TIMOR-LESTE
HUMAN DEVELOPMENT REPORT
2006

The Path out of Poverty

Integrated rural development

United Nations Development Programme

Message from the President

Poverty and chronic deprivation continue to tragically affect more than forty per cent of our society today. The number of those in absolute poverty in Timor-Leste might have increased since three years ago. While the gap between the rich and the poor might also have widened, the poor continue to be chained by what is called "poverty trap".

But viewing poverty as a curse or a fate can no longer be acceptable – neither from a moral nor from a realpolitik standpoint. When I attended the Millennium Summit in 2000 as an observer, the world leaders committed themselves, for the first time in history, to reduce substantially – by half – the number of people in absolute poverty within a relative short period of time, by 2015.

In a recent two-day open dialogue on participative democracy chaired by me, I find, once again, that we cannot ignore the fate of more than forty per cent of our population. Poverty can potentially act as a breeding ground for social instability and civil disorder, and it can trigger crime and strife. The poor and the disadvantaged, particularly women, widows, orphans, and former ex-combatants and veterans, must be recognized as individuals with rights and as potential agents that can contribute to economic growth and poverty reduction – the twin objectives of the National Development Plan.
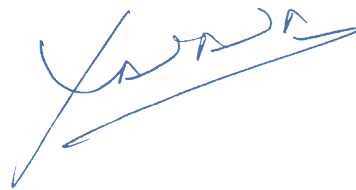
To reduce poverty by half will require sustained efforts at various levels and strong partnerships among all stakeholders. The Report suggests three key paths to follow – decentralization and local governance, partnerships and alliances, and capacity development. Halving poverty requires effective national policies, create access to economic services as well as health and education, and widen opportunities for the poor to organize themselves, especially at the local community level to enable them to present their views and to allow them to participate in the decision-making on local resource allocation. The empowerment of the poor and their participation in local governance would also contribute to higher accountability and transparency of the use of public resources that are spent in their name.

But empowerment of the poor does not solely reside on the Government's responsibility. Interactions with civil society organizations, cooperatives and the media are crucial. Quite a significant number of non-governmental organizations have been active in many areas, including health, education, water and sanitation, research and advocacy as well as human rights and development. Moreover, the culture of cooperation among farmers can be a way to enable them to raise production through the acquisition of agricultural inputs and selling of their surpluses. Increasing productivity and output can have a significant impact on poverty. In addition, the media can greatly contribute as source of information and public education in such areas as agriculture, education and health, while serving as public watchdog against corrupt practices and human rights and other abuses. Partnerships and alliances with non-state actors need to be pursued.

Given this country's past history, we face the fact that our institutions and our people are inadequately equipped with the skills required to deal with more complex issues related to economic and social development of our country. Enhancing skills and building human capabilities of the poor is particularly important and can have a major impact on their productivity and human dignity.

Timor-Leste has the resources to reduce poverty or even eliminate it. But setting a goal is one thing and achieving it is quite another. It is my sincere hope that this Human Development Report will make a significant contribution to our effort in mobilizing resources and forging partnerships to achieve this goal.

Kay Rala Xanana Gusmão
President of the
Democratic Republic of Timor-Leste

Message from the Prime Minister

The First National Human Development Report for Timor-Leste was launched on the momentous occasion of the country's independence in May 2002. Four years later, the release of the Second National Human Development Report proves to be an equally significant event as it pays due recognition to the country's progress over its first few years as a sovereign nation, while acknowledging the many steps that are still needed along the path towards sustainable peace and development.

As we continue along this path, while taking stock at how far we have come and how much has been achieved, we also need to keep moving forward. In its three short years since independence, Timor-Leste has a solid National Development Plan which helps to guide the country's vision and future. This has been operationalized through the Sector Investment Programmes which articulate the sector-specific strategies for the way forward.

Understandably, for the foreseeable future, the challenges of development will remain in the forefront with Timor-Leste being among the poorest nations in the world. For example, we are very much aware of the dire need for improvement in many sectors, in particular the social sectors where the health indicators are among the lowest in East Asia, with the under-five mortality rate at 136 per 1,000 live births. In addition, nearly 64 percent of the population still suffer from food insecurity, and malnutrition affects 46 percent of children. More than 44 percent of the population continue to subsist below $1 per day, and unemployment is estimated at 30 percent in urban areas with the inability to absorb the 11,000 graduates each year.

This Second National Human Development Report takes into account these daunting challenges and identifies opportunities to address them. For instance, the reduction of poverty is closely aligned with the importance of integrated rural development. The report goes further to make a case as to why local institutions and partnerships matter.

More importantly, it underscores the need to target the Millennium Development Goals through effective national policies and active participation in all sectors.

As history has shown us, the spirit and determination of the Timorese people are quite resilient. There are no impossible tasks that cannot be achieved through strong commitment and resolve. We will continue to move forward together with our many partners and friends who over the years have continued to show their relentless support. It is with this togetherness on the path to progress we will ensure that the fundamental values of peace, freedom and development is extended to every man, woman and child in Timor-Leste.

Mari Bin Amude Alkatiri,

**Prime Minister of the
Democratic Republic of Timor-Leste**

Foreword

As the newest member state of the United Nations, Timor-Leste has shown a strong commitment towards good governance and development. Yet, Timor-Leste remains amongst the poorest countries in the world. Poverty in Timor-Leste is most severe in rural areas. The main challenge during the years ahead will be to design and implement sound programmes that will lead the country out of poverty and enable it to attain the Millennium Development Goals and the first National Development Plan (NDP). In terms of the percentage of population, this means that those living in poverty must be reduced from 40 percent in 2001 to 27 percent by 2015.

The attainment of these goals, however, is firmly anchored to improved public service, increased employment and sustained economic growth. Integrated rural development is the key to increased productive activities and employment in agriculture, fisheries, forestry, tourism, commerce and industry. Growth will have to start with agriculture, which employs around three-quarters of the labour force. Tourism also offers an opportunity. Given the continuous growth of the world's tourism volume and the size of its share in the global economy as well as in the foreign exchange revenues of the Asia-Pacific region, tourism would be one of the key areas that could foster economic growth and employment generation. Equally, trade has long been considered an important engine of growth, with coffee as the main export item besides the country's exploitation of oil and gas resources in the Timor Sea. All of these activities require educated and skilled people, necessitating sound education policies as well as targeted capacity building initiatives.

