.
- The Asian experience shows that cell phones can give farmers access to market information, health care, and education, but in Africa, thanks to the recent rapid development of mobile telephony, even where land lines were once non-existent or a luxury for the rich few, cell phones are now widely used. They have become an important asset for poor farmers in countries such as Kenya, and for fishers in countries such as Sierra Leone, helping them to gain access to market information, bargain for their products, boost their incomes and take advantage of opportunities that would otherwise have passed them by.
- The cell phone is also giving birth to a new paradigm in money. Plastic cards have become the reigning instruments of payment in the West, but projects in Kenya are working to make the cell phone the hub of personal finance. Customers can convert cash into cell phone money at their local grocer, and this money can instantly be wired to anyone with a phone. In this way, the crucial issue of shortage of bank accounts in Africa can be addressed.
- In many African countries, educational knowledge, expertise and teaching is provided for teachers and students in villages via the use of mobile phones. Similarly, the knowledge required for basic routine health care is transmitted to people via their mobile phones.

For further information, see UNDP Newslettters, October 2006 and January 2007, *Development Challenges: South-South Solutions*. Also "Are mobile phones Africa's silver bullet?" Guardian.co.uk, 14 January 2010

**BOX 29** 

The Government could encourage telecommunication providers to adopt a more pro-rural approach. This could be done for example by lower denomination recharge cards, reducing the costs of text messaging (SMS), and designing and implementing a village-phone programme to provide public access in rural areas.

These issues are crucial for the development of the rural economy. Development would be greatly facilitated by the extension of cheaper mobile and internet coverage enabling access to market information, suppliers and buyers. Current conditions severely restrict this development.

# **Capacity - Building**

The rural economy faces several additional constraints. As noted earlier in the TLNHDR, education and health facilities can be improved in a number of ways to deal with problems in crucial areas of human development. The Government's recent *Strategic Framework for Rural Development*, 2010-2020, highlights the main tasks already agreed by the Ministries of Health and Education - to increase the number of health promotion facilities, expand midwifery provisioning in the countryside, make basic medicines more widely available in all rural areas, extend primary school provision and enable improved access to primary schools.

Capacity-building for rural development is also required in a range of areas, such as agricultural extension knowledge and systems, farmer-based technology development, commodity development programmes and private sector training. There is, however, an understandable reluctance on the part of many farming households to become involved in new capacity-building developments which they fear may involve risk, by moving away from tried and tested traditional forms of cultivation – particularly if there is limited back-up and limited incentives for new approaches. Consequently, as part of its strategy for the rural sector, the Government should also develop an enabling framework to assist farming households in building up their assets. Farmers

can then incorporate into their coping strategies the risks that need to be taken to improve productivity and diversify. Responding to this, in recent years, the Government has funded the deployment of extension workers to assist in the provision of seeds, the use of hand tractors, rice milling machinery and the rehabilitation of irrigation systems<sup>33</sup>. Donors have also made important contributions in assisting asset development. For example, the European Union, through its recently developed sustainable rural programme, aims to increase production directly and to improve the enabling environment for this increase. A further example is the *Deutsche Gesellschaft for Technische Zusammenarbeit* (GTZ), which has been maintaining successful long-term initiatives in developing the conditions for increased agricultural output, nutritional improvements and agricultural diversification. Issues relating to the provision of an enabling environment and capacity-building will be addressed later in the chapter.

#### **Stabilizing Food Security for Peace Promotion In Timor**

GTZ's project Stabilizing Food Security for Peace Promotion in the Rural Areas of Timor-Leste commenced in 2002. The project develops strategies for improved food security, diversified subsistence cultivation, increased productivity and income generation. Since 2005, the project has focused on:

- Assisting households in making the transition from subsistence to market-oriented production;
- Advising food insecure households on how best to diversify their subsistence production and nutritional knowledge;
- Strengthening village councils in consolidating local infrastructure.

As a result of the implementation of the project from 2002 to 2007, the rural population of the eastern areas was able to use its basic resources more effectively to maintain food security. The private sector became more successful in its efforts to obtain inputs and to market its products. As a result, commercial rice sales increased, and the production and export of candlenut was revived.

#### BOX 30

Finally, rural development can also be enhanced by increasing participation by farming households in the design and implementation of rural initiatives. The Government's policies for decentralization should enable such possibilities. This issue is addressed later in the TLNHDR.

# Strategies for the Rural Economy

Improving livelihoods in the rural sector requires sustainable improvements in a number of key strategic areas, most notably in agricultural productivity, promoting crop diversification, developing agricultural processing and in enabling the marketing of products – particularly those with export potential.

<sup>33</sup> For example, recent data from the Ministry of Agriculture in 2010 states that from 2007-9 the number of hand tractors increased from 100 to 2,591, and the number of tractors from 13 to 315. During the same period, 133 rice milling units have been provided for farmers and 31 irrigation schemes rehabilitated.

# **Increasing Production of Basic Crops**

Since many households experience food shortages for several months in the year, it is essential that current low yields for the basic crops, maize and rice, are increased, initially through the use of improved seeds. Many farmers use their own degenerated seed and mixed varieties of seeds, resulting in early maturing and subsequent loss of productivity. The Seeds for Life programme reported recently that as a result of use of improved seeds, maize yields increased from 1.16 tons per hectare to 2.6 tons per hectare. Government data similarly report increases in the output of rice and maize, over the 2007 to 2009 period, largely as a result of the introduction of improved varieties<sup>34</sup>. Increasing rice yield is particularly important, given the country's need to import rice to meet food shortages in 2009. A joint GTZ-Government Integrated Crop Management programme, introduced in 2007, increased rice yields from 2.5 tons to 4.5 tons per hectare. The introduction of a rice intensification system programme in selected districts in the same year resulted in higher yields of up to 10 tons per hectare35. A more widespread distribution of improved seeds, in itself, could lead to substantial increases in productivity and output. Outputs of both rice and maize could also be increased by fertilizer application, more efficient spacing of plants, and improved weeding. Information for farmers could be provided by a greater use of extension packages and training. Double cropping of rice is possible via improved irrigation. Of the 56,000 hectares that is irrigated, only 3,000 are double cropped<sup>36</sup>. Cultivation could also benefit from the rehabilitation of the 15,000 hectares of irrigated area currently unused<sup>37</sup>. Maintaining and repairing irrigation schemes, however, can be difficult, in the face of rapid water flows and heavy silting. It is also expensive, and since 2002 has relied heavily on donor funding, which it is hoped will continue under such initiatives as that of the European Union and GTZ.

Production of basic crops also suffers from post-harvest losses. The Ministry of Agriculture estimates that these may be as high as 30 percent. A recent assessment by the UN Office for the Coordination of Humanitarian Affairs estimated similarly that almost a third of the country's maize harvest is lost each year, due to poor storage facilities<sup>38</sup>. Silos, drums and ferro-cement jars developed by the Food and Agriculture Organization (FAO) in recent years have reduced losses to five percent in areas in which they have been installed. It would be useful, however, if such storage equipment could be included in the rice and maize commodity development programmes proposed recently in the Government's *Strategic Framework for Rural Development*<sup>39</sup>.

Along with rice and maize, cassava and sweet potatoes are also cultivated for subsistence in upland areas. Their cultivation could similarly be expanded, through the introduction of improved varieties of seed. Recent trials by the Ministry of Agriculture resulted in an 80 percent increase in yield for sweet potatoes as a result of improved varieties being introduced<sup>40</sup>.

Several reports have noted that the introduction of machinery for cultivation is restricted by the small size of family farms – averaging two hectares per household. This can be addressed by the development of farmer groups in which farmers share use, and by the development of contract farming. Contractors could also be used to level land and to provide services such as threshing and milling.

<sup>34</sup> The Government claims substantial increases have occurred in the output of rice and maize. For example, rice production increased by 73.8 percent and area cultivated by 45.2 percent, from 2007 to 2009. Similarly, maize production increased by 21.8 percent and area of cultivation by 17.5 percent during the same period. See A Path to Peace and Progress August 2007 – March 2010: The Xanana Government Mid Term Report, Dili, March 2010.

<sup>35</sup> Georg Diechert, Jose Barros, Martin Noltze, Introducing System of Rice Intensification in Timor-Leste: Experiences and Prospects, Dili, 2009.

<sup>36</sup> Rice Commodity Profile, MAF, RDTL, 2009. The main rice-producing areas are Maliana, Viqueque, Manatuto and Bobonaro. Only 3,784 hectares of rice is cultivated in upland areas.

<sup>37</sup> See Rice Commodity Profile, MAF, RDTL, 24 above.

<sup>38</sup> See "Timor-Leste: Poor storage adds to food insecurity", IRIN Humanitarian News and Analysis, UN Office for the Coordination of Humanitarian Affairs, 4 April 2010.

<sup>2010.</sup> 39 Based on figures provided by the Ministry of Agriculture, it is estimated that 5,000 silos were installed in Timor-Leste between 2007 and 2010

<sup>40</sup> See Improving food security through agricultural research and development in Timor-Leste: a country emerging from conflict, Lorenco Borges et al, Springer Science (online), 2009.

# **Cultivation of Cash Crops**

In addition to its basic crops, Timor-Leste's rural sector also produces a range of products the marketing of which needs to be improved, both domestically and internationally. Cultivation of some of these crops, however, occurs in upland areas, and is subject to soil erosion and limited moisture retention, both of which severely reduce fertility. The impact of these can be reduced by techniques such as interspersing with tree crops and hedgerow planting, which can be included in extension programmes. Vegetables such as taro, together with products such as cocoa and basic spices such as cloves and black pepper, are grown in small quantities, as are many fruits – such as mango, pineapples, guava, passion fruit, rambutan, peaches and plums. Some of these products have benefited from being sold in Dili - to residents and to some hotels and restaurants – although many restaurants and hotels use imported food and food products, as do most of the supermarkets. Products with potential for expansion include cashew nuts, vanilla, groundnuts, soybeans and mung beans. A recent study, for example, concluded that there were opportunities for exporting soybeans and mung beans to markets in Indonesian Timor41. Recently, cinnamon has been planted, in the hope of developing a regional market, although this market has not been assessed in any detail. There is also a potential for marketing dried fruits. The country is known for its 'exotic' fruits, but most are seasonal and cannot be sold widely due to limited storage facilities. Consequently, it is worthwhile considering drying fruits such as pineapple, mango and orange – all of which are grown throughout the country. Juices could also be packaged. Timor-Leste imports a variety of boxed juices, some of which could be replaced by juice that is produced locally.

Undoubtedly, the domestic market could take more of the country's organically grown products and this latter feature could also facilitate market entry in the region. Marketing of such products, however, remains constrained by poor roads, high transport costs, limited market information and inadequate means of preservation.

For several of the cash crops grown in Timor-Leste, the main issue is one of locating a niche market, where the product can be marketed on the basis of its particular qualities – most notably that it is organically grown. Coffee is a good example of this. It is the country's main non-oil export, grown over 52,000 hectares, and yielding an output of 14,000 tons of green coffee beans<sup>42</sup>. An annual 12,500 tons is exported, with Timor-Leste producing 0.2 percent of global supply. Production is dominated by an estimated 44,000 small producers, each harvesting one to two hectares. Producers are typically upland subsistence farmers. Potentially, Timor-Leste's arabica coffee is highly attractive for buyers, being organically grown in mountain areas. This organic quality is particularly important for the niche market, potentially enabling Timor-Leste coffee to develop a distinctive character, compared with arabica coffee grown in other countries, and regionally in neighbouring countries such as Indonesia<sup>43</sup>. However, over half the trees are unproductive, due largely to lack of replanting and poor tending over many years. Current producers are typically upland subsistence farmers, who do not generally carry out basic maintenance such as pruning, weeding and re-planting. Lack of maintenance and replanting has increased the vulnerability of trees to disease. Reluctance to maintain is reinforced by insecurity of tenure<sup>44</sup>.

The Ministry of Agriculture estimates that coffee production could be doubled in the coming years by rehabilitating the estates. In 2009, coffee growing areas increased by 2.4 percent<sup>45</sup>. The Ministry has devised a commodity development programme specifically for coffee, and aims to rehabilitate 40,000 hectares by 2020. Marketing Timor-Leste's coffee faces a number of problems. There are a wide variety of buyers and exporters–companies, individual traders and NGOs. There is limited communication between these organizations, and a subsequent lack of co-ordination. Difficulties in delivering coffee of a consistent quality – due not only to the state of the beans but also to deficiencies in processing- is an important issue, affecting in particular the maintenance of Fair Trade Arrangements. Market opportunities are further limited by production costs for Timor-Leste's

<sup>41</sup> West Timor Market Study, Sendall and Associates, Ministry of Agriculture/GTZ, Dili, 2006.

<sup>42</sup> Directorate of Agribusiness, *Coffee Commodity Profile*, Ministry of Agriculture, Timor-Leste, 2009.

<sup>43</sup> Regionally, Vietnam is the most important coffee producer, in addition to being the second largest coffee producer in the world. However, 97% of Vietnam's coffee is robusta, and only 3 percent Arabica.

<sup>44</sup> Information for this section is taken from Directorate of Agribusiness, Coffee Commodity Profile, Ministry of Agriculture, Timor-Leste, 2009, and from C. Deutsch,

Overview of the Coffee Sector in Timor-Leste. Oxfam. Dili. 2004.

Overview of the Coffee Sector in Timor-Leste, Oxfam, Dili, 2004.
45 See A Path to Peace and Progress, August 2007 – March 2010: The Xanana Gusmão Government Mid Term Report, Dili 2010, p. 45. (Document produced for the March 2010 Development Partners' Conference).

coffee being relatively high, when compared with other international producers, notably Indonesia. The coffee commodity development programme is beginning to address issues of tending and re-planting, but important issues of processing and marketing will also need to be addressed for coffee to realize its potential for the rural sector.

# **Agricultural Processing and Small Scale Industries**

Most of the commodities produced in the rural economy are sold without processing. Processing commodities could add value and improve household livelihoods. Coffee is an obvious example: a more extensive use of wet processing could improve the quality of the beans and create additional employment; approximately 75 percent of the coffee is dry-processed, resulting in beans lower and less consistent in quality than wet-processed beans46. Another example is coconut, grown and processed in many countries, and used in the production of cooking oil and medicinal oil, and in the production of baskets and brooms. Currently, Timor-Leste imports much of its coconut oil from Indonesia. Coconut trees are grown in many areas of the country, but they are old and produce reduced yields, and farmers now seem less interested in coconut than in previous years. Simple remedies would be a campaign to propagate seeding and planting, intercropping coconut with other marketable crops and providing coconut farmers with market information on particular coconut products, together with improved transport access. Candlenut, with a planted area of 1,462 hectares, is grown in almost half of Timor-Leste's districts, and has been exported in small amounts in recent years, both for processing as oil and for use in cooking. This production could also be increased, but farmers would need substantial support, since on average candlenut requires four years from planting to harvesting.

A further example is the production of starch from cassava. The starch is easy to extract using a simple process carried out on a small scale with limited capital, and is used extensively in diverse products such as food, paper, textiles, adhesives, beverages, confectionery, pharmaceuticals, and in building materials.

Bamboo is found throughout Timor-Leste, and its processing has a wide range of possibilities – for use in construction, as flooring, in fabrics and textiles, in cooking and in medicines. The possibilities for its processing and sale domestically and for export could usefully be assessed, particularly since many bamboo products currently are imported.

Similarly, soybean processing could be expanded considerably. Tofu and tempe<sup>47</sup> form part of the Timorese diet, but currently over 85 percent of soybean consumed in the country is imported. Expansion of processing could also result in products such as tofu and tempe and soya milk being exported regionally as natural, organic products. To do this will require more hygienic processing and improved refrigeration facilities.

A further area of the rural economy that could usefully be developed is livestock improvement – cattle for sale and for the production of dairy products. Cattle are reared in particular areas – Bobonaro, Covalima, Viqueque and Oecusse. The quality of bulls, however, is often poor, and there is considerable room for improvement, through selective breeding and better quality feed. Mortality rates are high and vaccination against disease is limited. The possibilities for exports, however, are substantial. According to the Ministry of Agriculture, demand for beef in Indonesia is growing by six to eight percent per year, and imports currently account for 38 percent of Timor-Leste's beef consumption<sup>48</sup>. The Ministry is proposing a programme to double exports and substitute a substantial proportion of imported beef with home produced beef by 2020<sup>49</sup>.

<sup>46</sup> See C. Deutsch, Overview of the Coffee Sector in Timor-Leste, Oxfam, Dili, 2004, See also UNIDO, Industrial Policies and Strategies for Timor-Leste: An Agenda for Action, Dili, 2009, pp. 62-3, where this issue is discussed in relation to improvements in the coffee value-chain.

<sup>47</sup> Tempe is a fermented soybean product, a popular food in Indonesia and Timor-Leste.

<sup>48</sup> Approximately 200 tons of beef is imported from Australia, annually. See Cattle Commodity Profile, Directorate of Agribusiness, Ministry of Agriculture and

<sup>49</sup> In support for such programmes, the Government has provided training and livestock to enable the development of cattle breeding. Since 2007, breeding services have been established, and in 2009 a major vaccination campaign was undertaken. Markets for cattle trading have been established in Tibar, west of Dili, and in Zumalai

Production of milk and dairy products can be increased beyond current levels. At present, milk production is largely for self-use by households, who themselves raise cattle. Local production of milk and dairy products can substitute for what is presently imported. This will require the development of cooperative organizations that can organize and manage collection and marketing, as well as provide information on how to improve the quality of fodder and the health of animals. In much the same way that cattle rearing can be improved to produce beef substituting for imports, this could also be done with pig-rearing and poultry; both pigs and chickens are raised by most rural households.

Currently, demand for chicken, meat and eggs is met by imports from several countries, notably Indonesia and Brazil. An important constraint on the expansion of poultry farming is a heavy reliance on imported feed, with a dearth of local ingredients and by-products that are used in feed. This again requires a development programme providing information to farmers on issues such as the use of bio-waste, soybean by-products and copra-oil in feed, transportation, refrigeration and the establishment of poultry farms. Additionally, the development of abattoirs and refrigeration facilities will be required to provide for the slaughtering, cleaning and sorting of cattle and pigs, the dressing and packing of chickens and eggs and the bottling of milk.

Within the rural sector, there is considerable potential for increases in productivity, diversification and the creation of wealth through processing. There is also significant potential for the development of craft industries, particularly the marketing of a wide range of *tais* goods for domestic and export consumption. These have benefited from the provision of micro credit in recent years, enabling women in particular to bring income into the household. Additionally, there are possibilities for the expansion of a number of small scale industries within the rural sector, producing goods for domestic consumption and for import substitution. Most notable of these are brick-making, the production of bio-briquettes (substituting for wood as an environment-friendly fuel), cement production, rearing of fish in village ponds, house construction relying increasingly on local materials, bamboo products and furniture-making. Additional off-farm employment can also be generated via the maintenance and re-building of the rural infrastructure, the development of tourism and eco-tourism, the promotion of local markets and the expansion and improvement of transport facilities. These aspects are examined in detail later in this chapter, when we consider the possibilities for development of the non-oil economy beyond the rural sector.

#### **Developing the Fishing Industry**

Despite the rich sources of fish in its surrounding seas, Timor-Leste imports most of the fish it consumes, particularly that which meets demand in Dili. Most of the existing fishing is carried out near the shore, in canoes, small boats or by hand-held nets and a small amount of fish is sold at local markets, shortly after being caught. Shellfish are harvested in small amounts from flat reefs. Storage and refrigeration facilities are virtually non-existent – due in part to limited electricity supply, and there is limited fish-drying. River-borne pollution from deforestation is causing problems for some coastal villages.

The country's rich marine endowment provides a strong case for a rapid development of the fishing industry. In addition to fishers needing better boats and training to go beyond the near shore<sup>50</sup>, investment is also needed in ice factories, transport and the creation of demonstration centres disseminating information on the use of electronic control systems, cutting, processing, transport and storage<sup>51</sup>. Seaweed farming could also be encouraged, to foster near-shore herbivore and carnivore fish numbers, fostering prawn, abalone, crab and oyster-farming. Government proposals

<sup>50</sup> Recently the Government has purchased two naval patrol vessels, aiming to restrict fishing by foreign ships within its territorial borders. Whilst this will facilitate the ability of East Timorese fishers to increase their catch, possibilities from this will only be realised if more off-shore boats are introduced, in addition to the small boats now being used close to the shore.

<sup>51</sup> In relation to boat improvement, it should be noted that – according to information received recently from the Ministry of Agriculture and Fisheries, the Government has assisted fishers in the purchase of glass bottom boats.

for the development of fisheries currently seem rather general<sup>52</sup>, and more specific policies, possibly in line with the above suggestions, could be a useful starting point for future development.

# **Exploring the Potential for Eco-Tourism**

Timor-Leste's countryside has unexplored areas of pristine natural beauty, making it ideal for the development of eco and community-based tourism. The country has substantial potential for trekking and mountaineering. Its abundant marine life and coral life are already attracting divers from many countries. It is rich in globally threatened and endangered species of birds, and several of the world's rarest birds are found in its forests and wetlands. Its seas are breeding nurseries for dolphins and whales that travel through deep ocean trenches to feed on the island's surrounding reefs. Available data suggests that coastal zone resources are largely unspoiled compared with other countries in the region<sup>53</sup>. Timor-Leste has a number of coastal and inland sites that are ideal for the development of eco-friendly tourist villages. Eco-tourism development in areas such as these can involve local communities and provide sustainable employment for village households. The wealth generated can be substantial (see BOX 31).