The Government of Timor-Leste has already committed one-third of its annual budget to pro-poor policies. The Government is expected to boost the capabilities of the poor particularly in the rural areas through improved infrastructure facilities and better access to market. Civil society organizations and the still embryonic private sector will have to play an increasingly important role in ensuring enhanced service delivery and promoting economic growth.

As the late Sergio Vieira de Mello rightly pointed out in 2002, "human development is the process of enlarging people's choices, providing every individual with the opportunity to make the most of his or her abilities." The Government and the people of Timor-Leste have taken great strides to identify possible paths out of poverty. Following the continued downsizing of the United Nations presence and a decline in bilateral and multilateral assistance, the leaders of Timor-Leste now look ahead and strive to implement pro-poor policies through integrated rural development. Faith and determination has provided the people of Timor-Leste with the resilience to face and overcome the challenges they encounter in their daily lives. In forging a strong partnership, we can walk together on the path out of poverty.
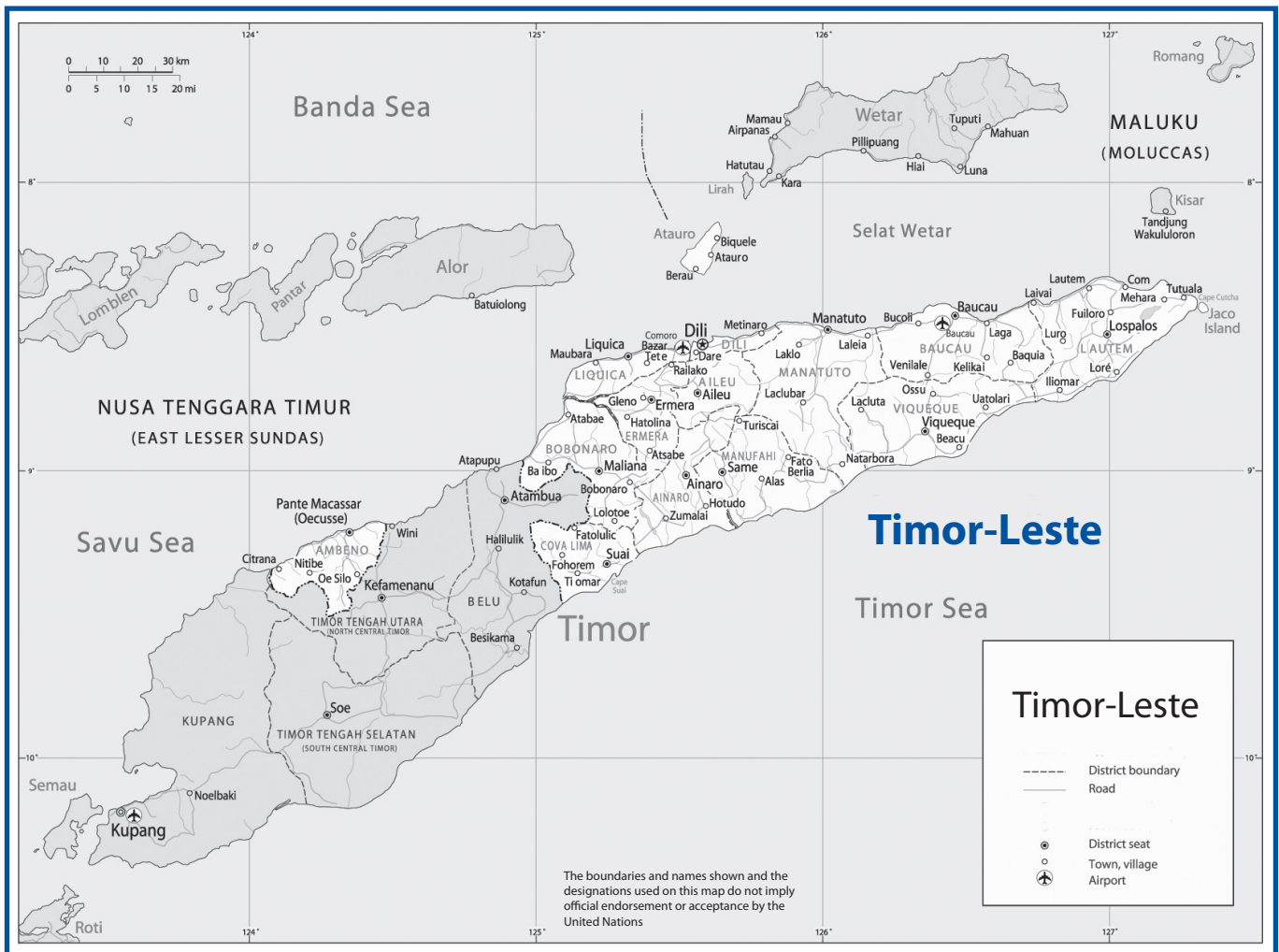
Dr. Sukehiro Hasegawa

**Special Representative
of the UN Secretary-General**

**UN Resident Coordinator and UNDP
Resident Representative in Timor-Leste**

Timor of the rising sun

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations

Timor-Leste

District boundary
Road

⦿ District seat
○ Town, village
✈ Airport

Timor-Leste, or Timor Lorosa'e – 'Timor of the rising sun' – is situated on the eastern part of the island of Timor, the easternmost of the Lesser Sunda islands. It is bordered on the west by the Indonesian province of Nusa Tenggara Timur. To the north lie the Savu Sea and the Strait of Wetar. To the south, 500 kilometres across the Timor Sea, is Australia. Also part of the national territory of Timor-Leste is the enclave of Oecussi in the western part of Timor island and the islands of Ataúro and Jaco , giving a total land area of 14,919 sq km.

Timor's relief is broadly characterized by a core of rugged hills and mountains consisting of a confused mass of knife-edged ridges and craggy upland blocks. The land rises to 2,000 metres and above, including Mount Ramelau at 3,000 metres. Around 44% of Timor-Leste may have a slope of approximately 40%, which, combined with heavy rainfall, encourages soil erosion. The climate is hot, with an average temperature of 24°C and around 80% humidity. During the dry season, Timor-Leste has moderate winds and slightly milder temperatures – 24°C on the coastline and 20°C or lower in the mountains. But between November and April, in the monsoon season, the rivers become torrents due to extremely high precipitation.