#### The Potential of Marine Megafauna Tourism

Marine megafauna tourism is one of the fastest growing areas of eco-tourism in the world and includes passive activities such as whale or dolphin watching, to more energetic activities such as snorkelling and cage diving. The economic value and potential of marine megafauna tourism is immense.

For example, Shark Whale tourism at Ningaloo Reef in Western Australia over a season of three to four months generates revenues in the order of Aus \$ 20 million for the Ningaloo region and has acted as a draw card that has facilitated the development of other related industries such as turtle and whale watching.

Some of the fastest growing marine megafauna developments have been located in small Pacific Island countries, with only limited infrastructure, such as Papua New Guinea, the Solomon Islands and the Federated States of Micronesia. In these regions, megafauna tourism has provided significant flow-on effects to local economies, where few alternative sources of income exist.

The ocean systems that surround Timor-Leste are being increasingly recognized as a major migratory pathway for many species of marine megafauna. Over a third of all known whale and dolphin species are found in the region. Groups of migrating whales and dolphins are seen regularly in the deep waters off Timor.

If megafauna aggregations can be identified in easy access off the shores of Timor-Leste, then this may provide an opportunity and basis for the development of a regional eco-tourism industry.

Adapted from "Surveying Marine Megafauna in Timor-Leste – Identifying Marine Eco-tourism Opportunities", Timor-Leste and Northern Territory Governments, 2009.

**BOX 31** 

Income from eco and community based tourism can be earned by local communities in many ways: by providing local residence and guides for mountaineering and trekking, supported by local information centres; establishing local eco-resorts, particularly in areas of coastal beauty; organizing local handicraft centres; establishing and participating in local diving and marine centres; and organizing overnight stay centres for eco-tourist groups. The potential for the development of

<sup>52</sup> The recent Strategic Framework for Rural Development, (2009) published by the Ministry of Agriculture and Fisheries, for example devotes only a short paragraph to fisheries, proposing generally, 'An inventory of suitable sites' for the development of mariculture and introducing 'three types of mariculture activities to coastal communities by 2020' (pp 25- 26).

<sup>53</sup> Government of Timor-Leste, Natural Resources and Environment: Priorities and Proposed Sector Investment Programme, 2006.

eco-tourism is beginning to be realized, as evidenced in growing numbers of tourists visiting the country<sup>54</sup>. Rather than attempting to reproduce tourist facilities similar to those proliferating in neighbouring resorts such as Bali, Flores and Sumbawa, Timor-Leste can develop lucrative niche activities for its rural sector, creating a sustainable basis for an attractive eco-tourist alternative in the region.

# **Enabling the Development of Household Coping Strategies**

In strategies for developing the rural economy, it is clear that in most cases Government involvement has an important role to play. Important decisions will be made on the basis of limited resources. It is crucial that funding be directed to areas in which it can be used most productively.

The recent mapping exercise undertaken by the Ministry of Economy and Development has provided basic information on the location of cultivation of particular crops, processing, and other production activities in the rural sector. This information will be invaluable for the implementation of the Government's strategic framework for rural development, enabling ministries to propose prioritizing specific activities in particular areas. This prioritization is exemplified in recent Government proposals for regional agricultural centres and in its 2008-9 creation of 32 'mini-markets' in the districts to facilitate marketing of agricultural commodities. This could be extended to develop local growth strategies for particular areas, in which area specialisations are facilitated by the Government identifying and enabling market access, monitoring quality, facilitating cooperation between public agencies, technical organisations and financial organisations to provide effective support to farming households. The Ministry of Economy and Development's recent piloting of a group of 26 cooperatives, providing equipment and materials to improve marketing for groups of households is an important step forward in facilitating local specialisations.

It is also important for farmers to continue to develop, and to adopt sustainable land management practices, since – as pointed out in chapter one of the TLNHDR – many areas of Timor-Leste have fragile eco-systems that are increasingly coming under pressure from deforestation and the incidence of natural disasters. Water retention and soil conservation are critical factors in sustaining agricultural production, and sound land management can help to mitigate disaster risks.

Developing effective strategies for the rural sector requires enabling farmers to build their assets, and build their confidence to do this. Building confidence and assets can be facilitated by addressing the constraints faced by farmers in marketing their products – as outlined earlier in the chapter – and by enabling them to increase, diversify and process their products.

Enabling market access, for example, requires development of financial, physical and human assets, via the growth of tailored micro-credit, provision of market skills and information, and improved transportation and storage. Diversification requires a substantial investment in human assets to develop appropriate skills, combined with confidence building via the provision of market information. The Government has begun to develop policies to meet these needs, focusing in particular on increasing productivity and improvements in infrastructure. These formed some of the main components of its National Priorities in 2009, for improving food security and promoting rural development, as presented earlier in the TLNHDR. They should remain priorities in the coming years, and it is hoped that the suggestions made for rural development in the TLNHDR can reinforce policy development in the forthcoming *Strategic Development Plan*.

<sup>54</sup> According to data provided by the Ministry of Tourism, Trade and Industry, the number of tourists visiting Timor-Leste in 2006 was 11,787, increasing to 12,980 in 2007 and to 18,905 in 2008.

# **Community-based tourism in Maubara**

The Assets Framework is useful for understanding poverty conditions in villages and communities, and in developing appropriate strategies for tackling poverty. In this approach we assess the assets held by poor households. These may be one or several of the following types:

Natural Assets: Forests, water, land, energy sources;

**Physical Assets:** Basic infrastructure; **Financial Assets:** Monetary resources;

Human Assets: Skills, knowledge, beliefs, attitudes, labour skills;

Social Assets: Relationships, social networks, customs.

Managing these assets is critical for poor households and communities as they try to improve their poverty conditions. Households can create different livelihood options by improving access to, and control over relevant sets of assets. For example: social networks can be utilized to create more secure conditions for gaining access to financial resources; local knowledge can deal with changing conditions in access to natural capital (such as forestry, changing soil fertility); cultivation skills can used in crop diversification, etc.

The assets approach focuses on the ways in which poor communities adapt to their changing conditions in order to maintain and improve their livelihoods. It begins with an analysis of household and community strengths, and emphasizes the importance of building the potential of poor households and communities for achieving sustainability. It enables us to identify and deal with constraints to the fullest use of available assets, through designing appropriate policies for poor villages.

In managing their assets to promote more sustainable livelihoods, communities can improve their livelihoods by using a range of strategies. These differ from one location to another. Once we understand these strategies, we can devise ways of directly assisting poor villagers to manage their assets more productively and efficiently. We can then design relevant strategies to reduce poverty, in partnership with poor village communities.

Source: Ian Scoones, Sustainable Rural Livelihoods: A Framework for Analysis, IDS Working Paper no. 72, Institute of Development Studies, University of Sussex, Brighton, UK, 1998.

# BOX 32

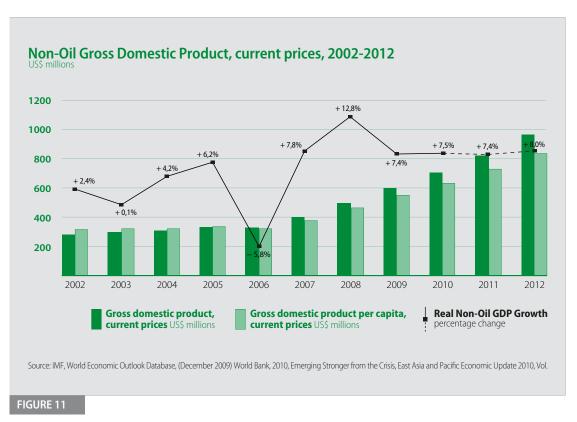
Commitment to, and support for programmes and projects by farming households is vital for their success, particularly under conditions in which households may regard them as risky undertakings. It is crucial that household members are involved in decisions being made on the design, implementation and monitoring of projects affecting their livelihoods. Traditional forms of Timorese participation have been further developed and formalised in recent years, often as a result of the involvement of NGOs locally, and discussions between villagers and *suco* heads in this area have become more frequent in recent years. The Government's proposals for decentralization will strengthen local involvement by improving the formal conditions under which decisions about policies are made at the local district level. Decentralization should also improve co-ordination of programmes at the local level<sup>55</sup>. It will enable district representatives to play major roles in local and national decision-making, tailoring service delivery to local needs, overseen by locally-elected officials.



<sup>55</sup> See Government of Timor-Leste, Ministry of State Administration and Territorial Management, Draft Concept Note: Joint National Decentralisation Support Programme, 2009.

# **Developing the Non-Oil Economy and the Private Sector**

Thus far, the focus of this chapter has been on developing the rural economy which will be critical for improving the livelihoods of the majority of the country's population. However, there are other important areas of the non-oil economy. In recent years, for example, there has been substantial development of the construction industry. Other important sectors are wholesale and retail trade, health, education and social services, the hotel and restaurant trade and security services. The non-arm sector is dominated by informal household activities, micro and small enterprises. About 72 percent of formal enterprises employ fewer than 10 workers, and only two percent employ between 110 and 200 workers. Approximately 45 percent of formal, and nearly 90 percent of informal enterprises have an annual turnover of less than US\$ 5,00056. Most obtain start-up capital from personal or family sources, and most informal start-ups launch operations with equity capital of less than US\$ 100. Approximately 80 percent of businesses are registered in Dili. The main business activities are furniture-making, vehicle repair, tailoring, bakeries, handicrafts, with additional activities such as iron-working, tais weaving, salt-making, rice milling and coffee-processing located both in the capital and elsewhere. Women play an important part both in private industry and as self-employed workers. Data from the 2004 Census indicate that 15,803 males were employed in private industries, and the number of women was less than half that number at 6,872. Self-employed males were 135,301 compared with 104,154 women. In the micro-enterprise segment of the informal economy, almost 50 percent of enterprises were owned by women<sup>57</sup>.



Much of the development of the non-oil economy thus far has been government funded and driven, with many businesses dependent upon government funding and contracts, and this is likely

<sup>56</sup> United Nations Industrial Development Organization and the Timor-Leste Government Ministry of Tourism, Commerce and Industry, Industrial Policies and Strategies for Timor-Leste: An Agenda for Action, Dili 2009. See also, Timor-Leste Online Procurement Database. Peace Dividend Trust, 2009.

<sup>57</sup> A figure of 43 percent is given in J. Conroy, *Timor-Leste: Access to Finance and Working Capital, World Bank, Dili, 2005.* Anecdotal evidence suggests that this percentage has increased since then. More recent data on male and female enterprise ownership is not yet available, but will be known once the full results of the 2010 Census are available. The 2010 Timor-Leste Labour Force Survey refers to 45,000 persons in informal employment, of which 23,000 are males and 22,000 females. Of the 45,000 persons, 31,000 are located in rural areas and 14,000 in urban areas (See Timor-Leste Labour Force Survey, p. 57).

to continue to be the driving force in the short-term. Government expenditure stands currently at 60 percent of non-oil GDP. The private sector accounts for six percent of non-oil GDP. Yet the value added in the non-farm private sector, estimated at almost US\$ 130 million, is 20 percent larger than that of the agriculture and government sectors. Private investment remains low, at 4.6 percent, and the share of private consumption in non-oil GDP has been declining steadily since 2005. In the medium term, to develop in a sustainable manner, Timor-Leste's non-oil economy can only develop if it attracts investment. Hence a key issue for the development of the non-agricultural, non-oil economy is its ability to attract both domestic and foreign investment.

The size of the problem facing the development of the non-oil economy is encapsulated in the employment statistics cited earlier in the TLNHDR, that 15,000 job seekers enter employment annually, and that the private sector currently is able to provide approximately 400 new jobs annually<sup>58</sup>. The majority of off-farm jobs in recent years have been temporary - generated by public expenditure for road construction and other short-term development projects. Consequently, the amount of employment generated in the non-oil economy must be increased significantly, particularly for youth - hence the importance of attracting investment to build on government funding, and of creating a more dynamic agricultural sector, creating expanding possibilities for off-farm employment, as discussed earlier in this chapter.

There are a number of constraints on the development of the non-oil, non-farm economy, some of which have been addressed recently, while others continue to limit the development of the private sector.

# **Skills and Training**

Unemployment in Timor-Leste is influenced by three major factors: lack of job opportunities due to the weak state of the economy; lack of appropriate skills to fill jobs when they become available; and lack of adequate and reliable information connecting employers with available job seekers<sup>59</sup>. Economic growth in 2008-10 created an increasing number of jobs in the non-oil economy, as noted earlier in the TLNHDR, from 2007-9, government employment projects created 40,000 jobs, mostly at the sub-district and suco level. Additionally, in 2009, US\$ 44 million was utilised by local companies in rural areas, undertaking infrastructure improvements that created approximately 64,000 jobs60. Meeting the increasing demand for jobs, however, also revealed that basic skills training is required for these jobs to be filled successfully. Vocational skills training currently suffers from a number of deficiencies: too little investment in staff, facilities and equipment; a narrow focus on basic skills; and little attention paid to providing skills-in-demand. Low investment in the sector results in poor quality training and too few trainees in relation to need - especially in important areas such as construction and hospitality. Available skills training is not adequately attuned to enterprise needs and working practices, and active links between training providers and employers are weak or non-existent.

Since 2007, the Government has stressed repeatedly the importance of vocational training in reducing unemployment, tasking this to the Secretaria de Estado da Formação Profissional e de Emprego (SEFOPE). SEFOPE is responsible for the development and implementation of policies in a range of areas, from identifying and mediating appropriate job creation projects and small business development. SEFOPE oversees several organizations, notably the National Labour Force Development Institute, aiming to relate particular vocational training courses to the provision of the specific skills required for Timor-Leste's industries. By monitoring, the Institute also aims to ensure that training courses meet quality standards, and that employers develop relevant competencies. In co-operation with employers and donors, the Institute also administers an employment and vocational training fund, and overseas fellowship and workers programmes.

<sup>58</sup> See TLNHDR chapter two, footnotes 61 and 62.

<sup>59</sup> Richard Curtain, *Employment and Training: preparing young people for the labour market*, Dili, 2009. 60 This data is taken from the *Timor-Leste MDG Booklet*, Timor-Leste Government, Dili, 2010.

CHAPTER

Despite the priority accorded to vocational training by the Government, the support it gives to SEFOPE, and the courses offered by both Timor-Leste providers and international donors, many employers still consider that skill levels are inadequate and that much of the training is not wholly appropriate. Training provided currently and in recent years is not insubstantial: For example, Business Development Centres have been set up in many areas by the Ministry of Economy and Development. Thus far over 8,000 people have been trained in these Centres. Training is also provided by organizations such as the Business Development Support Institute (in Dili and in four additional district centres), the National Employment and Vocational Training Centre (in Tibar), and the Centre for Business Training, Vocational Training and Promotion (in Becora). Additionally, almost 40 percent of formal enterprises provide some training for their workers. Furthermore, there are 39 vocational training providers and 12 technical secondary schools registered with the State Secretariat for Vocational Training and Employment. Most recently, in 2009, 91 training centres were established across all 13 districts, to teach skills in areas such as woodwork, carpentry, electrical maintenance, mechanics and welding and construction<sup>61</sup>. Beyond this Government provision, training is also provided by NGOs, the Church, and by agencies and donors in a wide variety of areas, from language training to IT, office administration, technical trades, and tourism and hospitality. The problem is not so much the quantity of training provided, but its quality. As several reports have noted, major gaps remain in skills provision at all levels: basic numeracy and literacy skills, management and financial expertise, language skills, and middle level and intermediate technical skills<sup>62</sup>.

# **Reactions from a Survey of Employers**

A Youth Employment Study was carried out by the Secretariat of State for Vocational Training and Employment and the International Labour Organization (ILO) in Timor-Leste in 2007. As part of this, a sample of employers was surveyed. When asked to indicate how well (or not) applicants were prepared for the jobs for which they were applying, a little over 60 percent of employers considered applicants as being poorly prepared in relation to the "technical or professional skills needed for the job". Likewise, 80 percent considered applicants to be poorly prepared in relation to "overall general knowledge". 60 percent of employers considered the "overall preparedness of youth" to be poor. About 25 percent felt that potential employees did not have the "appropriate level" of skill required for the job".

Source: Taken from Timor-Leste: National Youth Employment Action Plan, 2009, p.7.

# BOX 33

Although public sector employment tends currently to be the preferred path for most Timorese, nonetheless, skills shortages are also reported in this field, even though the majority (59 percent) have completed high school, and 18 percent hold tertiary level diplomas<sup>63</sup>. Capacity building facilities are common in the public sector, with the National Institute of Public Administration providing in-service training courses, and civil servants attending specialist courses overseas, in addition to courses provided by agencies and donors. Training in both the public and private sectors can be improved in a number of ways.

Substantial international evidence suggests that greater benefits accrue from on-the-job training being combined with classroom training, as opposed to relying solely on the latter. The involvement of employers in providing practical work experience and in identifying what types of skills are required by the market tend to have a positive impact on the outcomes of the training being

<sup>61</sup> According to Government sources, by the end of 2009, 2,429 East Timorese had received training in these centres: See *The Xanana Government: Mid Term Achievement Report*, Dili, 2010, p. 49.

Achievement Report, Dill, 2010, p. 49.
62 See for example, Richard Curtain, Skills in Demand: Identifying the Skill Needs of Enterprises in Construction and Hospitality in Timor-Leste, AusAlD, Dili, 2009. See also the State of Human Resources chapter in the State of the Nation, Timor-Leste Government, Dili, 2008.

<sup>63</sup> See Seymour, E, A Profile of Timor-Leste Public Service –2008, Dili.

offered. Consequently, a greater degree of support should be given to enterprises as providers of on-the-job training. Training should also provide work placements. A recent survey conducted in the construction and hospitality sectors revealed that only one in six enterprises managed to provide placements for those engaged in training, and that these placements were very short – four weeks on average. 80 percent of enterprises stated that they could support stronger work placements. The quality of the training provided is also a crucial issue, since students are taking courses yet emerging with inadequate skills and expertise. The content of courses and the quality of the training provided require oversight by a monitoring system organized by staff with relevant expertise, with the development of a common accreditation and certification system for these courses. A database, both of the courses and of their relevance, and of jobs available is an essential pre-requisite for providing adequate training. The Government has recognized this via its establishment of the National Labour Force Development Institute (Instituto Nacional de Desenvolvimento de Mão-de-Obra - INDMO).

# Capacity Building In Timor-Leste – the role of INDMO

The Instituto Nacional de Desenvolvimento de Mão-de-Obra (INDMO) was established by the Timor-Leste Government in March 2008. It operates under the administrative rubric of the Secretaria de Estado da Formação Profissional e de Emprego (SEFOPE). Its mandate is to ensure that Timor-Leste has skilled women and men, able to respond to the economic and social development needs of the country with meaningful jobs and gainful employment. INDMO achieves these aims by:

- Updating the content of vocational courses;
- · Giving trainees qualifications that are recognised and needed by industry;
- Involving employers in developing competency standards;
- Ensuring that training providers meet quality standards as a basis for registration.

# The functions of INDMO are:

- To define and approve competency standards for industrial sectors;
- · Certify competence according to approved standards;
- Certify staff to become assessors.

# INDMO's objectives are to:

- · Outline what a worker should be able to do, and must know in order to carry out effectively his/her role in the workplace;
- Combine these standards in a qualification that gives formal recognition in a certificate;
- Define and set quality standards for the delivery of vocational training courses;
- Assess competency and award certificates:
- · Provide advice to the Council of Ministers on the establishment of a National Qualifications Framework.

Source: Information summarized from Secretaria de Estado da Formação Profissional e Emprego (SEFOPE), Vocational Training Policy, Government of Timor-Leste, 2009.

# **BOX 34**

Realizing INDMO's aims will require substantial funding, greater co-ordination between the organizations involved in training, and capacity-building within INDMO itself. Coordination is key, since not only are employers often not linked in with training organizations and institutions, but tasks are also replicated, since training providers are often unaware of what is being provided by other trainers.

Although lack of appropriate training is less prevalent in the public sector, nonetheless it remains a problem, with Government employers complaining that staff do not have the appropriate skills to perform some of the basic tasks required. Staff are often unclear about the core functions of the agency in which they work, delegation of responsibilities is limited, and lines of communication are often blurred. Processes for decision-making, recruitment and management are not sufficiently transparent<sup>64</sup>. Training in the public sector has thus far relied heavily on the use of international advisers, as the country had relatively few people with modern professional skills for state administration available at independence. Use of these advisers has had mixed results. Much of the training occurs outside the workplace. When workplace training does occur, however, it often results in an over-reliance on substitution by international advisers. Many advisers have the ability to carry out line functions, but often not the language, teaching or capacity-building expertise to communicate these skills adequately. This situation is also compounded by language difficulties, with advisers unfamiliar with *Tetum* or *Bahasa Indonesia*, and staff having only limited knowledge of English or Portuguese.

Stating what needs to be done is fairly straightforward, and it has been reiterated and repeated in many reports<sup>65</sup> – capacity development needs to be more supportive of specific and particular Government initiatives, it must strategically target key roles (such as policy formulation, budget management, and personnel management), and must foster accountability and transparency in decision-making. Achieving these objectives, however, has proved to be difficult. Suggestions for improvement could focus on areas such as: the development of relevant and effective curricula for particular areas of public administration, accompanied by a delineation of specific learning outcomes, teaching methodologies and assessment and benchmarks to be achieved; a clear specification of existing capacities in each area of public administration; and the appointment of advisers with proven communication, training, teaching and appropriate language skills. Lessons should also be learnt from areas in which training has been relatively more successful, for example in the training and advice given by the UN staff and the Peace Dividend Trust and on the process of tendering in the Ministry of Finance, or in the use of radio by UN based journalists, assisting in the provision of a good quality radio service in Timor-Leste in recent years.

# **Infrastructure and Energy Development**

These have been discussed earlier in the TLNHDR. Key issues, in particular, for the development of the non-oil economy are limited supplies, high energy costs, and limited provision and high costs of transport. To meet these needs, the Government has prioritized expenditure on road improvements. The year 2009 was designated the Year of Infrastructure Development, with the focus of expenditure on roads, bridges and improvements in electricity supply. In addressing transport needs, the Government is being assisted by donor funding<sup>66</sup>. Given the substantial funding available for road improvement in the coming years (and the concerns of local communities to be involved in road repair and maintenance), conditions are set to improve. Similarly, given the Government's commitment to provide adequate electricity for every household – through the construction of heavy-oil plants, an integrated energy policy or ultimately by natural gas supplies from the Sunrise field – energy supplies for the non-oil sector will also improve. Faced with a fragile natural environment, infrastructure and energy investments should require environmental impact assessments and the adherence to quality standards for disaster risk mitigation. Maintenance and operations should also be budgeted and enforced, to optimise the durability of, and return on investments.

<sup>64</sup> See, for example, the assessment in Seymour, E., A Profile of Timor-Leste Public Service –2008, Dili.

<sup>65</sup> Recently – and most clearly – in the introduction to an ADB Technical Assistance Report, Democratic Republic of Timor-Leste: Capacity Building to Strengthen Public Sector Management and Governance Skills, Phase III, Dili 2008.

<sup>66</sup> For example, the ADB Road Network Development Sector Project, implemented from 2010-14, is providing a grant of US\$ 46 million (with additional funding from the Timor-Leste government of US\$ 6.9 million) to rehabilitate and maintain 232 kilometres of national roads.

Within the non-oil economy there is substantial room for improvements in the conditions faced by those attempting to establish and operate enterprises. Improving Timor-Leste's climate for business is critical for growth and for job creation. Currently perception of the country's business potential is not particularly favourable. This is reflected in Timor-Leste's ranking on the World Bank's 2011 *Doing Business* Survey, at 174 of 183 countries reporting during 2009-10<sup>67</sup>. The main reasons for the prevalence of this view are: widespread occurrence of expensive and time-consuming administrative procedures; difficulties in resolving contract disputes; high communication costs; high wages relative to other Southeast Asian countries; a serious lack of supporting services such as auditing, accounting and law practices; lack of a credit registry; limited transparency of procurement procedures; insecurity of tenure; difficulties in obtaining credit; and high risks associated with business closure.

Despite the fact that since independence the Government has introduced legislation and regulations in areas such as customs provision, business registration, foreign and domestic investment, aspects of the land law, insurance and business administration, nonetheless, many of the problems outlined above continue to constrain the establishment and operation of businesses.

Until recently, a crucial problem was the perception that the country had an unfavourable taxation system, but recent improvements streamlining the business tax regime, simplifying tax administration and the introduction of a new tax law have addressed most of the criticisms previously made<sup>68</sup>. As a result of these improvements, according to government data, company registrations in Timor-Leste have increased from 1,695 in 2007 to 3,781 in 2009<sup>69</sup>.

# 'Paying Taxes': Timor-Leste

The World Bank Group's 'Paying Taxes' Indicator measures tax systems from the point of view of a domestic company complying with the different tax laws and regulations in each of the national economies of the world. The results are published in the World Bank's annual 'Paying Taxes' report. A company is selected as a case study in each country. It is usually a small to medium-size manufacturer and retailer, deliberately chosen to ensure that its business can be identified with and compared worldwide.

The indicator covers the cost of taxes borne by the case study company and the administrative burden of tax compliance for the firm. Both are important for business. This is measured by three sub-indicators: The total tax rate, the time needed to comply with the major taxes and the number of tax payments.

The Paying Taxes 2010 Report notes that the top reformer in 2009 was Timor-Leste, due to the introduction of a new tax law, the streamlining of its tax regime and the simplification of its tax administration. Timor-Leste was commended for reducing its compliance time by over 50 percent, by rationalising tax regulations, simplifying computation rules and reducing payments. Timor-Leste's overall ranking in the IFC's 2010 Doing Business Report increased from 75 in 2009 to 19 in 2010.

Source: See World Bank: Paying Taxes, 2010; IFC: Doing Business Report, 2010.

BOX 35

<sup>67</sup> The reporting covered the period June 2009-May 2010. In the 2010 Survey, Timor-Leste was again ranked 174 of 183 countries reporting. See World Bank: *Doing Business Survey*, 2010; IFC, World Bank, Washington D.C. Within the Survey, economies are ranked on their ease of doing business, from 1 – 183. A high ranking on the ease of doing business index means the regulatory environment is more conducive to the starting and operation of a local firm. The index averages the country's percentile rankings on 9 topics made up of a variety of indicators giving equal weight to each topic

country's percentile rankings on 9 topics, made up of a variety of indicators, giving equal weight to each topic. 68 Amongst other measures, import duties and sales tax have been reduced to 2.5 percent, and service tax to 5 percent.

<sup>69</sup> See A Path to Peace and Progress, August 2007 – March 2010: The Xanana Gusman Government, Mid Term Achievement Report, Dili, March 2010.

CHAPTER

Some problems will require time to resolve. Relatively high wages result from skilled labour shortages, which will be addressed through improvements in education and training, as outlined earlier in the report. Professionals needed to service an economy, such as lawyers, auditors and accountants also require training. Additionally, the judicial system is overburdened with criminal cases and has little time to deal with issues such as commercial dispute resolution or debt collection. Resolving land disputes will also take time, given the limited capacity of the legal system and the fact that many land holdings have several claimants - from the pre-1975 period, from resettlement and displacement in the years prior to independence, from settlement after 1999, as a result of post-independence displacement, and – most complicated of all – from customary land tenure (see BOX 36). The Government is in the process of finalizing a Transitional Land Law, aiming to provide secure land tenure and a means for resolving land disputes. The law will also set out criteria for issuing land titles. In preparation for this, a programme entitled *Ita Nia Rai* ('Our Land') commenced in October 2007, piloting areas for Timorese to register land claims, to be addressed after the adoption of the Land Law by Parliament. This, however, does not include customary land, which also needs to be recognized in law and specifically protected.

Addressing the land tenure issue is important for potential overseas investors. Since Timor-Leste's Constitution does not permit foreigners to own land, following the passage of the Land Law, the Government will have to introduce a rigorous system of land leasing to secure the position of overseas investors.

# **Customary Land Rights**

Timor-Leste has at least 26 distinct resident language communities. Each language area has its own system of customary land tenures. Customary tenures rely on memory and narrative histories that recall land use practices and ownership claims. All customary attachments to land are embedded within social relationships, most based upon the country's clan (or ancestral house: uma lisan, literally, traditional house) system. This means that all members of an ancestral house trace their affiliations to their maternal or paternal ancestors. Households comprising these ancestral groups are typically geographically dispersed across different communities within a local area. They convene from time to time to celebrate their shared history and identity in ritual ceremonies, marriages and funerals. Each house manages and defends ancestral property as a product of generations of residence and the active management of clan resources. Membership of the ancestral house gives automatic access and use of collective clan lands under the authority of the clan leadership, who are the sources of knowledge of clan land histories and serve as moral arbitrators in matters of dispute. There are two types of clan land -one held and worked communally, the other devolved to constituent lineages (or sibling groups) of the clan. Communal land is rarely sold. *Uma lisan* are usually exogamous. Members marry into other *uma* lisan groups. This movement creates complex networks of affinal (related by marriage) exchange and alliance between house groups and among other benefits provides another important way to gain access to land for agricultural livelihoods.

Source: Adapted from Andrew McWilliam "Customary Land and Legal Regulation in East Timor", SEAP Bulletin, Cornell University, Fall 2008.

# BOX 36

Other problems can be addressed more easily in the short-term. For example: there are continual and widespread complaints about difficulties in registering a business and obtaining work visas. Goods are held up regularly at Dili port. Such problems are due largely to centralized decision-making and this can be addressed by basic training and by responsibilities being given increasingly to lower level staff. It is expensive to start a business: to benefit from incentives such as sales tax exemptions on goods, raw materials, services and fuel, foreigners must invest a minimum of US\$ 100,000, and Timorese nationals are required to invest a minimum of US\$ 5,000. Such barriers can also be addressed in the short-term. As noted earlier in the TLNHDR, a Procurement Commission was established in January 2010. Decree Law 14/2010 to establish the Procurement Commission was

passed and preparatory work started under the former Vice Prime Minister until his resignation in mid-2010. Currently, work is underway under the Ministry of Finance to streamline government procurement policies and systems, including the possibility of establishing a "Procurement Agent" for projects under the Infrastructure Fund established in the 2011 Budget. During 2010, procurement training was supported by several organisations, such as the Peace Dividend Trust, UN, EU and the World Bank, Subsequently, further consideration of the legal framework for recruitment is being undertaken by the Government, focusing on areas such as rules for supplier participation, conditions of contract, dispute resolution and codes of conduct. The TLNHDR has already highlighted the limited possibilities for financing that exist in Timor-Leste. Companies currently suffer from inadequate access to capital, as well from the high costs of institutional financing. Interest rates in Timor-Leste are amongst the highest in the region. The Government is attempting to address this problem, notably by establishing a National Bank, and it is hoped that the benefits of this will accrue to businesses soon. The Commercial Societies Act and the Commercial Registry Code can also be simplified in a relatively short time. Plans to establish a credit registry could be expedited, particularly since this is seen by investors as a major obstacle to investment.

# Meeting the Development Challenge

Timor-Leste has a strong financial resource base from oil revenues to meet its development challenges. In the coming years, it is essential that Timor-Leste build a sustainable basis for economic growth, human development and poverty reduction, through the development of the non-oil economy – in which the role of the agricultural economy is crucial. The urgency of the task is clear: despite improvements in recent years, poverty remains widespread<sup>70</sup> and unemployment is a pressing issue that needs to be addressed.

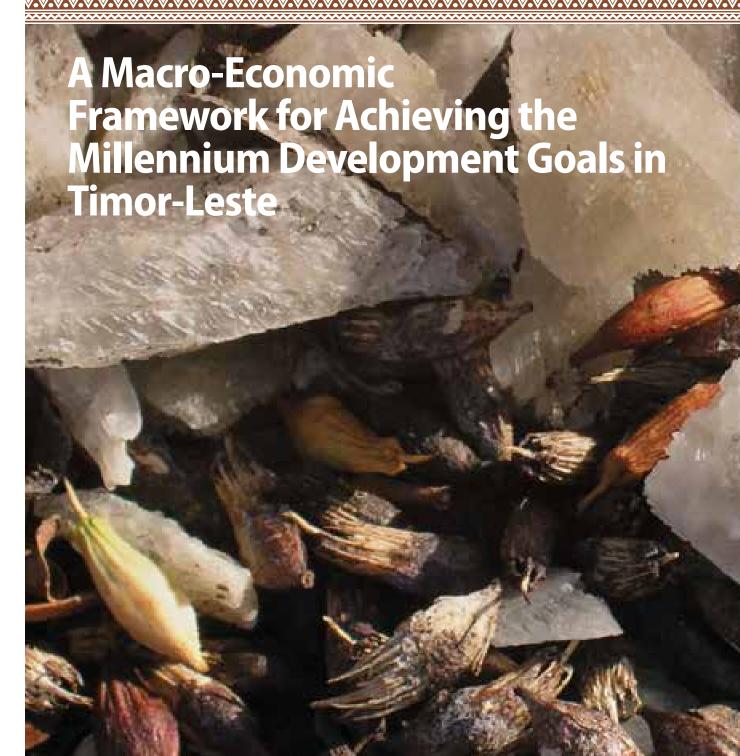
The Government is acutely aware of these problems and has devised priority areas for short-term development, and is drafting both a medium-term framework and the SDP.

To enable the country to be in a position to achieve its MDGs, it is crucial that the macro-economic policies in the medium-term and the SDP both establish a firm basis for pro-poor growth. In the next chapter, the TLNHDR outlines Timor-Leste's MDGs and assesses its current state of progress in achieving them. It then outlines a Macro-Economic Framework and financial strategy, based on a costing of what it will take to achieve the MDGs, at both the national and sectoral levels.

<sup>70</sup> It is important to reiterate that – as stated in Chapters 1 and 2 – evidence for poverty reduction since 2007 is based on predictive assessments and is anecdotal, and that firm evidence on this issue awaits further household surveys and the full results of the 2010 Census, expected in 2011.











# A Macro-Economic Framework for Achieving the Millennium Development Goals in Timor-Leste

The Government of Timor-Leste is in the process of finalizing its long-term *Strategic Development Plan* (SDP) for the country. Simultaneously, the Government has signalled its commitment to the attainment of the MDGs by the establishment of a high-powered Inter-Ministerial MDG Steering Committee. Therefore, it can be expected that achievement of the MDGs will be one of the primary goals in the Plan, especially those goals relating to the reduction of poverty and hunger, increase in school enrolments, elimination of diseases like malaria, and decline in infant and maternal mortality rates.

The objective of this chapter is to develop a long-term Macro-Economic Framework, which is consistent with the attainment of the MDG targets, within the next 15 to 20 years. This framework will highlight, in particular, the implications of different target growth rates in non-oil GDP for the pace of poverty reduction in the country. Given the chosen target growth rates of the economy, the required levels of investment, both public and private, can be calculated. This will enable determination of Plan size, equivalent to the cumulative level of public investment over the plan period. Based on this, a public expenditure framework can be derived and a Financing Plan put in place to implement the SDP. Beyond this, a sectoral allocation of public expenditure can be formulated, which focuses on the attainment of the MDGs.

The SDP needs to follow an inclusive and financially sustainable growth strategy for achieving the MDGs in the most effective manner. A high growth strategy of double-digit growth rates runs the risk of 'overheating' the economy as it hits supply bottlenecks. The resulting higher inflation may negatively impact on poverty. In addition, inequalities could increase in the pursuit of higher growth and the Petroleum Fund could be depleted as the Government makes excessively large withdrawals to finance a high and rising level of public investment. As opposed to this, a moderate-to-high growth strategy, which emphasises rural development, from within a human development framework, will contain inequality and spread more widely the benefits of growth. Such a strategy is also likely to focus more on pro-poor sectoral allocations of public expenditure and less on the overall level, thereby making reduced claims on the Petroleum Fund.

This chapter reviews the experience of developing countries, especially relatively small LDCs like Timor-Leste, in achieving the MDGs during the last decade. Lessons are drawn for Timor-Leste, which is a latecomer, and is only now seriously embarking on the task of meeting the key targets set out in the MDGs. It then reviews the progress made by the country in achieving the MDGs since 2001. With four years of uninterrupted high growth, from 2007 to 2010, Timor-Leste is now ready to proceed on the long-term path of development.

# **The Millennium Development Goals**

The Millennium Declaration was passed in a special session of the General Assembly of the United Nations, in September 2000 and ratified by 192 countries. Since then most developing countries have been attempting to achieve the various targets embodied in the MDGs.

Measurement of progress on the MDGs is rendered difficult by the multiplicity of targets. Inevitably, most countries are likely to be on-track in meeting some of the targets and off-track in others. We have constructed a summary Index of Progress on the most important of the MDGs, which is presented in BOX 37. Given that Timor-Leste is an LDC, attention is largely on the success that other LDCs have had in achieving the MDGs during the last decade.

# Index of Progress over the MDGs (IPROG)

Only six of the eight MDG targets have been considered, due to data constraints. These are:

- 1. Halve, between 1990 and 2015, the proportion of people whose income is below US\$ 1 a day, in purchasing power parity (PPP) terms.
- 2. Halve, between 1990 and 2015, the proportion of people who suffer from hunger. (The indicator that has been used is the prevalence of malnutrition).
- 3. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling. (The net enrolment rate has been used as an indicator).
- 4. Eliminate gender disparity in primary and secondary education, preferably by 2005 and no later than 2015.
- 5. Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate.
- 6. Halve, by 2015, the proportion of people without sustainable access to drinking water and basic sanitation.

For each target, the measure of progress, IPROG, is derived as follows:

**IPROG** = +1 The country is on track to meet the target

**IPROG = 0** The country is making progress but not enough to meet the target

**IPROG** = −1 The country has actually shown deterioration in relation to the indicator

To get an overall measure, IMDG, of progress on MDGs by a country, the IPROGs across the six targets are summed together and divided by 7, since twice the weight is attached to the first target for poverty reduction. Therefore, the minimum value of IMDG is -1 and the maximum value is +1.

# BOX 37

Data availability allowed the construction of a summary Index for 14 LDCs, as shown in TABLE 5. A number of conclusions emerge from the table. Firstly, most LDCs have made little or no progress on the MDGs. Some countries, mostly in Sub-Saharan Africa, have actually regressed, with the Index having a negative value. Asian LDCs, on the other hand, are somewhat more on track with positive, though low, values in the Index. The LDC which has made the greatest progress is Bhutan, with an Index value close to unity (see BOX 38). Low and middle-income developing countries have made substantially greater progress on the MDGs, with countries like China, Vietnam, Thailand and Malaysia well on the way to achieving most of the MDGs. Other countries like India, Pakistan and Indonesia, have made moderate progress on the MDGs. However, some middle-income countries, like Argentina, South Africa and Venezuela are also largely off-track.



# Bhutan's Experience - Success in Achieving the MDGs

Bhutan is located to the north of India, in the foothills of the Himalayas. It has a small population of 0.8 million, close to that of Timor-Leste. It has recently made a successful transition from a monarchy to a democracy. It has successfully balanced its philosophy of Gross National Happiness with the pressures for modernization.

The primary source of growth has been the run-of-the-river hydroelectricity projects including the gigantic Tala Hydroelectric Project, from which most of the electricity generated is exported to India. Per-capita income has grown rapidly, at over five percent per annum. Therefore, Bhutan is also an energy exporter, and revenues from this source are the main source of income, like petroleum is for Timor-Leste. Guaranteed export of electricity to one country, India, has provided a stable source of income.

Bhutan is ranked 132 in the Human Development Index. Almost 25 percent of public expenditure is devoted to health and education. Currently one in four families is poor. Bhutan is on track to achieve most of the MDGs including targets related to poverty, primary school enrolment, gender equality, infant mortality, incidence of TB and malaria, and coverage of improved water supply and sanitation. It is off-track only in reduction of hunger. The Bhutan experience shows how an LDC with rates of growth that are not very high, can be successful in achieving the MDGs.

**BOX 38** 

One of the prime determinants of success in achieving the MDG targets by 2015 appears to be the rate of economic growth of a country (see TABLE 5). Bhutan, for example, is a fast growing LDC, with growth in per capita income in excess of five percent per annum (see BOX 38). Similarly, countries like China and Vietnam have experienced sustained high rates of growth for long periods. Growth dynamism appears to be a necessary, though not sufficient condition for progress on the MDGs. As highlighted in the recent global HDR, countries with similar growth rates have shown different progress on the MDGs.

LDCs like Lao PDR and Mozambique have shown growth in annual per capita income which is above four percent, but they have not made much progress in achieving the MDGs. As opposed to this, a country like Ethiopia has shown somewhat better results, despite slow growth in per capita income, with annual increase being less than two percent. Therefore, not only does growth matter, but the degree of inclusiveness of such growth is also important.

The general conclusions from the review of experience of countries in meeting the MDGs is that LDCs, in particular, are handicapped in meeting ambitious targets such as the halving of poverty by 2015 due to severe financial, institutional and human resource constraints. The substantial increases in food and energy prices in recent years may even have led many affected countries to fall behind in the battle against poverty. It is to be expected that Timor-Leste will experience similar difficulties in achieving the MDGs, although with the onset of petroleum revenues, it does not have the same degree of financial resource limitations as other LDCs.



# CHAPTER

# Extent of Progress on the MDGs by a Sample of Developing Countries

Country	Level of Human Development *	Population (Million)	Per Capita Income Growth Rate (%)	MDGs Index of Progress
LDCs				
Bangladesh	М	156.0	3.1	0.33
Bhutan	М	0.8	5.2	0.83
Burkina Faso	L	14.4	2.5	0.07
Burundi	L	8.2	-2.7	- 0.07
Djibouti	М	0.8	-2.1	- 0.07
Gambia	L	77.2	1.9	0.29
Guinea	L	1.7	0.3	0.29
Lao PDR	М	9.2	1.3	0.29
Madagascar	М	19.2	-0.4	-0.07
Mozambique	L	21.0	4.2	0.14
Nepal	М	28.3	1.9	0.36
Niger	L	13.7		
Tanzania	М	39.5	1.8	- 0.43
Yemen, Rep.	М	21.7	1.6	-0.50
Other Developing Count	ries			
Argentina	Н	39.5	1.5	- 0.25
Brazil	Н	190.1	1.2	0.86
Chile	Н	16.6	3.7	0.67
China	М	1329.1	8.9	0.92
Egypt	М	80.1	2.5	0.75
Indonesia	М	224.7	2.3	0.50
India	М	1164.7	4.5	0.29
Iran	М	72.4	2.5	0.86
Malaysia	Н	26.6	3.4	0.92
Morocco	М	31.2	2.0	0.57
Pakistan	М	173.2	1.6	0.21
South Africa	М	49.2	1.0	- 0.36
Thailand	М	67.0	2.9	1.00
Venezuela	Н	27.7	-0.2	- 0.42
Vietnam	М	86.1	6.0	1.00

\* H = High, M = Medium, L=Low

# The MDGs in Timor-Leste

After independence in 2002, Timor-Leste pledged its support for the Millennium Declaration. The second National MDG Report was released by the Prime Minister in 2009. It highlights progress in achieving the MDG targets up to 2007. TABLE 6 gives a summary of the magnitude of the key targets, the initial values and the latest values of such indicators. It appears that up to 2007 progress was limited. Of the 13 specific targets for the seven MDGs for which data is available, Timor-Leste was off-track on eight, on-track on four and the target had been achieved only for one indicator. The application of the above-mentioned methodology for constructing a summary Index of progress on the MDGs reveals that the magnitude of this Index for Timor-Leste is close to zero. Therefore, at least to 2007, like many other LDCs, the country had difficulties in making significant progress on the MDGs.