During this period, the average temperature on the coast is about 25°C. On the northern coast, the rainfall ranges from 500 to 1,000 millimetres per year and there is only one harvest. The southern coastal plain, however, can receive over 2,000 millimetres and has two wet seasons and two harvests. The island is also affected by El Niño-related weather anomalies.

Abbreviations

ADB....................Asian Development Bank
AIDS...................Acquired immunodeficiency syndrome
ASEAN...............Association of Southeast Asian Nations
ASYCUDA..........Automated System for Customs Data Administration
AusAID...............Australian Agency for International Development
BULOG ....Indonesian Logistics Agency
CCT.....................Cooperativa Café Timor
CEDAW ....Convention on the Elimination of All forms of Discrimination Against Women
CFET...................Consolidated Fund for East Timor
CSB.....................Combined Sources Budget
CSO ....Civil Society Organization
DOTS ....Directly Observed Treatment Short-Course for detection and treatment of tuberculosis
DPT ....Diphtheria, pertussis, tetanus
ETADEP ....East Timor Agriculture and Development Foundation
ETWAVE............East Timor Women Against Violence
FAO ....Food and Agriculture Organization
FOKUPERS ....Women's Communication Forum
FONTIL...............Timor-Leste NGO Forum
FRETILIN............Revolutionary Front for the Liberation of East Timor
GDI ....Gender-related development index
GDP....................Gross domestic product
GEM ....Gender empowerment measure
GFFTL ....Young Women's Student Group of Timor-Leste
HDR....................Human Development Report
HIV......................Human immunodeficiency virus
HDI.....................Human development index
HPI......................Human poverty index
IMF ....International Monetary Fund
IMFTL ....Instituição de Microfinanças de Timor-Leste
JICA....................Japan International Cooperation Agency
LDP ....Local Development Programme
LSMS..................Living Standards Measurement (or House-hold) Survey
MAFF ....Ministry of Agriculture, Forest and Fisheries

MoD...................Ministry of Development
MDG ....Millennium Development Goal
MECYS...............Ministry of Education, Culture, Youth and Sports
MoI.....................Ministry of the Interior
MoH....................Ministry of Health
MICS ....Multiple Indicator Cluster Survey
MoJ ....Ministry of Justice
MoPF ....Ministry of Planning and Finance
MSA ....Ministry of State Administration
MTC ....Ministry of Transport and Communications
MPW ....Ministry of Public Works
NDP....................National Development Plan
NHDR ....National Human Development Report
NCBA ....National Cooperative Business Association
NGO ....Non-government organization
OPMT ....Organização Popular da Mulher de Timor
OMT ....Organização da Mulher de Timor
PAP.....................Poverty Assessment Project
PPA ....Participatory potential assessment
PPP.....................Purchasing power parity
QRM...................Quarterly Reporting Matrix
RTL ....Radio Timor Kmanek
SIP ....Sector Investment Package or Programme
SUSENAS...........Indonesian Socio-Economic Household Survey
TFET...................Trust Fund for East Timor
TLSS ....Timor-Leste Living Standards Measurement (or Household) Survey
TSP ....Transition Support Programme
UNCDF ....United Nations Capital Development Fund
UNDP ....United Nations Development Programme
UNICEF..............United Nations Children's Fund
UNIFEM ....United Nations Development Fund for Women
UNMISET..........United Nations Mission of Support to East Timor
UNTAET ....United Nations Transitional Administration in East Timor
USAID................United States Agency for International Development

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Executive summary

This report assesses Timor-Leste's human development progress in the context of the Millennium Development Goals. Then it focuses more specifically on poverty – and the ways of reducing it, particularly through integrated rural development. Finally, it considers the resources and partnerships that Timor-Leste will need if it is to fulfil its people's right to human development.

In recent years, the people of Timor-Leste have made impressive gains – particularly in social and political development. This is largely due to their own efforts. They survived centuries of colonial rule, overcame a 24-year occupation, and became independent only after enduring phenomenal suffering and making tremendous sacrifices.

But economic progress has been much slower. This is the poorest country in the region, with a per capita income of only $370 per year. And it is getting poorer: following the withdrawal of the UN personnel and other aid workers the economy has continue to shrink.

The state of human development

The pace of overall progress is evident in Timor-Leste's human development indicators – which, although steadily improving, remain far lower than those in most other countries in the region. Life expectancy is short, education levels are low and a high proportion of the population live below the poverty line.

Health

Health standards are still very low. Life expectancy in 2004 was estimated at only 55.5 years – 54.0 years for males and 56.6 years for females. The people of Timor-Leste remain vulnerable to respiratory and diarrhoeal diseases as well as malaria, dengue fever, TB and leprosy. They do not yet face a widespread epidemic of HIV/AIDS, but few people are aware of the threat it poses and fewer still know how to prevent it. People suffer from poor health partly because they cannot get ready access to health services. But water supplies and sanitation are also deficient: half the population do not have access to safe drinking water, and 60% do not have adequate sanitation.

In this precarious health environment, children are particularly exposed: out of every 1,000 live births, around 90 infants die before their first birthday. They are prey to some of the commonest childhood illnesses, including diarrhoea and acute respiratory infections; more than half of children under-two have never been immunized.

Education

Education standards too are poor. In 2004 the adult literacy rate was only 50.1% – 56.3% for males and 43.9% for females. The situation should improve as more children go to school. But too many children are still missing out: between 10% and 30% of primary school-age children are not in school – particularly those from the poorest families. Even when they do enrol, pupils tend to do so late and then have to repeat classes or drop out; fewer than half of children entering primary school complete six years of education.

There is also very little education outside the normal school ages: only around 2% of children under five attend any kind of pre-school or playschool. At the other end of the age scale, few adults attend literacy classes, whether organized by the Government or NGOs.

Human development index

The slow pace of improvement in health and education has been registered in Timor-Leste's human development index (HDI). The HDI had been rising during the 1990s, then dipped in 1999 as a result of the phenomenal destruction and dislocation during the referendum period. Subsequently it started to rise again, but Timor-Leste's HDI is still the lowest among the ASEAN countries.