# **Extent of Progress on MDGs by Timor-Leste**

Target	Unit	Earliest Year	2007	2009	Target for 2015	Status
Proportion of population below the national poverty line	%	36.0	49.9	41.0	14.0	Off-Track
Prevalence of underweight children under five years of age	%	45.0	48.6	45.0	31.0	Off-Track
Net enrolment ratio in primary education	%	65.1	65.6	82.7	100.0	Off-Track
Proportion of children who reached 5th grade	%	47.0	n.a.	65.9	100.0	Off-Track
Increase in literacy rate of youth (15-24 years)	%	50.0 <sup>a</sup>	85.0		100.0	Off-Track
Increase in Adult Literacy	%	36.0 <sup>b</sup>	58.0		100.0	Off-Track
Elimination of Gender Disparity in Education	%	100.0 <sup>a</sup>	110.0		100.0	Achieved
Reduction in Infant Mortality: Under-five years Under-one year	‰ ‰	125.0 88.0	92.0 60.0	64.0 44.0	96.0 53.0	Achieved Achieved
Maternal Mortality Ratio	<b>‰</b>	660.0	n.a.	450.0	252.0	On-Track
Proportion of births attended by skilled health personnel	%	19.0	19.0	29.6	60.0	On-Track
Incidence associated with malaria	<b>‰</b>	113.0	206.0	113.0	45.0	Off-Track
Proportion of population using an improved drinking water source	%	48.0	63.1	66.0	78.0	On-Track
Proportion of population using an improved sanitation facility	%	31.0	46.8	49.0	60.0	Off-Track

<sup>a</sup> 2001 <sup>b</sup> 2000

Source: RDTL, 2010, Millennium Development Goals 2010: Where we are now! Where do we want to be in 2015?, Government of Timor-Leste.



Due largely to the relatively slow growth in earlier years and a significant contraction in the non-oil GDP following the 2006 crisis, the incidence of poverty increased in Timor-Leste. The incidence of poverty in 2001 was estimated to be about 36 percent of the population, rising to almost 50 percent in 2007. Similarly, during these years an upward trend was witnessed in the extent of malnutrition. The primary school enrolment rate remained more or less unchanged from 1999 to 2007. The MDGs on which Timor-Leste was on-track up to 2007 included completion rates in primary education, youth literacy, infant mortality and coverage of improved sanitation. One MDG target achieved by 2007 was the elimination of gender disparity in education, with enrolment of girls exceeding that of boys in primary school, by 10 percent in 2007.

Overall progress towards achieving the MDGs by Timor-Leste was thus limited up to 2007. However, from 2007 onwards Timor-Leste made improvements in the non-oil economy, with increases in the rate of growth. These have enabled an increase in public expenditure, based on the receipt of petroleum revenues. Economic growth has been enhanced by an increase in agricultural output, particularly of rice (mainly during 2009), and the institution of a food (rice) price subsidy, along with a regime of income transfers to disadvantaged groups, as outlined earlier in the report. Evidence indicates that the rate of progress on the MDGs has improved substantially since 2007, with more goals on track and achieved. Details of Timor-Leste's MDG progress from 2007 to 2009 are presented in TABLE 6, and in more detail in Annex 5. Most notably, the incidence of poverty, which stood at almost 50 percent in 2007, appears to have been reduced as a result of increasing growth rates and increased public expenditure, as outlined in chapter two. As noted earlier in the TLNHDR, a recent World Bank estimate gives a predictive figure of 41 percent poverty incidence for 2009. Additionally, the newfound confidence in making the successful transition from conflict to development and in building an environment of peace and stability undoubtedly has motivated the Government to focus more vigorously on the attainment of the MDGs.

# Alternative Economic Frameworks

This section examines the development strategy required for Timor-Leste to attain its MDGs, at the latest by 2025. On the basis of this strategy, the implied Macro-Economic Framework for implementing the strategy can then be devised. The experiences of other countries show that the strategy that works is one that combines a relatively high rate of growth and ensures that the process of growth is inclusive and sustainable.

A basic issue concerns the rate of growth required of the non-oil economy in order to ensure that the official target of reducing the incidence of poverty to 14 percent is achieved at the latest by 2025. This is an ambitious target, which requires that on average, the incidence of poverty falls in proportionate terms by almost seven percent annually. Such a rate of decline has seldom been achieved, with the exception of China.

The ability to achieve such a rapid decline in poverty, of the type observed earlier in countries like China, Vietnam and Malaysia, hinges crucially not only on the projected growth in per capita non-oil income but also on the magnitude of poverty-to-growth elasticity, which itself depends upon the extent to which the process of growth is inclusive in character. As a region, East Asia and the Pacific, especially China, has achieved remarkable success in bringing down poverty – not only because it has been the fastest growing region in the world but also because the pattern of growth achieved has led to high (absolute) poverty-to-growth elasticities (see BOX 39). Clearly, Timor-Leste will have to replicate the East Asian experience if it is to come close to reducing the incidence of poverty from one in two families in 2007, to one in seven families by 2025.



# **Poverty-to-Growth Elasticity**

The poverty-to-growth elasticity measures the proportionate decline in the incidence of poverty, due to a one percentage point increase in real per capita income. This elasticity for different Asian regions over the last 25 years is given below:

	1980s	1990s	2000-2005
South Asia	-0.5	-0.7	-0.6
East Asia and the Pacific	-1.2	-0.9	-1.4

Source: Pasha (2005).

BOX 39

Given this basic objective, a range of possible growth strategies is available. Optimism about the possibilities of achieving high growth rates of non-oil GDP in Timor-Leste has been greatly heightened by the performance of the economy since 2007. As highlighted earlier, based on Government data, an average growth rate in excess of 10 percent has been achieved. The initial stimulus provided to growth was the multiplier-effect of the quantum jump in public expenditure, as a consequence of the inflow of petroleum revenues. Thus far, the public sector has acted as the 'engine of growth'. During 2009, however, there are indications of a new-found dynamism in the private sector, with growth in sectors such as construction, transport and telecommunications.

The key question is, can the economy of Timor-Leste sustain such high rates of growth on a long-term basis? Timor-Leste remains an LDC with severe human resource constraints and limited institutional development. The private sector is small and nascent in character, and the amount of investment is limited by the high costs of doing business, the small size of the domestic market, and an underdeveloped financial sector. Continued high rates of growth run the risk of 'overheating' the economy due to rapid increases in the prices of non-tradable goods and services like local building materials and skilled labour. Also, the economy could hit infrastructural bottlenecks with respect to power, transport and water, given the lags in implementation of large, capital-intensive projects.

Perhaps one of the more critical factors is that fast growth will require high levels of public investment, which may necessitate further withdrawals from the Petroleum Fund. Projected levels of ESI are essentially flat and may decline as a percentage of the non-oil GDP. Therefore, it may be the case that a more rapid growth strategy can only be sustained by withdrawals that exceed the ESI level, which has already been the case in some years recently. The relative advantages and disadvantages of various strategies for withdrawal above ESI have been discussed earlier. As was noted, there is also a real danger that if such a strategy is adopted, the Petroleum Fund could be depleted in years to come, and unless new reserves such as those in the Greater Sunrise field are successfully exploited there will be little left for future generations, when existing oil and gas reserves are exhausted.

A further risk associated with fast growth – which is often not highlighted adequately – is that Timor-Leste is a highly import-dependent economy and that the large trade deficit has been financed by petroleum revenues. As the economy grows, import demand could rise rapidly and require foreign exchange financing beyond the ESI. In other words, the balance of payments could also become unsustainable.

Therefore, there is a need to focus on a sustainable growth strategy which is sufficiently inclusive in character and focuses on investing in people, promoting basic food security by concentrating on



agriculture and rural development, and which strives to reduce inequalities, especially among the different regions of Timor-Leste.

Following Article IV consultations in mid-2009, the IMF made medium-to long-term macroeconomic projections for Timor-Leste. Inevitably, the primary concern of the IMF is with financial sustainability. Consequently, it projects public finances in a way that ensures that annual withdrawals to 2020 are within limits imposed by the ESI. As such, it expects that government capital expenditure will be halved from over 41 percent of the non-oil GDP in 2010 to 21 percent by 2014, as shown in TABLE 7.

Given an incremental capital-output ratio of close to six (see BOX 40) the IMF accordingly projected a non-oil GDP growth rate of 7.5 percent in 2010, falling to 5.9 percent by 2014 and to 3.9 percent by 2020. With an assumed poverty-to-growth elasticity of minus 1.3, close to that experienced by countries of East Asia and Pacific (see BOX 39), this implies that the incidence of poverty could fall to 32 percent by 2015 and to 28 percent by 2020. However, the target of reducing poverty incidence to 14 percent will not be attained in this scenario till well after 2030.



# A Comparison of Alternate Macro-Economic Scenarios

	IMF <sup>a</sup>			'Moderate-to-High Grov Scenario		
	2010	2014	2020	2010	2014	2020
Growth Rate of Non-Oil GDP (%)	7.5	5.9	3.9	9.0	9.0	7.0
Rate of Inflation (%)	4.0	4.0	4.0	5.0	5.0	3.0
Investment as % of Non-Oil GDP	54.0	33.0	n.a	49.5	49.5	39.2
Government Capital Exp as % of non-oil GDP	41.0	21.0	n.a	37.5	31.5	18.7
Private (+donors) Investment as % of non-oil GDP	13.0	12.0	n.a	12.0	18.0	20.5
Recurrent Exp as % of non-oil GDP	53.0	39.0	n.a	64.0	45.1	33.1
Domestic Revenue as % of non-oil GDP	9.0	13.0	n.a	12.5	20.0	25.0
Non-Oil Fiscal Balance as % of GDP	- 85.4	- 47.0	- 39.3	-81.5	- 56.5	- 26.8
Petroleum Fund Withdrawal (US\$ Million)	560.0	460.0	n.a	560.0	612.0	612.0
Crude Oil Price (US\$ per barrel)	75.0	83.0	n.a	75.0	72.0	77.0
Balance in Petroleum Fund (US\$ Billion)	6.2	13.4	24.1	6.5	11.8	19.4

<sup>&</sup>lt;sup>a</sup> Following Article IV Consultation in 2009 n.a not available

# **Incremental Capital-Output Ratio in Small LDCs**

The incremental capital-output ratio (ICOR) is the ratio of the investment rate (as a percentage of the GDP) to the real GDP growth rate of an economy.

The ICOR is likely to be high in small, underdeveloped economies because the efficiency of capital is retarded by the lack of human resources and institutional capacity.

Further, lumpy capital-intensive projects may remain underutilized due to lack of economies of scale.

Some observed ICORs in relatively fast-growing LDCs are as follows:

Country	Period	Average GDP growth rate (%)	ICOR
Bhutan	2002-2006 1997-2001	8.0 6.5	6.2 7.2
Solomon Islands	2002-2006	5.0	6.3
Mauritania	2002-2006	6.0	5.9
Lao PDR	2002-2006	6.5	4.9
Lesotho	1992-1996	5.0	12.1
Guinea-Bissau	1987-1991	5.0	7.7
Timor-Leste	2006-2009	6.5	6.0

Based on the above, a projected ICOR of six appears to be justified for Timor-Leste, especially as it moves to a capital-intensive stage of development with large public investment in infrastructure like power, highways, etc.

# BOX 40

The IMF projections are perhaps too conservative in character and not fully consistent with the attainment of the MDGs within a reasonable timeframe. Petroleum Fund withdrawals in this scenario, in fact, fall from US\$ 560 million in 2010 to US\$ 460 million in 2014. Even the available 'fiscal space' is not fully utilised for stimulating growth and enhancing levels of public expenditure for achieving the MDGs.

Consequently, an alternative Macro-Economic Framework, which is consistent with the achievement of most of the MDGs, is developed in this chapter. The growth strategy, which drives this framework can be characterized as one of 'moderate-to-high' growth, with a non-oil GDP growth rate of nine percent from 2010 to 2014, eight percent from 2015 to 2019 and seven percent from 2020 to 2024. The resulting projections for the incidence of poverty are 27 percent in 2015, 19 percent in 2020 and 14 percent in 2025. This implies that the target of poverty reduction will be attained by 2025. The initial growth is in line with the recent growth in 2010 of close to 9 percent. Thereafter, the growth rate is projected to fall somewhat given emerging resource constraints in the public sector, especially in terms of withdrawals from the Petroleum Fund. The proposed Macro-Economic Framework is presented in the next section.



# An MDG-Consistent Macro - Economic Framework

This section develops a Macro-Economic Framework for the next three five-year-Plan periods; 2010 – 2014, 2015 – 2019, and 2020 – 2024, respectively.

# Non-Oil GDP

Projected non-oil GDP is shown in TABLE 8. The projections indicate that the economy is likely to be about three times larger, in real terms, in 2024. The per capita income level of US\$ 1000 will be attained in the year 2015, according to these projections.

# Projection of Non-Oil GDP in the Moderate-to-High Growth Scenario

	At constant prices of 2009 (US\$ Million)	Price index (base year of 2009)	At current prices (US\$ Million)	Non-oil per capita income (US\$)
2009	600.0	1.000	600.0	545
2010	654.0	1.050	686.7	606
2011	712.9	1.102	785.6	673
2012	777.0	1.158	899.8	748
2013	846.9	1.216	1029.8	832
2014	923.2	1.276	1178.0	923
2015	997.1	1.327	1323	1011
2016	1076.8	1.380	1486.0	1104
2017	1163.0	1.435	1668.9	1209
2018	1256.0	1.493	1875.2	1322
2019	1356.5	1.552	2105.3	1445
2020	1451.4	1.598	2319.3	1553
2021	1553.1	1.647	2558.0	1668
2022	1661.8	1.696	2818.4	1796
2023	1778.1	1.747	3106.3	1931
2024	1902.6	1.799	3422.8	2077

TABLE 8

# Investment

The projected investment requirements, with an ICOR of six, are presented in TABLE 9. The level of investment is projected at close to 50 percent of the non-oil GDP in the first five year plan period, falling to below 45 percent in the second plan period and to 39 percent in the third plan period. The distribution of investment between the public and private sectors is given in TABLE 10. The private sector is expected to play an increasingly important role in expanding the growth capacity of the economy. As such, the share of private (plus donor) investment in total investment is projected to reach 46 percent by 2019. The implied level of government capital expenditure is also given in TABLE 10.



# Projected Level of Investment in the Moderate-to-High Growth Scenario

	At constant prices of 2009 (US\$ Million)	Price index	At current prices (US\$ Million)	Investment as % of non-oil GDP
2010	324.0	1.050	340.2	49.5
2011	353.4	1.102	389.4	49.5
2012	384.6	1.158	445.4	49.5
2013	419.4	1.216	510.0	49.5
2014	457.8	1.276	584.2	49.5
2015	443.4	1.327	588.4	44.5
2016	478.2	1.380	659.9	44.5
2017	517.2	1.436	742.7	44.5
2018	558.0	1.493	833.1	44.5
2019	603.0	1.552	935.9	44.5
2020	569.4	1.598	909.9	39.2
2021	610.2	1.647	1005.0	39.2
2022	652.2	1.696	1106.1	39.2
2023	697.8	1.747	1219.1	39.2
2024	747.0	1.799	1343.9	39.2

TABLE 9

# Distribution of Investment between Public and Private Sectors in the Moderate-to-High Growth Scenario

	Le Private	vel of Investme (% of GDP) Public	nt Total	Government Capital Expenditure At current prices (US\$ Million)	Plan Size
2010	12.0	37.5	49.5	257.5	
2011	13.5	36.0	49.5	282.8	
2012	15.0	34.5	49.5	310.4	1562
2013	16.5	33.0	49.5	339.8	
2014	18.0	31.5	49.5	371.1	
2015	18.5	26.0	44.5	344.0	
2016	19.0	25.5	44.5	378.9	
2017	19.5	25.0	44.5	417.2	
2018	20.0	24.5	44.5	459.4	2105
2019	20.5	24.0	44.5	505.3	
2020	20.5	18.7	39.2	433.7	
2021	20.5	18.7	39.2	478.3	
2022	20.5	18.7	39.2	527.0	
2023	20.5	18.7	39.2	580.9	2660
2024	20.5	18.7	39.2	640.1	
				TOTAL	6327

# **Recurrent State Expenditure**

Growth in recurrent expenditure in real terms is expected to be restrained through economies in administrative expenditure and the scaling down of subsidies, at three percent per annum between 2010 and 2014; at 2.5 percent per annum between 2015 and 2019; and at two percent per annum between 2020 and 2024. The resulting projections of recurrent expenditure are given in TABLE 11.

# **Domestic Non-Oil Revenue**

Domestic revenue is projected to be buoyant, approaching 25 percent of non-oil GDP by the end of the second plan period in 2019, as shown in TABLE 11. Based on the projections for revenue and expenditure, the outlook for the State Budget is also presented in the same table. Withdrawals from the Petroleum Fund are restricted to the maximum of the ESI, with the price of crude oil at US\$ 75 per barrel in 2010, rising to US\$ 82 by 2024, and with inflation rising in line with the value of the Fund. The State Budget of 2010 assumes an ESI of about US\$ 500 million, based on an oil price of US\$ 62 per barrel in 2010. In mid-June 2010, the oil price stood at US\$ 72 per barrel. The aim of having a constant withdrawal from the Petroleum Fund from 2012 onwards is to ensure a lasting stream of transfers and implied that reductions in remaining petroleum reserves would be offset by a build-up of financial assets. The approach had the benefit of being intuitively simple, appealing from the point of view of intergenerational equity, and offering a reasonably stable source of income to the budget. In practice, the calculation is more complicated than it might appear. It depends on uncertain forecasts for oil prices and volumes, is highly sensitive to the discount factor, and there is no assurance that investments will earn a 3 percent real rate of return. If all assumptions entering into the calculations prove correct then ESI will remain constant in real terms from one year to the next. However, if actual values differ, as invariably happens, then ESI will fluctuate from year to year. This volatility will gradually diminish as financial assets grow relative to remaining future petroleum revenue.

	Domestic Revenue	Withdrawal from Petrol. Fund <sup>b</sup>	Total Revenue	Recurrent Expenditure	Capital Expenditure	Total Expenditure	Deficit
2010	87.3	549.6	636.9	392.0	244.9	636.9	0.0
2011	110.0	592.3	702.3	419.5	282.8	702.3	0.0
2012	144.0	612.0	756.0	454.1	310.4	764.5	-8.5
2013	185.4	612.0	797.4	491.1	339.8	830.9	-33.5
2014	235.6	612.0	847.6	530.8	371.1	901.9	-54.3
2015	277.9	612.0	889.9	565.8	344.0	909.8	-19.9
2016	326.9	612.0	938.9	603.2	378.9	982.1	-43.2
2017	383.8	612.0	995.0	642.9	417.2	1060.1	-65.1
2018	450.0	612.0	1062.0	685.6	459.4	1145.0	-83.0
2019	526.0	612.0	1138.0	730.5	505.3	1235.8	-97.8
2020	579.8	612.0	1191.8	767.2	433.7	1200.9	-9.1
2021	639.5	612.0	1251.5	806.5	478.3	1284.8	-33.3
2022	704.6	612.0	1316.6	847.2	527.0	1374.2	-57.6
2023	776.6	612.0	1388.6	890.1	580.9	1471.0	-82.4
2024	855.7	612.0	1467.7	934.9	640.1	1575.0	-107.3
					Cumula	ative Deficit	- 695



The outcome for the State Budget demonstrates the fiscal sustainability of the moderate to-high growth strategy. The size of the residual deficit is small in most years, at below US\$ 100 million. Cumulatively, over the 15-year period, the deficit is estimated at below US\$ 0.7 billion. This is within the bounds of available concessional finance, especially from international multilateral agencies or bilateral donors. The Petroleum Fund is not subjected to exceptionally large withdrawals and is projected to reach a level of US\$ 19.4 billion by 2020.

# Plan Size

The derived Plan size (total public investment) in the first Plan period (2010-2014) is US\$ 1.6 billion; in the second plan (2015-2019) it is US\$ 2.1 billion and in the third plan period (2020 – 2024) it is US\$ 2.7 billion. Subject to the adoption of an inclusive growth strategy, focusing on investment in rural development, human development and balanced spatial development, the proposed strategy can lead to the achievement of most MDG targets by 2025, particularly that of bringing the incidence of poverty down to 14 percent of the population.