The people of Timor-Leste have made impressive gains in social and political development

Poverty

Timor-Leste's low HDI corresponds to a high level of income poverty. The income poverty line is set at $0.55 per capita per day. In 2001 the proportion of the population with an income below this was around 40% – only slightly smaller than in earlier years. Income poverty is more pronounced in rural (46%) than urban (26%) areas. However there are also contrasts between different urban areas: lower in Dili and Baucau (14%) and higher elsewhere.

The poorest people tend be those with least education and they are likely to be working in agriculture. Widows and orphans of the resistance, veterans and former child soldiers are also among the poorest. Especially disadvantaged and vulnerable are those children – one in ten – who have lost one or more parents.

A broader measure of poverty is the human poverty index (HPI) which is a composite measure of deprivation that combines the probability of survival to age 40, illiteracy, the proportion of children who are underweight and the proportion who lack access to clean water. Since 2001, Timor-Leste's HPI too has improved, but only slightly; progress in survival and literacy has been offset by a deterioration in living standards.

Food insecurity

Health standards are also compromised by a lack of food. Many rural households go short of food during the lean months from November to February. Currently, 64% of the population suffer from food insecurity.

Food insecurity is partly the result of low levels of food production – a consequence of poor land and the generally low levels of technology, combined with high crop losses, both pre- and post-harvest. Another problem is distribution: many farmers lack storage capacity and find it difficult to get their produce to markets.

Gender disparities

Women in Timor-Leste suffer significant discrimination – in the household, the workplace and the community. Girls are more likely than boys to drop out of school and almost two-thirds of women aged 15-60 years are illiterate, compared with less than half of men. Women also suffer discrimination at work: they are less likely to work in the formal labour force and they are paid significantly less than men.

Women now have more access to information on reproductive health but many still lack full access to family planning services. As a result, Timor-Leste's women tend to have high fertility rates and many die in childbirth – the maternal mortality rate is up to 800 per 100,000 live births.

The extent of discrimination against women is evident in the gender-related development index (GDI). This shows a slight improvement since 2001, largely due to an increase on female incomes, though this was offset to some extent by a poor performance in education.

Another serious concern is gender-based violence. Women continue to be subjected to domestic violence, sexual harassment in the workplace, rape and other forms of mistreatment and sexual abuse. Around half of women in intimate relationships suffer from some form of violence.

Infrastructure and communications

A significant obstacle to raising standards of human development is the state of the country's infrastructure. Timor-Leste has a reasonable network of principal roads but secondary and feeder roads are less developed and during the rainy season many sucos are difficult to reach.

Electricity supplies too are uneven. Services are reasonably good in urban areas, reaching 92% of households in Dili and Baucau, but they only reach 10% of rural households: indeed in recent years the proportion of rural residents covered by electricity has actually declined. People living outside the major urban centres also have very limited telecommunications services.

Environment

Most Timorese are critically dependent on the state of the natural environment. Unfortunately this has been deteriorating rapidly. 'Slash and burn' agriculture, combined with decades of unsustainable logging and forest fires have exposed the land, and rapid water flows have washed away soil. This is exacerbated by the gathering of fuel wood: the major source of energy for rural residents. This also harms people's health: inefficient burning of wood in poorly ventilated kitchens is a significant factor in respiratory diseases.

Around 40% of people live in income poverty, with less than $0.55 per person per day

Tackling rural poverty

If Timor-Leste is to reduce levels of poverty it will need sustained economic growth. Growth of any kind is still proving elusive; the economy has continued to decline following the withdrawal of UN personnel. What will be needed in the future, however, is not just any kind of growth but 'pro-poor' growth that is equitable and creates sufficient employment for Timor-Leste's growing labour force. It will also need to be sustainable, and not over-exploit the natural resources – as well as being based on activities that can help enhance national culture and identity.

Agriculture and rural development

Growth will have to start with agriculture, which employs around three-quarters of the labour force. Most farmers are engaged in subsistence cultivation, employing family members on small plots of land: average landholdings are around 1.2 hectares. Currently productivity is low: output per worker is less than one-tenth of that in industry and services and, as a result, agriculture generates only one-fifth of GDP.

Low productivity can be ascribed to an unfavourable climate, poor soils, and the lack of roads and other infrastructure. But there are a number of other constraints to agricultural development. Farmers generally lack inputs and machinery, as well as many of the management and other skills that would enable them to take advantage of higher levels of technology. They also face financial constraints: they do not have ready access to credit, and even then may be reluctant to invest because they do not have secure title to their land.

Timor-Leste needs to develop a dynamic agricultural sector that not only generates more income for farmers but also creates more opportunities for off-farm employment. Thus far the Government's policy for achieving this has been to concentrate on providing infrastructure and social services, but to offer only limited economic services in the expectation that the private sector will move in to fill the gaps. However the private sector is still embryonic, so for the time being the Government may still have to take the lead even for economic services.

The way forward will probably be through a combination of one or more of four basic options:

1. *Develop government services* – The Government would provide these services for the next five to ten years until the private sector is sufficiently developed to take over.
2. *Encourage local organizations* – The Government and development partners could encourage the formation of cooperatives, farmers' associations and user groups.
3. *Involve NGOs* – Strengthen NGOs and other organizations of civil society so that they can provide services.
4. *Encourage the private sector* – The Government could encourage entrepreneurs who are interested in delivering services, through tax breaks and access to credit.

Whatever the balance in provision, Timor-Leste urgently needs a clearly laid out strategy for pro-poor rural development. This will also require greater public investment as well as better coordination with the administration, since responsibility for rural development is spread across a number of ministries and agencies.

One of the most immediate priorities should be to improve the provision of credit. One option is to establish a Rural Development Bank, while also encouraging more lending by commercial banks. Linked to this should be land reform, both to redistribute farming land and to issue land titles that can be used as security.

It will also be important to establish more production and marketing cooperatives, as well as transport cooperatives to connect the main production areas with major consumer markets. With better access to markets, farmers can then diversify into production of poultry and eggs and invest more in livestock. The fisheries sector could also diversify by expanding the catch of high-sea species.