# **Plan Implementation**

As outlined earlier in the report, successful implementation of the Plan will require the adoption of policies and measures in a number of critical areas, as follows:

- i Promotion of the private sector through deregulation and simplification of procedures to reduce the costs of doing business; improvement in the operations of the land market through proper land titling and registration; enhanced access to credit, through the establishment of the National Development Bank (NDB) and the Timor-Leste Investment Corporation; and the establishment of vocational training facilities to improve the skills of the labour force.
- ii Greater domestic resource mobilization, firstly through measures to increase tax payers' compliance and reduce tax evasion (including under-invoicing of imports), and secondly, by reforms to broaden the tax base (including the possible introduction of VAT) and, thirdly, by the introduction and effective collection of user charges on public services provided.
- iii Economy in recurrent expenditure especially by reducing inefficiencies in the consumption of goods and services by line departments and by restricting the growth in salaries and perks of senior officials.
- **iv** Improvement in the capacity for execution of projects by, firstly, strengthening the line departments and autonomous agencies to design, execute and monitor projects, and secondly, by the delegation of financial authority for spending from the Minister of Finance to line departments, with appropriate controls to ensure transparency and accountability and, thirdly, the establishment of a high level inter-ministerial committee for the approval of projects with proper economic justification and within the framework of the forthcoming SDP.

# **Budget Priorities and Allocations**

# **Public Expenditure**

The evolution of the General State Budget of Timor-Leste since 2008 is highlighted in TABLE 12. Total outlay is estimated at US\$ 564 million in 2008. This increased sharply in 2009 and crossed US\$ 900 million. The budget for 2010 envisaged a total outlay of US\$ 766 million, implying potentially some decline in the level attained in 2009. However, the bulk of the decline of US\$ 93 million is in donor financing.



# Timor-Leste CHAPTER

	2008 Estimated	2009 Budget	2010 Budget
Income	638.5	901.8	765.6
Domestic Revenue	58.5	91.1	87.3
Oil Fund Financing	396.0	589.0	502.0
Changes in Treasury Cash Balances	-74.4	0.7	47.6
Financing by Donors	184.0	221.0	128.7
Recurrent Expenditure	477.0	642.5	513.3
Share (%)	84.6	71.3	67.0
Capital Expenditure	87.1	259.3	252.3
Share (%)	15.4	28.7	33.0
Total Expenditure	564.1	901.8	765.6

# TABLE 12

Within the overall budget, much of the increase in 2009 is likely to have been in capital expenditure, due partly to the carryover of funds from 2008 which enabled the Government to launch the Referendum Package, outlined earlier in the report. Consequently, the share of capital expenditure in the Budget doubled in 2009. It is expected that the level of capital expenditure will be sustained at above US\$ 250 million in 2010, particularly with a growth rate of at least nine percent in the non-oil GDP being achieved, as indicated in TABLE 10.

Turning to the income side of the Budget, the dependence on oil-funded financing continues to be high, with a share of almost two thirds of income in 2010. Donors are expected to contribute US\$ 129 million to projects, which they directly execute. The remainder, about 18 percent, is projected from domestic tax and non-tax revenues and by changes in treasury cash balances. A significant fiscal effort was made to raise domestic tax revenues in 2009, with a jump of 56 percent. This may also reflect the buoyancy of the tax bases during that year. Withdrawal from the Petroleum Fund in 2010 is pitched at just over US\$ 500 million, corresponding to the ESI. However, as indicated earlier, this may be rather conservative, given the assumptions about the future price of crude oil and gas.

The composition of recurrent expenditure by type is given in TABLE 16. The largest single head is the cost of consumption of goods and services by line departments and autonomous agencies, with a share of almost 40 percent in the 2010 Budget. Next in importance is expenditure on donor projects, followed by government salaries and wages. It is important to note the relatively large share of public transfer payments in the budget, approaching US\$ 86 million in 2010.

	2008 Estimate	% Share	2009 Budget	% Share	2010 Budget	% Share
Line Departments	189.8	40	301.6	47	306.0 <sup>a</sup>	59
Salaries and Wages	50.3	11	92.1	14	98.0	19
Goods and Services	139.5	29	209.5	33	208.0	40
Public Transfer Payments	81.1	17	96.4	15	86.0	17
Operational Expenditure by Autonomous Agencies	39.1	8	41.5	6	n.a	
Donor Projects	167.0	35	203.0	32	122.0	24
Total	477.0	100	642.5	100	514.0 <sup>b</sup>	100

As far as execution responsibilities for the capital budget are concerned, the vast majority – over 90 percent – is by Government line departments and autonomous agencies, with the remainder by donors. There appears to have been a progressive decline in capital outlay on projects by donors in recent years.

# **Budget Priorities**

Turning to the sectoral distribution of public expenditure, a classification is presented in BOX 41. The resulting estimates are given in TABLE 14. A number of conclusions emerge from the table. The share of overhead costs (costs of the executive branch of government) is relatively high, at about 17 percent of the budget. This is, of course, an indication of the lack of economies of scale in the administration of a small country such as Timor-Leste. In the 2010 Budget the largest share, at over 26 percent, is in allocations for the development of the infrastructure. Next in order of importance is expenditure on social services, largely education and health, which accounts for 16 percent of the Budget in 2010. Significant declines in shares are proposed in two types of expenditure, namely social protection and directly productive activities. For example, the expected allocation in 2010 for agriculture is only two percent of the Budget. It remains to be seen whether the significant change in public expenditure priorities towards physical infrastructure, and away from directly productive activities and social protection, will lead to more or less growth, and whether such growth will be more or less inclusive in character.

	State E	State Budget <sup>a</sup>			
	2009 Budget	2010 Budget	2010 Budget		
Executive	21.5	21.9	20.3		
Legislative	2.0	2.5	2.2		
Judiciary	3.0	2.8	3.6		
Social Protection <sup>b</sup>	12.4	9.7	8.6		
Directly Productive Activities	14.5	9.3	9.2		
Social Services	14.0	15.6	18.3		
Physical Infrastructure	19.5	26.1	24.7		
Defence and Security	9.6	7.1	8.9		
Autonomous Agencies	2.9	4.6	3.5		
Others	0.6	0.4	0.5		
Total	100.0	100.0	100.0		

<sup>&</sup>lt;sup>a</sup> Recurrent and capital expenditure combined by government line departments and autonomous agencies, excluding donors b Does not include transfers and subsidies which are shown also in the heads of executive and economy and development

# CHAPTER

# **Classification of Public Expenditure**

From the expenditure heads given in the State Budget the economic/sectoral classification of expenditure as follows:

## **Executive**

- President of the Republic
- Council of Ministers
- Finance
- Appropriations for all governments
- State Admin and Territorial Organization
- · Office of the Prime Minister
- · Foreign Affairs
- Economy and Development
- Public Service Commission

# Legislative

National Parliament

National Electoral Commission

# **Justice**

- Justice
- Prosecutor General
- Anti-Corruption Commission
- Tribunals
- Ombudsman

## **Social Protection**

- · Vocational training and Employment
- Social solidarity

- Promotion of Gender Equality
- Youth and Sports

# **Directly Productive**

- Tourism, Commerce and Industry
- Natural Resources

Agriculture

## **Social Services**

• Health

• Education

# Infrastructure

• Energy Policy

Infrastructure

# **Defence and Security**

- Defence and Security
- Autonomous agencies
- Radio/Television

- · National Police
- Other

# BOX 41

TABLE 14 also highlights the sectoral shares in expenditure when allocations by donors are included. These allocations are declining in importance over time, as highlighted earlier. It is expected that in 2010 sectors in which donors will account for more than one third of expenditure are defence and security, and justice and social services. The share of public expenditure devoted to social services will rise from 16 percent to 18 percent in 2010, following the inclusion of donors.

The level of public expenditure on social services is generally considered very important in relation to determining rates of progress on MDGs, particularly for goals related to poverty, school enrolment, literacy, gender equality and child and maternal mortality. As such, it is useful to refer to the public expenditure priorities of countries that have made progress on the MDGs, to see if Timor-Leste is according more or less the same priority to social services as these countries. TABLE 15 presents a comparison among countries of the percentage of public expenditure devoted to health and education respectively. Countries which have an Index of Progress (see BOX 37) on the MDGs of over 0.5 are generally spending an average of 28 percent of their budgets on social services, with a share for education roughly twice that of health. In 2009, the State Budget of Timor-Leste allocated 14 percent to social services. Based on the experience of other countries it appears, therefore, that not enough priority is being accorded to education and health. If Timor-Leste is to move faster in achieving the MDGs in these areas, then the share of social services in the budget will have to be virtually doubled.

# 5

	Index of Progress	% of	% of Public Expenditure	
	on MDGs <sup>a</sup>	Health	Education	Total
Brazil	0.86	7.2	14.5	21.7
Chile	0.67	14.1	16.0	30.1
China	0.92	9.9	18.8	28.7
Egypt	0.75	7.3	12.6	19.9
Indonesia	0.50	5.3	17.2	22.5
Iran	0.86	9.2	19.5	28.7
Malaysia	0.92	7.0	25.2	32.2
Morocco	0.57	5.5	26.1	31.6
Thailand	1.00	11.3	25.0	36.3
Vietnam	1.00	6.8	17.1	23.9
Average of 10 countries above	0.81	8.4	19.2	27.6
Timor-Leste (2009)	_	4.8	9.2	14.0

<sup>&</sup>lt;sup>a</sup> Countries with index value of 0.5 or above, as given in Table 8

TABLE 15

# **Sectoral Growth Strategy**

The moderate-to-high growth strategy recommended for achieving the MDGs by 2025 involves achieving a nine percent growth rate from 2010 to 2014, eight percent from 2015 to 2019 and seven percent from 2020 to 2024. This section describes the potential sources of growth in the Timorese economy and the major policies and programs required to realize this potential.

TABLE 16 gives the projected sectoral growth rates in the non-oil economy to 2024. Over the next 15 years it is expected that Timor-Leste will witness the same type of structural transformation during the process of development as other countries, whereby the importance of the primary sector (agriculture) declines and that of the secondary (industrial) sector and the tertiary (services) sector increases. Consequently, it is likely that the share of agriculture will decline from about 32 percent of the non-oil economy to 24 percent by 2024. Simultaneously, the share of industry could increase from 16 percent to 20 percent and that of services from 52 percent to 56 percent.

The leading (i.e. relatively fast growing) sectors of the economy are expected to be manufacturing, private construction, transport and communications, financial and other services and public utilities. With the rise in household incomes and the growth in consumer demand, there could be an increase in private investment in light consumer goods industries, especially if access to concessional credit is provided, gaps in infrastructure are removed, and a modicum of protection is provided to local industry through the import tariff regime. Also, if energy (oil and gas) supplies become available at below world prices, then in the long run Timor-Leste could acquire a degree of comparative advantage in energy-intensive exports.

# **Projected Sectoral Growth Rates in the Non-Oil Economy**

		(	Growth Rates (%	)	
	Share in Non-Oil GDP in 2008 <sup>a</sup>	2009 <sup>b</sup> to 2014	2015 to 2019	2020 to 2024	Share in Non-Oil GDP in 2024
Agriculture, Forestry, Fishing	31.8	7.5 <sup>C</sup>	6.0	5.0	24.0
Food Sector	22.4	7.5 <sup>C</sup>	5.5	4.5	16.1
Commercial Sector	9.4	7.5	7.0	6.0	7.9
Industry	15.8	11.0	10.0	9.0	20.3
Mining and Quarrying	0.5	9.0	8.5	7.5	0.5
Manufacturing	2.4	10.0	11.0	9.0	3.2
Private Construction	4.6	13.5 <sup>C</sup>	12.5	10.0	8.5
Public Construction	8.4	9.5	8.0	6.0	8.2
Services	52.3	9.5	8.5	7.5	55.7
Transport and Communication	7.2	13.0 <sup>C</sup>	12.0	10.5	12.5
Wholesale and Retail Trade	7.4	13.0 <sup>C</sup>	11.0	9.5	11.7
Financial and Other Services	7.7	13.5	10.0	8.5	11.2
Government Services	28.6	6.0	5.0	4.0	18.0
Public Utilities	1.4	13.0	10.0	9.5	2.2
Non-Oil GDP	100.0	9.2	8.0	7.0	100.0

<sup>\*</sup> Rounded off to the nearest half percentage point /  $^{a}$  Because GDP data not finalized yet for 2009 /  $^{b}$  Growth rate higher than 9% because of expectation of high growth rate in 2009 /  $^{c}$  Sectors which are likely to have performed well in 2009

# TABLE 16

Private construction is already beginning to take off and there is a boom in residential and other construction in Dili. Such activity is likely to gain further momentum, as private investment increases in hotels and housing. Households in Timor-Leste are likely to plough back a large part of their increased incomes and savings into improving the quality of their housing stock. This will be facilitated by improvements in the functioning of the land market and greater access to mortgage finance, as outlined earlier in the report.

The transport and communications sector could receive a substantial stimulus with public investments in infrastructure, in developing port facilities, the airport and roads. The development of tourism, as outlined earlier, could also increase transport demand. In addition, deregulation of the telecommunications sector could result in a considerable increase in the use of mobile phones, as has been observed in other countries. The wholesale and retail trade sector of Timor-Leste is likely to receive a boost, as the agriculture sector develops from subsistence farming to the marketing of cash crops.

The financial sector of Timor-Leste is currently 'repressed'. As greater emphasis is placed on private sector development, new financial institutions are likely to emerge, such as the National Development Bank (NDB) and the Timor-Leste Investment Corporation. Additionally, a deepening of the financial sector will lead to the emergence of banking activities in the rural-urban interface. Finally, public utilities will assume greater importance as large investments are made to expand the availability of power, gas and water.

Priority to agriculture and rural development will ensure the inclusive nature of the growth process. With a growth rate above four percent in the food sector, primarily through enhancements in yields, food security can be ensured initially by an achievement of greater self-sufficiency in rice

production. Beyond this, as argued earlier in the report, the agricultural sector is expected to diversify towards cultivation of cash crops and the development of commercial agriculture.

The second dimension of the inclusive growth strategy will be the enhanced priority for investment in human resources. As highlighted in the previous section, Timor-Leste will have to substantially increase the share of public expenditure for health and education. Employment prospects, especially for youth, should improve with greater activity in the private sector, in areas such as manufacturing, construction, wholesale and retail trade and financial services. The public sector will gradually cease to act as the 'residual employer'.

Finally, balanced spatial development will also have a critical role in the inclusive growth strategy. Improved accessibility resulting from the development of a road network and decentralization of government to the municipal level should help in reducing regional disparities and possibly limiting the pressure of rural-urban migration, especially to Dili.

# Sustainable and Inclusive Growth for Poverty Reduction

This chapter has outlined a long-term Macro-Economic Framework for Timor-Leste, which is consistent with the attainment of its MDGs by 2025, especially the target for poverty reduction. The framework is developed on the basis of a growth strategy which targets an average growth rate of eight percent in the non-oil economy over the next 15 years. Such a strategy is feasible, financially sustainable and will not place undue demands on the Petroleum Fund, provided efforts are made to mobilize domestic resources, promote private sector development, and there is restraint on recurrent state expenditure.

This chapter has also emphasized the need to make the growth process more inclusive by focusing on human development, rural development and balanced spatial development. This will require major changes in budget priorities and allocations, with significant increases in the share of public expenditure going to social services and to directly productive sectors like agriculture, accompanied by a decline, over time, in the share of the overhead costs of government.

Following 2006 and the subsequent three years of high growth, Timor-Leste is poised to make a substantial leap forward. The adoption of a sustainable and inclusive moderate-to-high growth strategy for achieving the MDGs in the forthcoming *Strategic Development Plan* can assist in the devising of strategies for promoting economic growth, facilitating human development and reducing current levels of poverty. The successful implementation of such strategies is essential for ensuring prosperity for the people of Timor-Leste, within the next two decades.



# Annex 1 Bibliography

- ADB, 2005, Technical Assistance to East Timor for Transport Sector Improvement, Manila
- ADB, 2008, Democratic Republic of Timor-Leste: Capacity-Building to Strengthen Public Sector Management and Governance Skills, Phase III, Dili.
- ADB, 2008, Timor-Leste: Country Environmental Analysis, Manila.
- ADB and Ministry of Infrastructure, Timor-Leste Government, 2009, Preparing the Road Network Development Plan, Dili.
- Acemoglu, D, Johnson, S, and Robinson, J, 2003, "An African Success Story:
  Botswana", in D.Rodrick (ed), In Search of Prosperity: Analytic Narratives on Economic Growth, Princeton University Press, Princeton NJ, pp 80-119.
- Amnesty International, August 2009, We Cry for Justice: Impunity Persists 10 Years On in Timor-Leste, London, United Kingdom.
- Anderson, Tim, December 2008, Solidarity Aid: the Cuba-Timor-Leste health programme, The International Journal of Cuban Studies, London Metropolitan University, United Kingdom.
- Araujo, Rui Maria de, November 2008, Planning, Budgeting and Financial Management Reforms as a means to Improve Budget Execution to promote Economic Growth and support Poverty Alleviation initiatives in Timor-Leste, Paper presented to the Timor-Leste Government State Council, Dili.
- Ballantine, K, 2003, "Beyond Greed and Grievance: Reconsidering the Economic Dynamics of Armed Conflict", in K. Ballantine and J Sherman (eds), The Political Economy of Armed Conflict: Beyond Greed and Grievance, Lynne Reiner, London, pp. 259-283.
- Bevan D, Collier, P, Gunning, J, (1999), *The* Political Economy of Poverty, Equity, and Growth: Nigeria and Indonesia, Oxford University Press, Oxford.
- Belton, Suzanne, 2009, Maternal Mortality, Unplanned Pregnancy and Unsafe Abortions in Timor-Leste: A Situational Analysis, Alola Foundation, Dili.
- Borges, Lorenco and Science, Springer, 2009, Improving food security through agricultural research and development in Timor-Leste (online).

- Brown, Graham K, 2008, Human Development and Conflict: Theoretical and Empirical Linkages. Technical Paper for the 2010 TLNHDR.
- Bulato, R, 2006, Policy Note on Population Growth and its Implications for Timor-Leste, World Bank, Dili.
- CAVR, 2005, Chega! The Report of the Commission for Reception,Truth and Reconciliation in Timor-Leste, Dili.
- Centre of Studies for Peace and Development (CEPAD) and Interpeace, August 2009, Timor-Leste: Voices and Paths to Peace, Dili.
- Chaudhry, K, 1994, "Economic Liberalisation and the Lineages of the Rentier State", Comparative Politics, 27 (October), pp 1-25.
- Collier, Paul, 2008, The Bottom Billion: Why the Poorest Countries Are Failing and What Can Be Done About It, Oxford University Press.
- Conroy, John, 2005, Timor-Leste: Access to Finance and Working Capital, World Bank, Dili.
- Curtain, Richard, 2009, Skills in Demand: Identifying the Skills of Enterprises in Construction and Hospitality in Timor-Leste, AusAid, Dili.
- Curtain, Richard, May 2009, Employment and Training: Preparing Young People for the Labour Market", Unpublished paper, Dili.
- Davis, G.A, 1995, "Learning to Love the Dutch Disease: Evidence from Mineral Economies", World Development, 23 (10): pp 1765-80.
- Desoysa, I, 2000, "The Resource Curse: Are Civil Wars Driven by Rapacity or Paucity?", in M.Berdal and D.Malone (eds), *Greed and Grievance: Economic Agendas in Civil Wars*, Boulder: Lynne Reiner, pp. 113-135.
- Diechert, Georg, Barros, Jose, Noltze, Martin, 2009, Introducing System of Rice Intensification in Timor-Leste: Experiences and Prospects, Dili.
- Directorate of Agribusiness, Ministry of Agriculture and Fisheries, Timor-Leste Government, 2009, *Profiles: Maize; Rice; Coffee; Cattle*, Dili.
- Directorate of National Statistics, September 2007, *Timor-Leste Survey of Living Standards*, 2007, Dili.

- DNE, 2008, Projesuan Populasan ba Distritus, Dili.
- Drysdale, J, 2007, "The Institutional Challenges of Managing Timor-Leste's Petroleum Revenue", in D. Shoesmith (ed), The Crisis in Timor-Leste: Understanding the Past, Imagining the Future, Charles Darwin University Press, pp 77-83.
- Fearon, J, 2005, "Primary Commodity Exports and Civil War", *Journal of Conflict Resolution*, 49, (4), pp 483-507.
- Fearon, J, and Laitin, D, 2003, "Ethnicity, Insurgency, and Civil War", *American* Political Science Review, 97 (1), pp.75-90.
- Gomes, Rui A, February 2007, *Perceptions* on *Justice in Timor-Leste* (Report prepared for UNDP, Dili).
- Gomes, Rui A, and Harmadi, S.H.B, 2008, Policy Paper on Income Inequality in Timor-Leste, Dili. (Unpublished Policy Paper).
- Government of Bhutan, 2008, The Millennium Development Goals National Report, Thimpu.
- Health Alliance International, 2008, Maternal and Child Health in Timor-Leste, Dili and Washington D.C.
- Humphreys, M, Sachs, J, Stiglitz, J, 2007, Escaping the Resource Curse, Columbia University Press, New York.
- International Crisis Group, February 2009, Timor-Leste: No Time for Complacency, Update Briefing No. 87, Dili/Brussels.
- International Labour Organization and Timor-Leste Government, 2007, Youth Employment Study, Dili.
- International Monetary Fund, 2009, Report on Timor-Leste following Article IV Consultations, Washington D.C, USA.
- International Policy and Research Institute, Concern Worldwide and Welthungerhilfe, 2009, *The Global Hunger Index*, Washington and Dublin.
- Isham, J, Woolcock, M, Pritchett, L, and Busby, G, 2002, "The Varieties of Rentier Experience: How Natural Resource Export Structures Affect the Political Economy of Economic Growth", Worldwide Web document, available at http://middlebury.edu/NR/rdonlyr es/23035072-BFDI-43A1-923C-99CF1183 1F32/0/0308.pdf

- Jensen, N, and Wantchekon, L, 2004, "Resource Wealth and Political Regimes in Africa", Comparative Political Studies, 37, (7), pp. 816-841.
- La'o Hamutuk, March 2009, Estimating the Sustainable Income: Prudence and Stability, Dili.
- La'o Hamutuk, June 2009, Heavy Oil Power Plants: Project without Process, Dili.
- La'o Hamutuk, November 2009, RDTL General State Budget for 2010, Dili.
- La'o Hamutuk, February 2010, Timor-Leste Petroleum Fund, September 2005 -February 2010, Dili.
- Loy, Detlev, and Correia, Lino, July 2008, Rural Energy Policy for Timor-Leste, UNDP, Dili.
- Lundahl, M, and Sjoholm, F, 2008, "The Oil Resources of Timor-Leste", *Pacific Review*, 21 (1), pp.67-86.
- McWilliam, Andrew, Fall 2008, Customary Land and Legal Regulation in East Timor, SEAP Bulletin, Cornell University, Ithaca.
- Ministry of Agriculture and Fisheries, Timor-Leste Government, GTZ and Sendall Associates, 2006, West Timor Market Study, Dili.
- Ministry of Agriculture and Fisheries, Timor-Leste Government, 2009, Strategic Framework for Rural Development in Timor-Leste, 2010-2020, Dili.
- Ministry of Finance, Timor-Leste Government, WB, DNE, November 2008, Timor-Leste: Poverty in a New Nation, Dili.
- Ministry of Health, Timor-Leste Government, July 2008, Assessment of Maternal and Child Health, Dili.
- Ministry of Health, Timor-Leste Government, 2008, 2009, Annual Health Report, Dili.
- Ministry of State Administration and Territorial Management, Timor-Leste Government, 2009, Draft Concept Note: Joint National Decentralisation Support Programme, Dili.
- National Parliament of Timor-Leste, 2010, National Parliament: Strategic Plan 2010-14 (Draft), Dili.
- National Statistics Directorate, Timor-Leste Government, March 2010, *Timor-Leste Demographic and Health Survey*, 2009-10, Preliminary Report, Dili.
- Neupert, Ricardo, and Lopes, Silvino, September 2006, *The Demographic Component of the Crisis in Timor-Leste*, Association for the Study of Ethnicity and Nationalism, London School of Economics, United Kingdom.
- Neupert, Ricardo F, 2008, Oil, Conflict and Population Policy in Timor-Leste, Technical Paper produced for the TLNHDR.

- Office of the Prime Minister, Timor-Leste Government, April 2010, From Conflict to Prosperity: Timor-Leste's Strategic Development Plan 2011-2030: Summary, Dili.
- Oxfam, 2003, Overview of the Coffee Sector in Timor-Leste, Dili.
- Pasha, Hafiz A, 2007, Inclusive Growth and the MDGs: The Asian Experience, UNDP Regional Bureau for Asia and the Pacific, New York, USA.
- Peace Dividend Trust, 2009, Timor-Leste Online Procurement Database, Dili.
- Planning Commission for East Timor, May 2002, East Timor: National Development Plan. Dili.
- Rasmussen, Tobias, 2008, Timor-Leste's Petroleum Fund: Achievements and Challenges, Technical paper for the TLNHDR.
- Ross, M, 2003, "Oil, Drugs and Diamonds: The Varying Role of Natural Resources in Civil War", in K.Ballentine and J, Sherman (eds), The Political Economy of Armed Conflict: Beyond Greed and Grievance, Boulder, Lynne Reiner Publishers, pp. 37-70.
- Ross, M, 2006, "A Closer Look at Oil, Diamonds and Civil War", Annual Review of Political Science, 9, pp.265-300.
- Rosser, A, 2006, The Political Economy of the Resource Curse: A Literature Survey, IDS Working Paper 268, Institute of Development Studies, Sussex University, UK.
- Rosser, A, 2007, "Escaping the Resource Curse: The Case of Indonesia", Journal of Contemporary Asia, 37 (1), pp.38-58
- Rosser, A, 2008, *Timor Leste's Vulnerability to the Resource Curse: An Assessment*, Technical Paper for the 2010 TLNHDR.
- Sachs, J D and Warner M, 1995, "Natural Resource Abundance and Economic Growth", National Bureau of Economic Research *Working Paper* 6398, Swcwmber, Cambridge: Mass, National Bureau of Economic Research.
- Sahin, S, 2007, "Building the State in Timor-Leste", *Asian Survey*, 47 (2), pp.250-267.
- Sala-i-Martin, X, and Subramanian, A, 2003, Addressing the Natural Resource Curse: An Illustration from Nigeria, Washington DC, IMF.
- Sandbu, Martin E, 2008, Natural Resource Funds and Human Development: Observations for Timor-Leste, Technical Paper for the 2010 TLNHDR.
- Sandlund, Odd Terje et al, April 2001, Assessing Environmental Needs and Priorities in East Timor, UNDP Dili and the Norwegian Government, Dili.

- Scambary, J, April 2009, Groups, Gangs and Armed Violence in Timor-Leste, Timor-Leste Armed Violence Assessment, Issue Brief no.2, Dili.
- Secretariat of State for Vocational Training, Timor-Leste Government, 2009, Timor-Leste: National Youth Employment Action Plan, Dili.
- Seymour, Alan E, 2008, A Profile of Timor-Leste's Public Service, unpublished paper, Dili.
- Shoesmith, D, 2007, "Timor-Leste: Interpreting Violence in a Post-Conflict State", in D.Shoesmith (ed), *The Crisis* in Timor-Leste: Understanding the Past, Imaging the Future, Charles Darwin University Press, Darwin, pp.23-33.
- Smith, B, 2004, "Oil Wealth and Regime Survival in the Developing World, 1960-1999, American Journal of Political Science, 48 (2), pp. 232-46.
- Timor Institute of Development Studies, 2007, Baseline Study on Feminization of Poverty in Timor-Leste: Deprivation of Women Across Sectors, Dili.
- Timor-Leste Government, 2006, Natural Resources and Environment: Priorities and Proposed Sector Investment Programme, Dili.
- Timor-Leste Government, 2007, The Convention on the Elimination of All Forms of Discrimination Against Women: Timor-Leste, Dili.
- Timor-Leste Government, 2008, Timor-Leste: The State of the Nation, Dili.
- Timor-Leste Government, 2008, Background Paper on National Priorities, Dili.
- Timor-Leste Government, March 2008, Working Together to Build the Foundations for Peace and Stability and Improve the Livelihoods of Timorese Citizens (Paper prepared for the April 2009 Development Partners' Meeting), Dili
- Timor Leste Government, 2009, The Millennium Development Goals National Report, Dili.
- Timor-Leste Government, 2009, *The State of the Nation*, Dili.
- Timor-Leste Government, January 2009, Democratic Republic of Timor-Leste: General Budget of the State and State Plan for 2009.
- Timor-Leste Government, April 2009, Goodbye Conflict and Welcome Development, (Paper prepared for the April 2009 Development Partners' Meeting), Dili.
- Timor-Leste Government, March 2010, A Path to Peace and Progress, August 2007 – March 2010: The Xanana Gusmao Government: Mid Term Achievement Report, Dili.

- Timor-Leste Government, April 2010, Strategic Development Plan 2011-30 (Draft Document), Dili.
- Timor-Leste Government, 2010, *Timor-Leste Labour Force Survey 2010*, Directorate of National Statistics and SEFOPE.
- Timor-Leste Government and the Government of the Northern Territory, 2009, Surveying Marine Megafauna in Timor-Leste - Identifying Marine Eco-tourism Opportunities, Darwin and
- UNDP, 2001, Assessing Environmental Needs and Priorities in East Timor, Dili.
- United Nations, January 2008, Employment Creation, Income Generation and Reintegration in Post-Conflict Settings (Draft), New York.
- UNDESA, 2009, MDG Data Base, New York, USA.
- UNDP, 2009, Human Development Report 2009: Overcoming Barriers: Human Mobility and Development, New York.
- UNDP and Timor-Leste Government, 2009, The Millennium Development Goals, Timor-Leste, Dili.
- UNESCO, September 2008, UNESCO National Education Support Strategy (UNESS) Timor-Leste, Dili.
- UNICEF, 2008, UNICEF Humanitarian Action Timor-Leste, Dili.
- United Nations Industrial Development Organization and the Ministry of Tourism, Commerce and Industry, Timor-Leste Government, Industrial Policies and Strategies for Timor-Leste: An Agenda for Action, Dili.
- Winters, J, 1996, Power in Motion: Capital and the Indonesian State, Cornell University Press, Ithaca.
- World Bank, Enterprises, Workers and Skills in Timor-Leste, East Asia and Pacific Region, Dili.
- World Bank, June 2005, *Timor-Leste:* Country Assistance Strategy, Dili.
- World Bank, 2007, Timor-Leste: Economic and Social Development Brief 2007, Dili.
- World Bank, August 2007, Economic and Social Development Brief: Timor-Leste, Washington.
- World Bank, September 2007, Timor-Leste's Youth in Crisis: Situational Analysis and Policy Options, Dili.
- World Bank, October 2007, Timor-Leste: Youth Development and the Labour Market, East Asia and Pacific Region, Dili
- World Bank, 2008, Reducing the Risks of Disasters and Climate Variability in the Pacific Islands, East Asia and Pacific Region.

- World Bank, October 2008, Policy Note on Population Growth and its Implications for Timor-Leste, Washington.
- World Bank, 2009, World Development Indicators Data Base, Washington DC.
- World Bank, July 2009, Sustainable Development Department, *Timor-Leste: Country Environmental Analysis*, East Asia and Pacific Region.
- World Bank, 2010, Emerging Stronger from the Crisis: East Asia and the Pacific Economic Update 2010, Washington.
- WHO, 2005, Multi-Country Study on Women's Health and Domestic Violence, New York.
- WHO, 2008, World Health Statistics 2007, Geneva.
- Zwi, A. B, et al, 2009, *Timor-Leste: Health Care Seeking Behaviour Study*, Ministry
  of Health, Timor-Leste Government and
  AusAid, Dili.

## Statistical Note and Definitions of Terms Used in the Report

## **Statistical Note**

The data and indicators presented in the Report are based on the best use of readily available material from various sources. Since the Second Human Development Report for Timor-Leste was published in 2006, several surveys have been carried out, providing important sources of data. The most important of these is the Timor-Leste Living Standards Survey (TLSLS), the results of which were published in September 2007.

The survey was carried out by the Directorate of National Statistics, Ministry of Finance. It covered 4,447 households nationwide and provided a rich array of information on living standards in Timor-Leste. The survey focused on consumption poverty, but also examined key areas such as health and education. It found that approximately half the population was living in poverty in 2007. A similar survey was undertaken in 2001, thereby enabling detailed comparisons between the two dates. No detailed household surveys have been undertaken subsequently. The next household survey is planned for 2011. Census data is available from 2004, but the full results of the 2010 Census will not be available until early in 2011. A Demographic and General Health Survey was completed in 2010, and the preliminary results of this became available at a late stage in the writing of the Report, thereby enabling comparison with an earlier, 2003, Demographic and General Health Survey.

Reports on most aspects of Timor-Leste's economy, society and political system have been published since the last 2006 Human Development Report. These come from a variety of sources – from Government Ministries, Agencies, Timor-Leste institutes and academies, NGOs and consultancy companies. These reports have provided detailed information and data for the 2010 Report, and are attributed in footnotes and in Annexe 1, which is the bibliography of texts consulted. Some of the data presented in these reports needs to be treated with caution, since the reliability of data on economic and human development indicators is variable and the reliability of some data may be questionable.

The calculation of the Human Development Index (HDI), its values and ranking, together with the Inequality-Adjusted Human Development Index (IHDI) and the Gender Inequality Index (GII) uses the measurement method in the Global Human Development Report 2010, as outlined below, in Annex 6. The sections on the indices, together with the data contained in them in chapter 2 of the TLNHDR were drafted by the UNDP Asia Regional Office.

## **Definitions of Terms Used in the Report**

#### Births attended by skilled health personnel

The percentage of deliveries attended by personnel (including doctors, nurses and midwives) trained to give the necessary care, supervision and advice to women during pregnancy, labour and the postpartum period; to conduct deliveries on their own; and to care for newborns.

#### Birthweight, infants with low

The percentage of infants with a birthweight of less than 2,500 grams.

#### Carbon dioxide emissions

Anthropogenic (human originated) carbon dioxide emissions stemming from the burning of fossil fuels, gas flaring and the production of cement. Emissions are calculated from data on the consumption of solid, liquid and gaseous fuels; gas flaring; and the production of cement.

## Consumer price index, average annual change in

Reflects changes in the cost to the average consumer of acquiring a basket of goods and services (that may be fixed or may change), at specified times.

#### Debt service, total

The sum of principal repayments and interest actually paid in foreign currency, goods or services on long-term debt (having a maturity of more than one year), interest paid on short-term debt and repayments to the International Monetary Fund.

## **Dutch Disease**

The negative impact on an economy of anything that gives rise to a sharp inflow of foreign currency, such as the discovery of large oil reserves. The currency inflows lead to currency appreciation, making the country's other products less price competitive on the export market. It also leads to higher levels of cheap imports and may lead to difficulties for industrialization, as industries apart from resource exploiting industries prefer cheaper locations.

## Earned income (PPP US\$), estimated

Roughly derived on the basis of the ratio of the female non-agricultural wage to the male non-agricultural wage, the female and male shares of the economically active population, total female and male population and GDP per capita (in purchasing power parity terms in US dollars; see PPP).

## **Economic activity rate, female**

The share of the female population ages 15 and older, who supply, or are available to supply, labour for the production of goods and services.

#### Education expenditure, current public

Spending on goods and services that are consumed within the current year and that would need to be renewed the following year, including such expenditures as staff salaries and benefits, contracted or purchased services, books and teaching materials, welfare services, furniture and equipment, minor repairs, fuel, insurance, rents, telecommunications and travel.

## **Education expenditure, public**

Includes both capital expenditures (spending on construction, renovation, major repairs and purchases of heavy equipment or vehicles) and current expenditure.

#### **Electricity consumption per capita**

Refers to gross production in per capita terms and includes consumption by station auxiliaries and any losses in transformers that are considered integral parts of the station. Also included is total electric energy produced by pumping installations without deduction of electric energy absorbed by pumping.

## **Employment by economic activity, female**

Female employment in industry, agriculture or services as defined according to the International Standard Industrial Classification (ISIC) system (revisions 2 and 3). Industry refers to mining and quarrying, manufacturing, construction and public utilities (gas, water and electricity). Agriculture refers to activities in agriculture, hunting, forestry and fishing. Services refer to wholesale and retail trade; restaurants and hotels; transport, storage and communications; finance, insurance, real estate and business services; and community, social and personal services.

#### Energy use, GDP per unit of

The ratio of GDP (in 2000 PPP US\$) to commercial energy use, measured in kilograms of oil equivalent.

This ratio provides a measure of energy efficiency by showing comparable and consistent estimates of real GDP across countries relative to physical inputs (units of energy use).

## **Enrolment ratio, gross**

The number of students enrolled in a level of education, regardless of age, as a percentage of the population of official school age, for that level. The gross enrolment ratio can be greater than 100 percent, as a result of grade repetition and entry at ages younger or older that the typical age at that grade level.

#### Enrolment ratio, gross combined, for primary, secondary and tertiary schools

The number of students enrolled in primary, secondary and tertiary levels of education, regardless of age, as a percentage of the population of official school age children for the three levels.

#### Enrolment ratio, net

The number of students enrolled in a level of education, who are of official school age for that level, as a percentage of the population of official school age children for that level.

#### Environmental treaties, ratification of

After signing a treaty, a country must ratify it, often with the approval of legislature. Such process implies not only an expression of interest as indicated by the signature, but also the transformation of the treaty's principles and obligations into national law.

## **Exports, manufactured**

Defined according to the Standard International Trade Classification to include exports of chemicals, basic manufactures, machinery and transport equipment and other miscellaneous manufactures goods.

## **Exports of goods and services**

The value of all goods and other market services provided to the rest of the world. Included is the value of merchandise, freight, insurance, transport, travel, royalties, license fees and other services, such as communication, construction, financial, information, business, personal and government services. Excluded are labour and property income and transfer payments.

#### **Exports, primary**

Defined according to the Standard International Trade Classification to include exports of food, agricultural raw materials, fuels and ores and metals.

## Fertility rate, total

The number of children that would be born to each woman if she were to live to the end of her child-bearing years and bear children at each age in accordance with the prevailing age-specific fertility rate.

## Foreign direct investment, net inflows of

Net inflows of investment to acquire a lasting management interest (10 percent or more voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of the equity capital, reinvestment of earnings, other long-term capital and short-term capital.

## **GDP** (gross domestic product)

The sum of value added by all resident producers in the economy plus any product taxes (less subsidies) not included in the valuation of output. It is calculated without making any deduction for depreciation of fabricated capital assets or for depletion and degradation of natural resources. Value added is the net output of an industry after adding up all outputs and subtracting intermediate inputs.

#### **GDP** index

One of the three indices on which the Human Development Index is built. It is based on gross domestic product per capita (in purchasing power parity (PPP) terms in US dollars; see PPP).

## GDP per capita (PPP US\$)

Gross domestic product (in purchasing power parity terms in US dollars) divided by midyear population.

## GDP per capita annual growth rate

Least squares annual growth rate, calculated from constant price GDP per capita in local currency units.

## **Gender Inequality Index (GII)**

Specifies women's disadvantages in three dimensions – reproductive health, empowerment, and economic activity. Details of the GII and its calculation are presented in Annex Six.

#### Gini index

Measures the extent to which the distribution of income (or consumption) among individuals or households within a country deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. A value of o represents perfect equality while a value of 100 represents perfect inequality.

## **GNI** (gross national income)

The sum of value added by all resident producers in the economy plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad. Value added is the net output of an industry after adding up all outputs and subtracting intermediate inputs. Data are in current US dollars converted using the World Bank Atlas method.

## Health expenditure per capita (PPP US\$)

The sum of public and private expenditure (in purchasing power parity terms in US dollars), divided by the population. Health expenditure includes the provision of health services (preventive and curative), family planning activities, nutrition activities and emergency aid designated for health, but excludes the provision of water and sanitation.

#### Health expenditure, private

Direct household (out of pocket) spending, private insurance, spending by non-profit institutions serving households and direct service payments by private corporations. Together with public health expenditure, it makes up total health expenditure.

#### Health expenditure, public

Current and capital spending from government (central and local) budgets, external borrowings and grants (including donations from international agencies nongovernmental organizations) and social (or compulsory) health insurance funds. Together with private health expenditure, it makes up total health expenditure.

## **HIV** prevalence

The percentage of people in the age group 15-49 years, who are infected with HIV.

## Human development index (HDI)

A composite index measuring average achievement in three basic dimensions of human development – a long and healthy life, knowledge and a decent standard of living. For details of the HDI, its values and rankings, see Annex Six.

#### Illiteracy rate, adult

Calculated as 100 minus the adult literacy rate.

#### Immunization, one-year-olds full immunized against measles or tuberculosis

One-year-olds injected with an antigen or a serum containing specific antibodies against measles or tuberculosis.

## Imports of goods and services

The value of all goods and other market services received from the rest of the world. Included is the value of merchandise, freight, insurance, transport, travel, royalties, license fees and other services, such as communication, construction, financial, information, business, personal and government services. Excluded are labour and property income and transfer payments.

#### Income poverty line, population below

The percentage of the population living below the specified poverty line:

- \$1 a day at 1985 international prices (equivalent to US\$ 1.08 at 1993 international prices), adjusted for purchasing power parity (PPP);
- \$2 a day at 1985 international prices (equivalent to US\$ 2.15 at 1993 international prices), adjusted for purchasing power parity;
- \$4 a day at 1990 international prices, adjusted for purchasing power parity;
- \$11 a day (per person for a family of three) at 1994 international prices, adjusted for purchasing power parity;
- National poverty line the poverty line deemed appropriate for a country by its authorities.
   National estimates are based on population weighted subgroup estimates from household surveys;
- 50 percent of median income 50 percent of the median adjusted disposable household income. See PPP.

## Income or consumption, shares of

The shares of income or consumption accruing to subgroups of population indicated by deciles or quintiles, based on national household surveys covering various years. Consumption surveys produce results showing lower levels of inequality between poor and rich than do income surveys, as poor people generally consume a greater share of their income. Because data come from surveys covering different years and using different methodologies, comparisons between countries must be made with caution.

## Inequality-Adjusted Human Development Index (IHDI)

The Human Development Index (HDI) is an average measure of basic human development achievements in a country. Like all averages, the HDI masks inequality in the distribution of human development across the population at the country level. The 2010 UNDP International Human Development Report introduces the 'inequality adjusted HDI (IHDI)', a new measure for a large number of countries which takes into account inequality in all three dimensions of the HDI by 'discounting' each dimension's average value according to its level of inequality. For details of the IHDI and its calculation, see Annex Six.

#### Infant mortality rate

See mortality rate, infant.

## Internally displaced people

People or groups of people who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized state boarder.

#### **Internet users**

People with access to the worldwide network.

#### **Labour force**

All people employed (including people above a specified age who, during the reference period, were in paid employment, at work, self-employed or with a job but not at work) and unemployed (including people above a specified age who, during the reference period, were without work, currently available for work and seeking work).