The Millennium Development Goals

As a newly independent country, Timor-Leste is making a late start on the MDGs. Globally the base year for the goals is 1990. This is inappropriate for Timor-Leste as it only gained independence some ten years later. A more appropriate base year would be 2001. Thus, rather than aiming to halve poverty between 1990 and 2015 Timor-Leste should instead be aiming to reduce it by around one-third between 2001 and 2015. Even with this adjustment, Timor-Leste faces a stiff challenge. The global Hu-

One of the most immediate priorities should be to improve the provision of credit

man Development Report for 2003 included Timor-Leste in the list of the 59 top-priority and high-priority countries that need urgent actions to achieve the MDGs.

How much investment would be needed for Timor-Leste to meet the MDGs? This is difficult to estimate since the country has very little data and has accumulated few empirical studies that can suggest the impact of different types of investment. Nevertheless, it is possible to get some idea of what is required by looking first at what it might take to achieve the poverty goal, and then at what it would cost to provide effective public services.

It is important that economic growth is not offset by a rise in inequality

The basic requirement for achieving the poverty goal is economic growth. But it is important that this growth is not offset by a rise in inequality. This can be illustrated with three different scenarios: pro-poor growth where the standard measure of inequality, the Gini coefficient, falls by 0.5% per year; neutral growth where the Gini coefficient stays the same; and anti-poor growth where the Gini coefficient increases by 0.5% per year.

If growth is neutral, and there is no change in the Gini-coefficient, then to cut poverty by one-third the annual growth rate would need to be around 4%. If growth were pro-poor, however, the rate would only need to be 3% to 4%. But if it were anti-poor it would need to be around 5%. How much investment would be needed to achieve the required levels of growth? Under the pro-poor growth scenario the total average annual investment, public and private, would need to be $48 million; and under the neutral scenario, $55 million; while under the anti-poor growth scenario it would need to average $65 million. This calculation is necessarily suggestive, but it does highlight the importance of following a growth strategy that is biased towards the poor.

The cost of achieving the remaining MDGs

Achieving the poverty goal should itself contribute to the achievement of the other MDGs. But achieving all the other goals will also require specific investment in such sectors as education, health, water supplies and sanitation. Estimates of what is needed will depend on various assumptions and the range can be quite wide – from $63 million to $137 million per year. Under the more plausible assumptions the average would be $63 million per year.

On the basis of these two exercises, for poverty and for these three sectors, the total annual costs over the next 12 years for achieving the MDGs would range from $122 million under the most favourable circumstances, to $203 million per year under the least favourable. This indicates that in principle it should be possible to achieve the goals since the favourable figure is close to the current level of $125 million per year.

Where will the investment funds come from? Although ultimately private investment should play an increasingly important part in stimulating economic development, for the next ten years at least the predominant source of funds will be public expenditure. The draft budget for 2004-05 indicates that the total requirement for public spending over the next four years will be $983 million. Domestic revenues, including those from the Timor Sea, would cover more than half of this, leaving a fiscal gap over this period over $480 million, or an average of about $120 million per year.

Since then, there have been other estimates that suggest lower deficits, as a result of cuts in expenditure and increases in revenue, particularly from oil. Nevertheless there still is likely to be a significant resource gap. How can it be filled? The eighth MDG emphasizes that achieving the goals is not just a national but also a global responsibility. Timor-Leste, like other low-income countries, should therefore be able to rely on support from the development partners, including bilateral donors, international organizations, public and private foundations and international NGOs.

All this expenditure will, however, have to be focused on the priority sectors that can help the poor. Thus far Timor-Leste has a good record: the Consolidated Fund for East Timor (CFET), for example, has allocated around 35% of the total to education and health. Nevertheless, there are concerns about the distribution of investment across the country. At present the lion's share of CFET expenditures continues to go to Dili; only one-third of the total public expenditure and one-fifth of goods and services are going to the districts. The Government will therefore need to pursue ways of shifting resources and decision-making authority to the districts.

Working together: institutions and partnerships

Timor-Leste has been in the vanguard of popular participation. From the period of resistance onwards, its national institutions have maintained a strong working partnership with the people – evident, for example, in the process of mass consultation that led to the National Vision in preparation for the National Development Plan.

There is thus no shortage of political resolve at the top to encourage participation. The challenge will be to ensure that people throughout the country have the capacity to take advantage of these opportunities.

The bedrock of these partnerships must be sound national institutions. Timor-Leste has made a good start in establishing the basic institutions of public administration, though most of these will need strengthening in the years ahead. There are also efforts underway to establish new institutions.

Decentralization and local government

Achieving the MDGs requires effective national policies, but most of the work has to take place at the local level and particularly in the rural areas. Timor-Leste has yet to decentralize to any great extent. The Constitution sets out the necessary vision of decentralized government, but power still remains concentrated at the centre. Decentralization thus far has largely taken the form of deconcentration.

In principle decentralization should make services more efficient by allowing them to be tailored more closely to local needs. But given the shortage of personnel and resources it could take ten years or more to implement decentralization effectively. In the initial years therefore the Government should focus on decentralizing service delivery – either by organizing this from the centre or by establishing offices of the national departments in a few regional centres. Then, as resources allow, and as more skilled personnel become available, the Government can gradually transfer authority to local bodies.

Decentralization also needs to take into account the political dimensions, including local power structures. Thus as well as transferring responsibilities and resources vertically from central to regional and local governments, the Government will need to foster horizontal networks that will allow regional and local governments to interact with non-state actors.

Partnerships and alliances

Among the most important of these are non-governmental organizations, of which the country has more than 400. National NGOs, a number of which are linked to the Catholic Church, have been active in many areas including education, health, water and sanitation projects, research and advocacy as well as in human rights and development. In addition, more than one-quarter of the NGOs are international – often concentrating on capacity building through education and training, as well as on health services and on community development.

Co-operatives too have an important place. Subsistence farming households already have a culture of cooperation through a network of farmers' organisations, and the potential of new cooperatives is evident from the success of Cooperativa Café Timor.

The media, can also contribute, not only by acting as sources of information and public education in such areas as agriculture, health and sanitation, but also by serving as public watchdogs that can expose corruption as well as and human rights and other abuses.