## Legislators, senior officials and managers, female

Women's share of positions defined according to the International Standard Classification of

Occupation (ISCO-88) to include legislators, senior government officials, traditional chiefs and heads of villages, senior officials of special-interest organizations, corporate managers, directors and chief executives, production and operations department managers and other department and general managers.

#### Life expectancy at birth

The number of years a new-born infant would live if prevailing patterns of age-specific mortality rates at the time of birth were to stay the same throughout the child's life.

#### Literacy rate, adult

The percentage of people ages 15 and older who can, with understanding, both read and write a short, simple statement related to their everyday life.

#### Literacy rate, youth

The percentage of people ages 15-24 who can, with understanding, both read and write a short, simple statement related to their everyday life.

#### Malaria prevention, children under age five

The percentage of children under age five sleeping under insecticide-treated bed-nets.

## Malaria, treatment, children under age five with fever

The percentage of children under age five, who were ill with fever in the two weeks before the survey and received anti-malarial drugs.

#### **Market activities**

Defined according to the 1993 revised UN System of National Accounts to include employment in establishments, services for income and other production of goods not in establishments. See nonmarket activities and work time, total.

#### Mortality rate, infant

The probability of dying between birth and exactly one year of age, expressed per 1,000 live births.

#### Mortality rate, under-five

The probability of dying between birth and exactly five years of age, expressed per 1,000 live births.

#### Mortality ratio, maternal

The annual number of female deaths from pregnancy-related causes per 100,000 live births.

## Mortality ratio, maternal adjusted

Maternal mortality ratio adjusted to account for well-documented problems of underreporting and misclassification of maternal deaths, as well as estimates for countries with no data.

## Mortality ratio, maternal reported

Maternal mortality ratio as reported by national authorities.

#### Nonmarket activities

Defined according to the 1993 revised UN System of National Accounts to include household maintenance (cleaning, laundry and meal preparation and cleanup), management and shopping for own household; care for children, the sick, the elderly and the disabled in own household; and community services.

## Official aid

Grants or loans that meet the same standard as for official development assistance (ODA) except that recipient countries do not qualify as recipients of ODA. These countries are identified in part II of the Development Assistance Committee (DAC) list of recipient countries, which includes more advanced countries of Central and Eastern Europe, the countries of the former Soviet Union and certain advanced developing countries and territories.

## Official development assistance (ODA), net

Disbursements of loans made on concessional terms (net of repayments of principal) and grants by official agencies of the members of the Development Assistance Committee (DAC), by multilateral institutions and by non-DAC countries to promote economic development and welfare in countries and territories in part I of the DAC list of aid recipients. It includes loans with a grant element of at least 25 percent (calculated at a discount rate of 10 percent).

## Official development assistance (ODA), per capita of donor country

Official development assistance granted by a specific country divided by the country's total population. See official development assistance (ODA), net.

#### Patents granted to residents

Refers to documents issued by a government office that describe an invention and create a legal situation in which the patented invention can normally be exploited (made, used, sold, imported) only by or with the authorization of the patentee. The protection of inventions is generally limited to 20 years from the filing date of the application for the grant of a patent.

#### **Physicians**

Includes graduates of a faculty or school of medicine who are working in any medical field (including teaching, research and practice).

## Population growth rate, annual

Refers to the average exponential growth rate for the period indicated. See population, total.

## Population, total

Refers to the de facto population, which includes all people actually present in a given area at a given time.

## Population, urban

The midyear population of areas classified as urban according to the criteria used by each country, as reported to the United Nations.

## PPP (purchasing power parity)

A rate of exchange that accounts for price differences across countries, allowing international comparisons of real output and incomes. At the PPP US\$ rate (as used in this report), PPP US\$ 1 has the same purchasing power in the domestic economy as US\$ 1 has in the United States.

## **Private flows**

A category combining non-debt-creating portfolio equity investment flows (the sum of country funds, depository receipts and direct purchases of shares by foreign investors), portfolio debt flows (bond issues purchased by foreign investors), and bank and trade-related lending (commercial bank lending and other commercial credits).

## Probability at birth of not surviving to a specified age

Calculated as 1 minus the probability at birth of surviving to a specified age, for a given cohort.

#### Probability at birth of surviving to a specified age

The probability of a newborn infant surviving to a specified age if subject to prevailing patterns of age-specific mortality rates.

#### Professional and technical workers, female

Women's share of positions defined according to the International Standard Classification of Occupation (ISCO-88) to include physical, mathematical, engineering science professionals (and associate professionals), life science and health professionals (and associate professionals), teaching professionals (and associate professionals) and other professionals and associate professionals.

## Refugees

People who have fled their country because of a well founded fear of persecution for reasons of their race, religion, nationality, political opinion or membership in a particular social group and who cannot or do not want to return. Country of asylum is the country in which a refugee has filed a claim of asylum but has not yet received a decision or is otherwise registered as an asylum seeker. Country of origin refers to claimant's nationality or country citizenship.

#### Rentier state

A state that derives all or a substantial portion of its national revenues from the rent of indigenous resources to external clients. The term is most frequently applied to states rich in highly valued natural resources such as petroleum, Dependent as they are on such sources of income, rentier states generate rents externally by manipulating the global political and economic environment. Such manipulation may include monopolies, trading restrictions, and the solicitation of subsidies or aid in exchange for political influence.

#### Research and development expenditures

Current and capital expenditures (including overhead) on creative, systematic activity intended to increase the stock of knowledge. Included are fundamental and applied research and experimental development work leading to new devices, products or processes.

## Researchers in R&D

People trained to work in any field of science who are engaged in professional research and development (R&D) activity. Most such jobs require the completion of tertiary education.

#### Royalties and licence fees, receipts of

Receipts by residents from non-residents or the authorized use of intangible, non-produced, non-financial assets and proprietary rights (such as patents, trademarks, copyrights, franchises and industrial processes) and for the use, through licensing agreements, of produced originals of prototypes (such as films and manuscripts). Data are based on the balance of payments.

## Sanitation facilities, improved, population with sustainable access to

The percentage of the population with access to adequate excreta disposal facilities, such as a connection to a sewer or septic tank system, a pour-flush latrine, simple pit latrine or a ventilated improved pit latrine. An excreta disposal system is considered adequate if it is private or shared (but not public) and if it can effectively prevent human, animal and insect contact with excreta.

#### Seats in Parliament held by women

Refers to seats held by women in a lower or single house or an upper house or senate, where relevant.

#### Standard and Poor's 500 Index

Is a capitalization-weighted index published since 1957 of the prices of 500 large-cap common stocks actively traded in the United States. The stocks included in the S&P 500 are those of large publicly held companies that trade on either of the two largest American stock market companies; the NYSE Euronext and the NASDAQ OMX.

#### Tenure, households with access to secure

Households that own or are purchasing their homes, are renting privately or are in social housing or sub-tenancy.

#### Terms of trade

The ratio of the export price index to the import price index measured relative to a base year. A value of more than 100, means that the price of exports has increased relative to the price of imports.

## Tuberculosis cases, prevalence

The total number of tuberculosis cases reported to the World Health Organization. A tuberculosis case is defined as a patient in whom tuberculosis has been bacteriologically confirmed or diagnosed by a clinician.

#### **Under-five mortality rate**

See mortality rate, under-five.

## Under height for age, children under age five

Includes moderate and severe stunting, defined as more than two standard deviations below the median height for age of the reference population.

## Under weight for age, children under age five

Includes moderate underweight, defined as more than two standard deviations below the median weight for age of the reference population, and severe underweight, defined as more than three standard deviations below the median weight.

#### **Undernourished** people

People whose food intake is chronically insufficient to meet their minimum energy requirements.

## **Unemployment**

Refers to all people above a specified age who are not in paid employment or self-employed, but are available for work and have taken specific steps to seek paid employment or self-employment.

## Unemployment, long-term

Unemployment lasting 12 months or longer. See unemployment.

## **Unemployment rate**

The number of unemployed persons divided by the labour force (those employed plus those unemployed).

#### Unemployment rate, youth

Refers to unemployment between the ages of 15 or 16 and 24, depending on the national definition.

#### Water source, improved, population with sustainable access to

The share of population with reasonable access to any of the following types of water supply for drinking: household connections, public standpipes, boreholes, protected dug wells, protected springs and rainwater collection. Reasonable access is defined as the availability of at least 20 litres a person per day, from a source, which is within one kilometre of the user's dwelling place.

#### Women in government at ministerial level

Includes deputy prime ministers and ministers. Prime ministers were included when they held ministerial portfolios. Vice-presidents and heads of ministerial-level departments or agencies were also included when exercising a ministerial function in the government structure.

## Millennium Development Goals, Targets and Indicators

## **GOAL 1 - Eradicate extreme poverty and hunger**

## TARGET 1.A Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day

## **Indicators for monitoring progress**

- 1.1 Proportion of population below US\$ 1 (PPP) per day
- 1.2 Poverty gap ratio
- 1.3 Share of poorest quintile in national consumption

#### TARGET 1.B Achieve full and productive employment and decent work for all, including women and young people

#### **Indicators for monitoring progress**

- 1.4 Growth rate of GDP per person employed
- 1.5 Employment-to-population ratio
- 1.6 Proportion of employed people living below US\$ 1 (PPP) per day
- 1.7 Proportion of own-account and contributing family workers in total employment

## TARGET 1.C Halve, between 1990 and 2015, the proportion of people who suffer from hunger

#### **Indicators for monitoring progress**

- 1.8 Prevalence of underweight children under-five years of age
- 1.9 Proportion of population below minimum level of dietary energy consumption

#### **GOAL 2 - Achieve universal primary education**

## TARGET 2.A Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling

#### Indicators for monitoring progress

- 2.1 Net enrolment ratio in primary education
- 2.2 Proportion of pupils starting grade 1 who reach last grade of primary
- 2.3 Literacy rate of 15-24 year-olds, women and men

## **GOAL 3 - Promote gender equality and empower women**

## TARGET 3.A Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015

#### **Indicators for monitoring progress**

- 3.1 Ratios of girls to boys in primary, secondary and tertiary education
- 3.2 Share of women in wage employment in the non-agricultural sector
- 3.3 Proportion of seats held by women in national parliament

## **GOAL 4 - Reduce child mortality**

## TARGET 4.A Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate

## **Indicators for monitoring progress**

- 4.1 Under-five mortality rate
- 4.2 Infant mortality rate
- 4.3 Proportion of 1 year-old children immunised against measles

## **GOAL 5 - Improve maternal health**

# TARGET 5.A Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio Indicators for monitoring progress

- 5.1 Maternal mortality ratio
- 5.2 Proportion of births attended by skilled health personnel

#### TARGET 5.B Achieve, by 2015, universal access to reproductive health

#### **Indicators for monitoring progress**

- 5.3 Contraceptive prevalence rate
- 5.4 Adolescent birth rate
- 5.5 Antenatal care coverage (at least one visit and at least four visits)
- 5.6 Unmet need for family planning

## GOAL 6 - Combat HIV/AIDS, malaria and other diseases

#### TARGET 6.A Have halted by 2015 and begun to reverse the spread of HIV/AIDS

#### **Indicators for monitoring progress**

- 6.1 HIV prevalence among population aged 15-24 years
- 6.2 Condom use at last high-risk sex
- 6.3 Proportion of population aged 15-24 years with comprehensive correct knowledge of HIV/AIDS
- 6.4 Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14 years

## TARGET 6.B Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it

## **Indicators for monitoring progress**

6.5 Proportion of population with advanced HIV infection with access to antiretroviral drugs

# TARGET 6.C Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases

#### **Indicators for monitoring progress**

- 6.6 Incidence and death rates associated with malaria
- 6.7 Proportion of children under 5 sleeping under insecticide-treated bed nets
- 6.8 Proportion of children under 5 with fever who are treated with appropriate anti-malarial drugs
- 6.9 Incidence, prevalence and death rates associated with tuberculosis
- 6.10 Proportion of tuberculosis cases detected and cured under directly observed treatment short course

## **GOAL 7 - Ensure environmental sustainability**

# TARGET 7.A Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources

#### Indicators for monitoring progress

- 7.1 Proportion of land area covered by forest
- 7.2 CO emissions, total, per capita and per US\$ 1 GDP (PPP)
- 7.3 Consumption of ozone-depleting substances
- 7.4 Proportion of fish stocks within safe biological limits

## TARGET 7.B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss

#### **Indicators for monitoring progress**

- 7.5 Proportion of total water resources used
- 7.6 Proportion of terrestrial and marine areas protected
- 7.7 Proportion of species threatened with extinction

# TARGET 7.C Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation

#### **Indicators for monitoring progress**

- 7.8 Proportion of population using an improved drinking water source
- 7.9 Proportion of population using an improved sanitation facility

# TARGET 7.D **By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers**

#### **Indicators for monitoring progress**

7.10 Proportion of urban population living in slums

## **GOAL 8 - Develop a global partnership for development**

# TARGET 8.A Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources

Includes a commitment to good governance, development and poverty reduction - both nationally and internationally.

## TARGET 8.B **Reduce biodiversity loss, achieving, by 2010, a significant reduction** in the rate of loss

Includes: Tariff and quota free access for the least developed countries' exports; enhanced programme of debt relief for heavily indebted poor countries (HIPC) and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction.

## TARGET 8.C Halve, by 2015, the proportion of people without sustainable access

**to safe drinking water and basic sanitation** through the Programme of Action for the Sustainable Development of Small Island Developing States and the outcome of the twenty-second special session of the General Assembly.

# TARGET 8.D By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers through national and

international measures in order to make debt sustainable in the long term.

## Indicators for monitoring progress of targets 8a, 8b, 8c and 8d

Some of the indicators listed below are monitored separately for the least developed countries (LDCs), Africa, landlocked developing countries and small island developing States.

#### Official development assistance (ODA)

- 8.1 Net ODA, total and to the least developed countries, as percentage of OECD/DAC donors; gross national income
- 8.2 Proportion of total bilateral, sector-allocable ODA of OECD/DAC donors to basic social services (basic education, primary health care, nutrition, safe water and sanitation
- 8.3 Proportion of bilateral official development assistance of OECD/DAC donors that is untied
- 8.4 ODA received in landlocked developing countries as a proportion of their gross national income
- 8.5 ODA received in small island developing States as a proportion of their gross national incomes

#### **Market access**

- 8.6 Proportion of total developed country imports (by value and excluding arms) from developing countries and least developed countries, admitted free of duty
- 8.7 Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries
- 8.8 Agricultural support estimate for OECD countries as a percentage of their gross domestic product
- 8.9 Proportion of ODA provided to help build trade capacity

#### **Debt sustainability**

- 8.10 Total number of countries that have reached their HIPC decision points and number that have reached their HIPC completion points (cumulative)
- 8.11 Debt relief committed under HIPC and MDRI Initiatives
- 8.12 Debt service as a percentage of exports of goods and services

# TARGET 8.E In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries

#### **Indicators for monitoring progress**

8.13 Proportion of population with access to affordable essential drugs on a sustainable basis

# TARGET 8.F In cooperation with the private sector, make available the benefits of new technologies, especially information and communications

## **Indicators for monitoring progress**

- 8.14 Telephone lines per 100 population
- 8.15 Cellular subscribers per 100 population
- 8.16 Internet users per 100 population

The Millennium Development Goals and targets come from the Millennium Declaration, signed by 189 countries, including 147 heads of State and Government, in September 2000 (http://www.un.org/millennium/declaration/ares552e.htm) and from further agreement by member states at the 2005 World Summit (Resolution adopted by the General Assembly - A/RES/60/1, http://www.un.org/Docs/journal/asp/ws.asp?m=A/RES/60/1). The goals and targets are interrelated and should be seen as a whole. They represent a partnership between the developed countries and the developing countries "to create an environment – at the national and global levels alike – which is conducive to development and the elimination of poverty".

# **Definitions of Millennium Development indicators**

## Goal 1 - Poverty

## Population below US\$ 1 a day

The percentage of the population living on less than US\$ 1.00 a day at 1993 international prices (equivalent to US\$ 1 in 1985 prices, adjusted for purchasing power parity). Poverty rates are comparable across countries, but as a result of revisions in PPP exchange rates, they cannot be compared with poverty rates reported in previous estimates for individual countries.

World Bank

## Poverty gap at US\$ 1 a day

The mean shortfall from the poverty line (counting the non-poor as having zero shortfall), expressed as a percentage of the poverty line. This measure reflects the depth of poverty as well as its incidence.

World Bank

## Percentage share of income or consumption held by poorest 20 percent

The share that accrues to the lowest quintile of the population.

World Bank

### Prevalence of child malnutrition

The percentage of children under five whose weight for age is less than minus two standard deviations from the median for the international reference population ages o to 59 months. The reference population adopted by the WHO in 1983 is based on children from the United States, who are assumed to be well nourished.

World Health Organization

## Proportion of population below minimum level of dietary energy consumption

Data not yet available.

## **Goal 2 – Education**

#### **Net primary enrolment ratio**

The ratio of the number of children of official school age (as defined by the national education system) who are enrolled in school to the population of the corresponding official school age. Primary education provides children with basic reading, writing, and mathematics skills along with an elementary understanding of such subjects as history, geography, natural science, social science, art, and music. Based on the International Standard Classification of Education, 1997 (ISCED97).

**UNESCO Institute for Statistics** 

## Percentage of cohort reaching grade 5

The share of children enrolled in primary school, who eventually reach grade 5. The estimate is based on the reconstructed cohort method.

**UNESCO** Institute for Statistics

## **Youth literacy rate**

The percentage of people between the ages of 15 and 24 years, that can, with understanding, read and write a short, simple statement on their everyday life.

UNESCO Institute for Statistics

## Goal 3 - Gender equality

## Ratio of girls to boys in primary and secondary education

The percentage of girls to boys enrolled at primary and secondary levels in public and private schools.

**UNESCO** Institute for Statistics

## Ratio of young literate females to males

The percentage of females to males ages 15-24 who can, with understanding, read and write a short, simple statement on their everyday life.

UNESCO Institute for Statistics

## Share of women to men in wage employment in the non-agricultural sector

The share of female workers in the non-agricultural sector (industry and services), expressed as a percentage of total. Industry includes mining and quarrying (including oil production), manufacturing, construction, electricity, gas, and water, corresponding to divisions 2-5 (ISIC revision 2) or tabulation categories C-F (ISIC revision 3). Services include wholesale and retail trade and restaurants and hotels; transport, storage, and communications; financing, insurance, real estate, and business services; and community, social, and personal services corresponding to divisions 6-9 (ISIC revision 2) or tabulation categories G-P (ISIC revision 3).

International Labour Organization

### Proportion of seats held by women in national Parliament

The percentage of seats held by women in national legislative assemblies. The number of seats refers to both elected and appointed members.

United Nations, Women's Indicators and Statistics Database

## **Goal 4 - Child mortality**

## **Under-five mortality rate**

Is the probability that a newborn baby will die before reaching age five, if subject to current age-specific mortality rates. The probability is expressed as a rate per 1,000.

United Nations Statistics Division's Population and Vital Statistics Report; Country statistical offices; Demographic and Health Surveys and the United Nations Children's Fund's (UNICEF) State of the World's Children 2000)

#### **Infant mortality rate**

The number of infants dying before reaching one year of age, per 1,000 live births in a given year.

United Nations Statistics Division's Population and Vital Statistics Report; country statistical offices; Demographic and Health Surveys and the United Nations Children's Fund's (UNICEF) State of the World's Children 2000)

#### Children immunized against measles

The percentage of children under one year of age who received measles vaccine. A child is considered adequately immunized against measles after receiving one dose of vaccine.

World Health Organization and United Nations Children's Fund

## Goal 5 - Maternal health

## **Maternal mortality ratio**

The number of women who die during pregnancy and childbirth, per 100,000 live births.

Demographic and Health Surveys, the World Health Organization's Coverage of Maternity Care (1997) and other WHO sources, the United Nations Children's Fund, and national statistical offices

## Births attended by skilled health staff

The percentage of deliveries attended by personnel trained to give the necessary supervision, care, and advice to women during pregnancy, labour, and the postpartum period, to conduct deliveries on their own, and to care for the newborns.

World Health Organization

## Goal 6 - HIV/AIDS

## Prevalence of HIV, female

The percentage of females between the ages of 15 and 24 years, that is infected with HIV.

Joint United Nations Programme on HIV/AIDS (UNAIDS)

## **Contraceptive prevalence rate**

The percentage of women who are practicing, or whose sexual partners are practicing, any form of contraception. It is usually measured for married women ages 15-49 only.

Surveys-such as Demographic and Health Survey or Living Standards Measurement Study-from national sources

## Number of children orphaned by HIV/AIDS

The estimated number of children at the end of 1999 that have lost their mother or both parents to AIDS before age 15, since the epidemic began. Some of the orphaned children included in this cumulative total are no longer alive; others are no longer under age 15.

Joint United Nations Programme on HIV/AIDS [UNAIDS]

## **Incidence of tuberculosis**

The estimated number of new tuberculosis cases (pulmonary, smear positive, extra pulmonary).  $_{\rm WHO}$ 

## **DOTS detection rate**

Is the percentage of estimated new infectious tuberculosis cases detected under the directly observed treatment, short-course (DOTS) case detection and treatment strategy.

WHO

## Goal 7 - Environment

#### Proportion of land area covered by forest

Land under natural or planted stands of trees of whether productive or not, as percentage total land area.

FAO

## **Nationally protected areas**

Totally or partially protected areas, as the percentage of total land area, of at least 1,000 hectares that are designated as national parks, natural monuments, nature reserves or wildlife sanctuaries, protected landscapes and seascapes, or scientific reserves with limited public access. The data do not include sites protected under local or provincial law.

World Conservation Monitoring Centre, Protected Areas Data Unit

## GDP per unit of energy use

The PPP GDP per kilogram of oil equivalent of commercial energy use.

International Energy Agency

## Carbon dioxide emissions per capita

Emissions stemming from the burning of fossil fuels They include contributions to the carbon dioxide produced during consumption of solid, liquid, and gas fuels and gas flaring.

Carbon Dioxide Information Analysis Center, Environmental Sciences Division, Oak Ridge National Laboratory, in the U.S. state of Tennessee

## Access to an improved water source

The percentage of the population with reasonable access to an adequate amount of water from an improved source, such as a household connection, public standpipe, borehole, protected well or spring, and rainwater collection. Unimproved sources include vendors, tanker trucks, and unprotected wells and springs. Reasonable access is defined as the availability of at least 20 litres a person a day from a source within one kilometre of the dwelling.

World Health Organization and United Nations Children's Fund, Global Water Supply and Sanitation Assessment 2000 Report

## **Access to improved sanitation facilities**

The percentage of the population with at least adequate excreta disposal facilities (private or shared, but not public) that can effectively prevent human, animal, and insect contact with excreta. Improved facilities range from simple but protected pit latrines to flush toilets with a sewerage connection. To be effective, facilities must be correctly constructed and properly maintained.

WHO and UNICEF, Global Water Supply and Sanitation Assessment 2000 Report

## Proportion of people with access to secure tenure

Data not yet available.

## Goal 8 - Partnership

## Net official development assistance (ODA)

Disbursements of loans made on concessional terms (net of repayments of principal) and grants by official agencies of the members of DAC, by multilateral institutions, and by certain Arab countries to promote economic development and welfare in recipient economies listed as developing by DAC. Loans with a grant element of at least 25 percent (calculated at a rate of discount of 10 percent) are included in ODA, as are technical cooperation and assistance. Data are presented as a percentage of GNI.

Organisation for Economic Co-operation and Development

#### **Proportion of ODA to basic social services**

Aid reported by DAC donors for basic health, education, nutrition, and water and sanitation services.

Organisation for Economic Co-operation and Development

#### Proportion of ODA that is untied

The share of ODA that is not subject to restrictions by donors on procurement sources.

Organisation for Economic Co-operation and Development

#### Proportion of exports admitted free of duties and quotas

The value of exports of goods (excluding arms) received from developing countries and admitted without tariffs as a share of total exports from developing countries.

Calculated by World Bank staff using the World Integrated Trade Solution

## Simple mean tariff

The un-weighted average of the effectively applied rates for all products subject to tariffs. Agricultural products comprise plant and animal products, including tree crops but excluding timber and fish products. Textiles and clothing include natural and man-made fibres and fabrics and articles of clothing made from them.

World Bank staff estimate using the World integrated Trade Solution system

## Total support to agriculture

The value of subsidies to the agricultural sector.

Organisation for Economic Co-operation and Development

## Proportion of ODA provided as debt relief

The share of aid from DAC donors going to debt relief.

Organisation for Economic Co-operation and Development

## **HIPC** decision point

The date at which a heavily indebted poor country with an established track record of good performance under adjustment programs supported by the IMF and the World Bank, commits to undertake additional reforms and to develop and implement a poverty reduction strategy.

The World Bank

## **HIPC completion point**

The date at which the country successfully completes the key structural reforms agreed at the decision point, including the development and implementation of its poverty reduction strategy. The country then receives the bulk of debt relief under the HIPC Initiative, without any further policy conditions.

The World Bank

## Unemployment rate of 15 to 24 year olds

Refers to the share of the labour force without work but available for and seeking employment among people in the 15-24 age group.

IIО

#### Fixed line and mobile telephones

Telephone lines connecting a customer's equipment to the public switched telephone network and portable telephones subscribing to an automatic public mobile telephone service using cellular technology that provides access to the public switched telephone network, per 1,000 people.

International Telecommunication Union

#### Personal computers

Self-contained computers designed to be used by a single individual.

International Telecommunication Union

# Status of the Millennium Development Goals in Timor-Leste

ili, 19 August 2010									
Indicator	Unit	2001	2007	2009	Target 2015	Status	Source		
GOAL 1 - ERADICATE	GOAL 1 - ERADICATE EXTREME POVERTY AND HUNGER								
Proportion of population below the national poverty line	%	36.0 <sup>a</sup>	39.9 <sup>b</sup>	41.0 <sup>c</sup>	14	Off track	a TLSS 2001 based on US \$0.51 per day b TLSLS 2007 based on US \$0.88 per da c World Bank Poverty Estimation 2010		
Prevalence of underweight children under five years of age	%	45.0 <sup>a</sup>	48.6 <sup>b</sup>	45.0€	31	On track	a DHS 2003 b TLSLS 2007 c DHS 2009-2010 Preliminary Report		
Indicator	Unit	2001	2007	2009	Target 2015	Status	Source		
GOAL 2 - ACHIEVE UN	NIVERSAL F	PRIMAR	Y EDU	CATION	N				
Net enrolment ratio in primary education	%	65.1 <sup>a</sup>	65.6 <sup>b</sup>	82.7 <sup>C</sup>	100	On track	a TLSS 2001 (FY 2001/2002) b TLSLS 2007 (FY 2006/2007) c MoE, EMIS, 2010 (FY 2008/2009)		
Proportion of children who reached 5th grade	%	47.0 <sup>a</sup>		65.9 <sup>b</sup>	100	Off track	a MoE, EMIS, 2004 b MoE, EMIS, 2010 (FY 2008/2009)		
Indicator	Unit	2001	2007	2009	Target 2015	Status	Source		
GOAL 3 - PROMOTE O	GENDER EQ	UALITY	/ & EMI	POWER	RMENT				
Proportion of seats held by women in Parliament	%	125.0ª	92.0 <sup>b</sup>	64.0 <sup>C</sup>	35	On track	a UNIFEM data, 2006 b National Parliament, 2010		
Indicator	Unit	2001	2007	2009	Target 2015	Status	Source		
GOAL 4 - REDUCE CH	ILD MORT	ALITY							
Under-5 mortality rate	per 1,000 live births	125.0ª	92.0 <sup>b</sup>	64.0 <sup>C</sup>	96	Achieved*	a MICS, 2002 (in 2002) b UNFPA, 2009 (est. for 05-10) c DHS 2009-2010 Preliminary Report		
Infant mortality rate	per 1,000 live births	88.0 <sup>a</sup>	60.0 <sup>b</sup>	44.0 <sup>C</sup>	53	Achieved*	a UNICEF MICS, 2002 b MoH, Nov 2009 (in 2008) c DHS 2009-2010 Preliminary Report		
Proportion of children immunized against measles	%	39.0 <sup>a</sup>	63.0 <sup>b</sup>	68.2 <sup>C</sup>	100	Off track	a UNICEF MICS, 2002 b MoH, EPI unit, 2009		

Indicator	Unit	2001	2007	2009	Target 2015	Status	Source
GOAL 5 - IMPROVE MA	TERNAL	HEALTH	1				
Maternal mortality ratio	Per 100,000	660.0 <sup>a</sup>		450.0 <sup>b</sup>	252	Off track	a Ta MM in 2000: WHO, UNICEF & UNF b MoH 2008/2009
Proportion of births attended by skilled health personnel	%	19.0 <sup>a</sup>	19.0 <sup>b</sup>	29.6°	60	On track	a DHS 2003 b UNFPA, 2009 c DHS 2009-2010 Preliminary Report
Contraceptive Prevalence Rate	%	8.0 <sup>a</sup>	19.8 <sup>b</sup>	22.4 <sup>c</sup>	40	On track	a TLSS, 2001 b TLSLS, 2007 c DHS 2009-2010 Preliminary
Antenatal care coverage at least one visit	%	42.5 <sup>a</sup>	55.4 <sup>b</sup>	86.0 <sup>€</sup>	75	Achieved*	a UN Statistical Yearbook, 2008 b MoH, Annual Statistic, 2007 c DHS 2009-2010 Preliminary Report
Indicator	Unit	2001	2007	2009	Target 2015	Status	Source
GOAL 6 - COMBAT HIV,	MALAR	IA & OT	HER DI	SEASES	;		
Prop. of popul. aged 15-24 with comprehensive correct knowledge of HIV/AIDS	%	3.0 <sup>a</sup>	12.9 <sup>b</sup>	37.4 <sup>C</sup>	80	Off track	a UNICEF MICS, 2002 (in 2002) b TLSLS, 2007 c DHS 2009-2010 Preliminary Report
Incidence associated with malaria	Per 1,000	113.0 <sup>a</sup>	206.0 <sup>b</sup>	113.0 <sup>C</sup>	45	Off track	a Ua MoH, HMIS, 2000 b MoH, HMIS, 2007 c MoH, HMIS, 2010
Proportion of children under-five sleeping under insecticide treated bet nets	%	8.3 <sup>a</sup>		45.5 <sup>b</sup>	100	Off track	a UNSTATS, 2009 b DHS 2009-2010 Preliminary Report
Incidence rates associated with TB	Per 100,000	250.0 <sup>a</sup>	250.0 <sup>a</sup>	145.0 <sup>a</sup>	138	On track	a MoH, TB Department, 2010
Prevalence rates associated with TB	Per 100,000	250.0 <sup>a</sup>	789.0 <sup>a</sup>	378.0 <sup>a</sup>	353	Off track	
Proportion of TB detected cases (under DOTS)	%	<b>50.0</b> <sup>a</sup> (in 2003)	61.0 <sup>b</sup>	70.0 <sup>c</sup>	70	Achieved*	a Global TB Control, WHO report, 2007 - 2003 figures b UNSTATS, 2009 - 2006 figures
Proportion of TB detected cases cured (under DOTS)	%	81.0 <sup>a</sup> (in 2003)	<b>79.0</b> <sup>a</sup> (in 2006)	85.0 <sup>C</sup>	85	Achieved*	c MoH, 2010
					Townst		
Indicator	Unit	2001	2007	2009	Target 2015	Status	Source
GOAL 7 - ENSURE ENVI	RONMEN	NTAL SU	JSTAIN.	ABILIT	1		
Proportion of land covered by forest	%	51.0	50.0	50.0	55	Off track	Ministry of Agriculture, Forestry Directorate, 2010
Proportion of population using an improved drinking water source	%	48.0 <sup>a</sup>	63.1 <sup>b</sup>	66.0°	78	On track	a SAS, 2010 (National Coverage) b UNFPA, 2009
Proportion of population using an improved	%	31.0 <sup>a</sup>	46.8 <sup>b</sup>	49.0 <sup>c</sup>	60	Off track	a SAS, 2010 (National Coverage) b TLSLS 2007

Indicator Unit 2001 2007 2009 2015 Status Source

#### **GOAL 8 - DEVELOP GLOBAL PARTNERSHIP FOR DEVELOPMENT**

Cellular	Per	2.0	7.8	35.0	N/A	N/A	Telecom Profile, 2009
subscribers per 100	100	(in 2003)					

<sup>\*</sup> Achieved targets will now be replaced by recalibrated targets for 2015. The MDG Report for 2011 will incorporate these new targets.

#### Note

The figures in this table, showing the progress of the MDGs were made available just before the final editing of the TLNHDR. These figures differ in some aspects from the MDG table presented in Chapter 5 of the TLNHDR, which outlines the macro-economic framework required for achieving the MDGs. The reason for this discrepancy is that whilst the macro-economic framework in Chapter 5 uses a moderate-to-high growth rate of eight percent for the economy, up to 2025, the Government's estimation of progress in achieving the MDGs and targets is based on double-digit growth estimates, up to 2025.

## **Calculating the Human Development Index and Associated Indices**

## Introduction to the 2010 Human Development Index (HDI) Data

The 2010 Global Human Development Report, the Real Wealth of Nations: Pathways to Human Development introduces several minor but significant adjustments in the indicators and methodology used to calculate the Human Development Index. These changes incorporate newly available data sets and further strengthen the HDI's statistical integrity. What follows explains the technical adjustments and the reasoning behind them, as well as the impact of these changes on the 2010 HDI values and ranks, as used in the 2010 Global Human Development Report, and in the HDI data contained in the Timor-Leste National Human Development Report (TLNHDR.)

Progress on HDI values for all countries is specified in Table 2 'Human Development Index Trends' in the Statistical Annex of the 2010 Global HDR. This table is based on consistent indicators, methodology and time series data, and thus shows real changes in values and ranks over time reflecting the actual progress countries have made. It is misleading and inappropriate to compare values and rankings across published Global Human Development Reports, because the underlying data and methods have changed.

The 2010 Global HDR introduces three new composite indices on an experimental basis – the Inequality-adjusted HDI, the Gender Inequality Index, and the Multidimensional Poverty Index. Data from the Inequality-adjusted HDI is presented in the TLNHDR

## The HDI: Indicators

The HDI is a summary measure for assessing long-term progress in three basic dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living. In previous Global and Timor-Leste HDRs these basic dimensions were measured by life expectancy at birth; adult literacy rate and combined gross enrolment in education; and GDP per capita in purchasing power parity US dollars (PPP US\$) respectively. The indicators measuring access to knowledge and a decent standard of living have changed in the tables in the 2010 Global HDR, and thus in the TLNHDR.

Access to knowledge is measured by: i) mean years of adult education, which is the average number of years of education received in a life-time by people aged 25 years and older; and ii) expected years of schooling for children of school-entrance age, which is the total number of years of schooling a child of school-entrance age can expect to receive if prevailing patterns of age-specific enrolment rates stay the same throughout the child's life. These new measures are used because a number of countries, especially those at the top of the HDI ladder, have achieved high levels of combined gross enrolment ratios and adult literacy rates. As such, the discriminatory power of these indicators has weakened. Mean years of adult education and expected years of schooling for children capture the concept of education better than the previous indicators and have stronger discriminating power across countries. These indicators are also better at capturing recent changes in education and school enrolment. However, as with the previous indicators, they do not assess quality of education.

Standard of living is now measured by Gross National Income (GNI) per capita in PPP US\$, instead of Gross Domestic Product (GDP) per capita in PPP US\$. While GDP is a measure of economic output, it does not reflect a country's disposable income – some profits may be repatriated abroad, some residents receive remittances from abroad, and in some cases inbound aid flows may be sizeable. GNI adjusts the GDP for these factors and is therefore a better measure of a country's level of income.

#### **Transformation of Dimension Indicators**

Calculating the HDI requires that the dimension indicators, which are measured in different units, are transformed to a unit-less scale ranging from zero to one. In order to make this transformation, minimum and maximum values are set for each indicator. Dimension indicators are transformed using observed maximum levels for all sub-components over the period for which HDI trends are presented (from 1980 to 2010). The minima are set as follows: for life expectancy - 20 years; for education - 0 years; and for GNI per capita - 163 (PPP US\$), which is an observed minimum. The choice of minimum values is motivated by the principle of a subsistence level or 'natural zero', below which there is no possibility for human development. Transformed using these maxima and minima, the HDI provides a summary measure of a country's human development achievement relative to what is feasible at the time.

## **Method of Aggregation**

In past Global Human Development Reports, the HDI was calculated as the arithmetic mean of the dimension indices. This method of aggregation allowed for perfect substitution between dimensions – in other words a low achievement in one dimension could be compensated for in the HDI calculation by high achievement in another dimension. This year, a multiplicative method of aggregation is used, i.e. aggregations are made using the geometric mean of the dimension indices. This approach reduces the level of substitutability between dimensions and ensures that a one percent decline in, for example, life expectancy at birth, has the same impact on the HDI as a one percent decline in education or income. Table A summarizes the changes made to the HDI in the 2010 report, from which the Timor-Leste HDI data are taken.

	Previous (Aggre	gation: Arithm	etic mean)	<b>2010</b> (Aggregation: Geometric mean)			
	Indicators -	Transfo	rmation	Indicators	Transformation		
Dimensions	illuicators	Minimum	Maximum	mulcators	Minimum	Maximum (observed)	
Health	Life expectancy at birth (years)	25	85	Life expectancy at birth (years)	20	83.2	
Knowledge	Adult literacy rate (%)	0	100	Expected years of schooling	0	20.6	
	Combined gross enrolment ratio (%	0	100	Mean years of schooling	0	13.2	
Standard of living	GDP per capita (PPP US\$)	100	<b>40,000</b> (capped)	GNI per capita (PPP US\$)	163	108,211	

#### Data

Unlike past reports which presented the HDI on a two year time lag, the 2010 Global HDR presents HDI values and ranks for the year 2010. Data for 2010 were available for life expectancy at birth and mean years of schooling, and data for the most recent year available were used for expected years of schooling. For GNI per capita (PPP US\$) 2010 estimates were made by applying GDP growth estimates from the IMF to the World Bank's most recent GNI per capita (PPP US\$) data.

To ensure as much cross-country comparability as possible, the HDI is based primarily on international data from the UN Population Division, the UNESCO Institute for Statistics (UIS) and the World Bank.

However, because the UIS does not compile statistics on mean years of schooling, reliable estimates by renowned scholars (Barro and Lee)<sup>1</sup> have been used. The Barro and Lee estimates are based on school attainment data from censuses and school enrolment data compiled by UN agencies including the UIS and the UN Statistics Division.

In the 2010 Global HDR, a number of countries are missing data for one or more of the four HDI components. Hence, the HDI was calculated for only 169 countries (168 UN member countries plus the Hong Kong Special Administrative Region of China). Micronesia entered the HDI table for the first time while Zimbabwe re-entered. Antigua and Barbuda, Bhutan, Cuba, Dominica, Eritrea, Grenada, Lebanon, Oman, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Samoa, Seychelles, and Vanuatu dropped from the table because data were missing.

#### **HDI Values and Ranks**

Changes in the HDI values and ranks shown in the 2009 and 2010 Global and Timor-Leste HDRs result from the methodological changes described above in calculating the HDI, as well as from real underlying changes in status.

The HDI values and ranks in this year's report are not comparable to those in past reports. To allow for assessments of progress in HDIs, the report includes recalculated HDIs from 1980 to 2010 for as many countries as data allow using the new methodology. Unless otherwise noted, the data used in the Global and Timor-Leste National Human Development Reports to assess HDI progress and ranks are based on the new HDI methodology.

#### **New Indices**

## The Inequality-Adjusted HDI (IHDI)

The HDI is an average measure of basic human development achievements in a country. Like all averages, the HDI masks inequality in the distribution of human development across the population at the country level. The 2010 Global Human Development Report introduces the 'inequality adjusted HDI (IHDI)', a new measure for a large number of countries which takes into account inequality in all three dimensions of the HDI by 'discounting' each dimension's average value according to its level of inequality. The IHDI is thus a measure of the average level of human development that a country has achieved in the three HDI dimensions, given the existing inequality in distribution of achievements and the level of aversion to inequality which is set to a low level of 1. When there is no inequality in the HDI dimensions or no aversion to inequality, the average level

<sup>1</sup> Barro, R. J. and Lee, J.W. (2010), "A New Data Set of Educational Attainment in the World, 1950-2010." NBER Working Paper No. 15902. Cambridge: National Bureau of Economic Research.

of human development is reflected in the HDI. In this sense, the HDI can be viewed as an index of 'potential' human development and IHDI as an index of actual human development. The 'loss' in potential human development due to inequality is given by the difference between the HDI and the IHDI, and can be expressed as a percentage. Full details can be found in Technical note 2 of the 2010 Global HDR

## The Gender Inequality Index (GII)

The new Gender Inequality Index (GII) presented in the 2010 Global Human Development Report reflects women's disadvantages in three dimensions – reproductive health, empowerment, and economic activity. Reproductive health is measured by maternal mortality and adolescent fertility rates; empowerment is measured by the share of parliamentary seats held by each gender and attainment at secondary and higher education by each gender; and economic activity is measured by the labour market participation rate for each gender. The GII replaces the previous Gender-related Development Index and Gender Empowerment Index. The GII shows the loss in human development due to inequality between female and male achievements in the three GII dimensions.

Aggregation of the GII dimensions is first done separately for each gender group using geometric means. The gender-specific means are then aggregated using harmonic means which capture the inequality between women and men and adjust for association between dimensions. Finally, the GII is expressed as the relative difference (loss) between the harmonic mean and the reference mean. The reference mean is obtained assuming equality of genders in all three GII dimensions. Due to a lack of relevant data this year, the GII has not been calculated for Timor-Leste.

## The Multidimensional Poverty Index (MPI)

Since 1997, Global HDRs have presented the Human Poverty Index (HPI), which combines different aspects of non-monetary deprivations. The HPI has contributed to the way poverty is understood, but the measure does not capture overlapping deprivations suffered by individuals or households.

The 2010 Global HDR report introduces the Multidimensional Poverty Index (MPI), which identifies multiple deprivations in the same households in education, health and standard of living. The education and health dimensions are based on two indicators each while the standard of living dimension is based on six indicators. All of the indicators needed to construct the MPI for a household are taken from the same household survey. The indicators are weighted, and the deprivation scores are computed for each household in the survey. Households with a score of 3, which is roughly equivalent to being deprived (or poor), in at least three out of ten indicators are considered multi-dimensionally poor. Households with a deprivation score between 2 and 3 are vulnerable to or at risk of becoming multi-dimensionally poor. Due to a lack of relevant data, the MPI has not been calculated for Timor-Leste