Capacity development

All of these institutions will play and important part in Timor-Leste's future development. But they share a common weakness – a lack of skilled people. One of Timor-Leste's most urgent priorities therefore must be to raise the country's levels of education, skill and capacity – whether in the public service, in NGOs and civil society, or in the private sector.

The Government plans to keep the number of permanent public servants to 17,200. This resolve has in some cases the right results: the police and the defence forces appear to have been staffed and equipped to a reasonable level. But elsewhere the staffing is inadequate. There are, for example, far too few agricultural extension workers. And virtually all the Government's sector investment plans highlight the shortage of skilled personnel. Just as serious is the lack of capacity of those who are employed: the quality of staff is very variable and most require ongoing training.

Achieving the MDGs requires effective national policies, but most work has to take place at the local level

Some of this skills deficit might be met by contributions from civil society organization, but they too are short of qualified staff. The Government should also be able to contract out some activities to the private sector, but here too the opportunities are limited since the private sector remains very small.

Meanwhile the priority must be to make the most efficient use of both existing government personnel and foreign advisers – an issue that many government departments have yet to fully address.

People do not just need to develop their skills they also need the opportunities to use and refine them. The Government will therefore need to pay careful attention to the work environment for public servants – including promotion opportunities, and incentive structures to ensure that staff are encouraged to develop their skills.

Critical decisions ahead

Timor-Leste has survived a traumatic period in its history. Its people have shown extraordinary resilience and a determination to keep their destiny in their own hands. Now they are in the process of shaping that destiny, making many of the critical decisions that will determine the country's course for decades ahead.

In this they should be able to rely on the support of their many friends overseas, whether in terms of effective forms of development cooperation, or being allowed fair access to their own natural resources. But most of the struggles will be closer to home, as the Timorese make the difficult transition from a society dominated and distorted by external forces to one based on the country's own social traditions and economic realities. They have their vision of where they want to go, of the nation that they want to be. But realizing that vision will be a long and difficult task and many painful decisions lie ahead.

The state of human development in Timor-Leste

Timor-Leste has taken major steps in recent years – taking advantage of the return to democracy which has allowed its people a much greater say in determining the country's future development path. But economic progress has been much slower, and the Timor-Leste's human development index confirms that it still has the lowest levels of human development in Asia.

This is Timor-Leste's second National Human Development Report. The first report, released at independence in 2002, provided the historical context and explored the prospects for promoting human development. This second report reassesses the human development picture four years on – in the context of the Millennium Development Goals. Then it focuses more specifically on poverty – and the ways of reducing it, particularly through integrated rural development. Finally, it considers the resources and partnerships that Timor-Leste will need if it is to fulfil its people's right to human development.

Timor-Leste has made significant advances. The extent of progress was evident in a household survey which registered the changes in people's lives between 1999 and 2001 (PAP, 2003). Around 29% of people felt that their life overall was much better, 60% the same, and 11% much worse – with the proportion seeing improvements significantly higher among urban than rural dwellers. Around one-third of adults (34%) believed their economic situation had improved, while around one-fifth (22%) had experienced a downward slide.

Understandably the greatest perceived progress was in the social and political arenas: 85% believed that they had more power and that there had been improvements in safety and physical security, in education, in political participation and in their status in the community. This is largely due to their own efforts. The people of Timor-Leste survived centuries of colonial rule, overcame a 24-year occupation, and became independent after enduring phenomenal suffering and making tremendous sacrifices.

But the new Government has also made determined efforts to promote participation and has actively consulted people on the country's future development path through a country-wide exercise that involved 38,293 people and covered virtually every suco in the country. The core elements of the resulting National Vision are shown in Box 1.1. This process then paved the way for the country's first National Development Plan (RDTL 2002).

The economic situation, however, has not improved significantly. The same survey (PAP, 2003) found that other aspects of life had worsened including housing, demand for products, employment and infrastructure.

Box 1.1 – The Timor-Leste National Vision for the year 2020

Through an extensive process of consultation in 2002 the people of Timor-Leste arrived at their vision for the future of the country.

- Timor-Leste will be a democratic country with a 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.

The employment situation has worsened during the past two years, largely due to the withdrawal of UN personnel and other aid workers

Progress in human development implies improvement in all these areas – social, political and economic. Essentially it is a process of enlarging people's choices. This involves enhancing their capabilities, such as the capacity to lead a long and healthy life, to be knowledgeable and to enjoy a decent standard of living. But promoting human development also involves creating the conditions that allow people to exercise those capabilities – by promoting participation, for example, gender equality, human security and environmental sustainability. These two aspects of human development have to be kept in balance: enhancing people's capacities without creating opportunities can lead to frustration.

Human development indicators

The lack of overall economic progress is evident in Timor-Leste's human development indicators. This is the poorest country in the region – life expectancy is short, education levels are low and a high proportion of the population live below the poverty line. At the same time the population is growing rapidly, by more than 3% per year (Box 1.2).

Income and employment

The employment situation has worsened during the past two years largely due to the withdrawal of UN personnel and other aid workers and the closure of businesses that catered to them. Each year, about 14,000 young people enter the labour force, swelling the ranks of the unemployed. In 2001, unemployment among youth (15-24 year olds) was 15% overall – and about 43% among those in the labour force in Dili and Baucau. As the economy continues to stagnate, so the employment situation has worsened; by 2004 the unemployment rate had increased to 8.9%, with 23% among the youth (2004 Census of Population and Housing).

Many people are also underemployed, especially in the agricultural and informal sectors. The 2004 Census show that 88% of the total 293,348 working population were engaged in self-employment or subsistence farming. Faced with limited prospects at home, a few of the more enterprising youth are migrating to seek their fortunes in foreign lands: according to the Ministry of Development and Environment, an average of about 800 of Timor-Leste's young people are leaving the country each year looking for opportunities abroad.

Health

Health standards are low: life expectancy was estimated at only 55.5 years in 2004 – 54.4 years for males and 56.6 years for females. Respiratory and diarrhoeal diseases are widespread, and malaria and dengue fever are endemic. TB continues to afflict people and leprosy remains a problem, especially in Oecussi. HIV/AIDS is not yet widely prevalent, but few people are aware of the threat it poses and fewer still know how to prevent it.

Children's health is especially vulnerable: out of every 1,000 live births, around 90 infants die before their first birthday and approximately 136 children die before their fifth birthday. Mortality rates are particularly high in the rural highlands: 15% of children die there before their fifth birthday, compared with around 7% in the major urban centres. Many of these child deaths are related to malnutrition: 43% of children under five are underweight, 47% are stunted and 12% are wasted. Other children die from immunizable diseases: some 58% of children under-two have never been immunized and 95% of children are not fully protected. Many children also suffer from diarrhoea and acute respiratory infections. According to UNICEF's Multiple Indicator Cluster Survey, more than half of the children experienced some form of illness in the two weeks preceding the survey and very few parents followed recommended remedial curative procedures (UNICEF, 2003).

Access to health facilities is difficult, es-

Box 1.2 – The population of Timor-Leste

In 2004 Timor-Leste's estimated population was 923,198. In November 2005 it was estimated to be around 1,011,000. The roots of the people are Melanesian or Malay-Polynesian, mingled with smaller groups that trace their ancestry back to China and the Arab world. In all, they speak more than 20 languages or dialects of which Tetun is the most widely used. Almost half the population can understand Bahasa Indonesia, less than 5% Portuguese and about 2% English.

Around 24%, of the population are urban with 14% residing in the major urban centres of Dili and Baucau.

More than half the population are to be found in the Central Region, 27% in the Eastern Region and a little more than 20% in the Western Region. The people are predominantly young: over half are under 15 years and more than two-thirds are under 25. One-fifth of the population are under 5.

Fertility rates are high – more than 7 children per woman of child-bearing age. And this, combined together with a low rate of contraceptive use (7%), contributes to a 4% population growth rate – with serious implications for employment and for the demand for public services.

Figure 1.1 – Distribution of rich and poor students across school grades
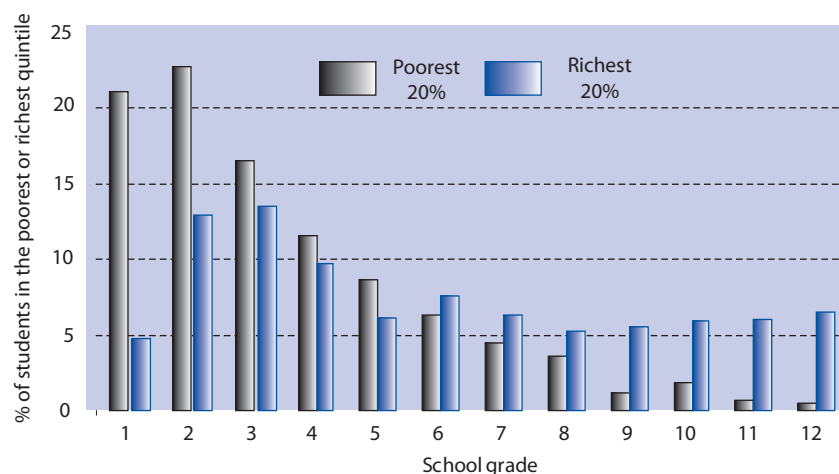
pecially in rural areas. For the country as a whole it takes on average a 70-minute walk to reach the nearest health facility, but in some rural areas it could be several hours. Travel by mikrolet (mini-bus) may cost $2 per visit. Even after reaching the health centre, there is no guarantee that a doctor or nurse will be available, as these personnel have to operate more than one health facility (Box 1.3).

By regional standards, access to other services such as safe water and sanitation are also difficult. Overall, half the population do not have access to safe drinking water, 60% do not have adequate sanitation. Again, the situation is much worse in rural areas than in urban areas.

Literacy and education

Education standards are also low. Based on the 2004 Census, the adult literacy rate was only 50.1% – 56.3% for males and 43.9% for females. Illiteracy is highest among the older population: among 15-34 year-olds, 73% are literate while among those over 50 the proportion drops to 19%. This is largely the result of a lack of primary education: in 2004 about 62% of males and 80% of females aged 30-54 years had not completed primary education (the 2004 Census of Population and Housing).

In 2004 the gross enrolment ratio at primary school level was 116% – 118% among boys and 113% among girls, indicating a high proportion of over-age children. At lower- and upper-secondary levels the gross enrolment ratios were 59% and 46%, whereas at tertiary level the ratio was 6.6%.

Between 10% and 30% of primary

school-age children, or around 67,000 children between the ages of 6 and 11, are not in school – and the absentees are equally divided between boys and girls. One of the main problems is late enrolment: in 2001 for example, only 55% of seven-year-olds and 72% of eight-year-olds attended school. Subsequently, around 20% of children have to repeat grades and many drop out – even today less than half of children entering primary school complete six years of education. Enrolment seems to be lower in rural areas, as is the quality of teaching and learning (World Bank, 2003a).

Low school attendance is often the result of poverty. Poor children are the most likely to enrol late: at age seven, only 10% of the children who were enrolled in school came from the poorest quintile, compared with 29% from the richest quintile. Poor children also tend to drop out sooner, and as a result

Box 1.3 – Improving access to health services for rural residents

Many communities live far from existing health facilities and some community groups are currently moving back to ancestral land even further away from roads and health facilities. One way to serve these communities has been through mobile clinics designed to provide comprehensive services twice a week. However transport and other problems have made it difficult to maintain these clinics and to provide a full range of services,

The Ministry of Health has concluded that mobile clinics are probably not the most effective way of meeting rural health needs and instead has been opening new health

posts in remote areas. For these new posts it has applied strict criteria, including the population in the catchment area, the use of existing mobile clinics, geographical location and the opportunities to rehabilitate existing buildings for the health posts. The Ministry has accommodated the new health posts within its staff ceiling by freeing up some lower level positions as a result of contracting out a range of hospital and community health centre services – though it still has to meet the cost of these contracted services within the overall health budget.

Source: Ministry of Health, June 2004

Table 1.1 – Human development index 1993-2004

	1993	1996	1997	1999	2001	2004
Life expectancy at birth (years)[1]	52.2	53.9	54.4	56.0	56.7	55.5
Adult literacy rate (% age 15 and above)	35.6	40.4	40.6	40.4	43.0	50.1
Combined primary, secondary and tertiary gross enrolment ratio (%)[2]	53	56	57	59	56.1	66.0
GDP per capita (nominal $) [3, 4]	374	429	442	331	466	366
Life expectancy index	0.453	0.482	0.459	0.517	0.528	0.508
Education index	0.413	0.454	0.248	0.466	0.474	0.554
GDP index	0.220	0.243	0.399	0.200	0.257	0.217
Human development index (HDI) [4]	0.362	0.393	0.399	0.394	0.420	0.426

Notes: 1. Life expectancy at birth in 2004 was calculated by extrapolating the past trends of life expectancy from various data sources, including the 2004 Census. See 'Note on Statistics' for more explanation on methods of measuring mortality and life expectancy; 2. Combined gross enrolment ratio was estimated from data on the number of enrolled students in primary, secondary and tertiary education in 2004/2005 from MECYS, divided by the number of school-age population according to the respective educational level from the results of the 2004 Census; 3. GDP per capita nominal is obtained by dividing the total GDP with the number of population in the respective years. GDP data is from IMF Country Report.; 4. Using the estimation of GDP per capita in PPP $ — amounting at $905 in 1993, $1,038 in 1996, $1,618 in 1997, $ 1,054 in 1999, $967 in 2001 and $782 in 2004, the resulting HDI values are reasonably higher than the above figures: 0.408 in 1993, 0.442 in 1996, 0.471 in 1997, 0.459 in 1999, 0.460 in 2001 and 0.475 in 2004. See Box 1.4 on 'Purchasing Power Parity – Issues and Implications' and 'Notes on Statistics' for more explanation for the calculation of PPP for Timor-Leste.

Sources: East Timor NHDR 2002; Multiple Indicator Cluster Survey (MICS) Timor-Leste 2002; UN Population Division; UNDP; UNESCO Institute for Statistics; UNDP (2002) East Timor Human Development Report 2002; National Statistics Directorate (2005) The 2004 Census of Population and Housing Timor-Leste; Information from Ministry of Education, Culture, Youth and Sports (MECYS); The Government of Timor-Leste (2002) 'National Development Plan'; IMF (June 2005) 'Country Report No. 05/250 on Democratic Republic of Timor-Leste: Statistical Appendix'.

they are concentrated at the lower grades while the richer children are more evenly distributed throughout the school (Figure 1.1). But there are also problems of attitude across all income groups: one survey found that 32% of the poorest children and 26% of the richest children expressed 'no interest' in schooling (World Bank, 2003a).

There is also very little education outside the normal school ages: only around 2% of children under five attend any kind of pre-school or playschool. At the other end of the age scale, adult literacy classes, whether organized by the Government or NGOs are also very limited.

Human development index

Health, education and other aspects of human development are reflected in the human development index (HDI), a composite measure that incorporates income, life expectancy and educational attainment. Table 1.1 shows progress in HDI values over the period 1993-2004. This combines data up to 1999, collected during the Indonesian period, with more recent data for Timor-Leste. This includes results from various sources including the Poverty Assessment – comprising the 2001 Suco Survey, the 2001 Household Expenditure Survey and the 2001 Participatory Potential Assessment, and the 2004 Census of Population and Housing. One of the major determinants of the low HDI is low income: the per capita gross domestic product in recent years has been estimated at around $370; but in the rural areas the figure is estimated at only around $150.

As Figure 1.2 indicates, the HDI has shown significant improvement over the

Only around 2% of children under five attend any kind of pre-school or playschool

Figure 1.2 – HDI trend, 1993-2004
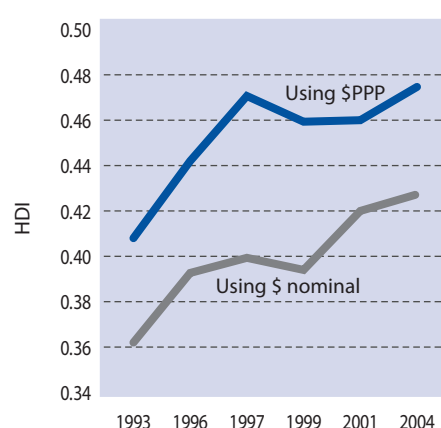
Figure 1.3 – Income poverty, 1996-2001
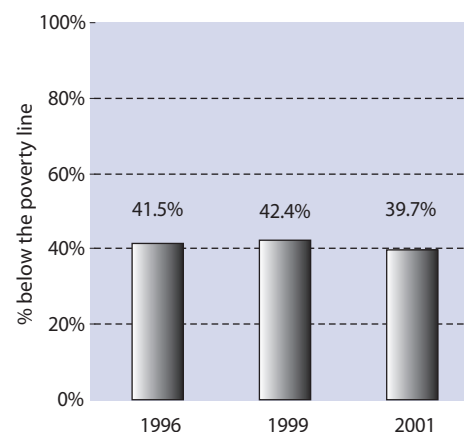
Table 1.2 – Comparison of Timor-Leste's HDI with clusters of countries

	Timor-Leste 2004	East Asia Pacific 2003	South Asia 2003	Least developed countries 2003	Developing countries 2003	High income OECD 2003
Life expectancy at birth (years)	55.5	70.5	63.4	52.2	66.0	78.9
Adult literacy rate (age 15 and over, %)	50.1	90.4	58.9	54.2	76.6	..
Combined primary, secondary and tertiary gross enrolment (%)	66	69	56	45	63	95
GDP per capita (PPP US $)[1]	732	5,100	2,897	1,328	4,359	30,181
Life expectancy index	0.508	0.76	0.64	0.45	0.67	0.90
Education index	0.554	0.83	0.58	0.50	0.72	0.98
GDP index	0.217	0.71	0.67	0.60	0.70	0.86
Human development index	0.426	0.768	0.628	0.518	0.694	0.911

Note : The Human Development for Timor-Leste 2004 has been estimated based on the latest data from Census 2004.

Table 1.3 – Comparison of HDI with those of other countries, 2003

	Rank	Value
Timor-Leste	140	0.513[1]
Highest ranking		
Norway	1	0.963
Iceland	2	0.956
Australia	3	0.955
Lowest ranking		
Niger	177	0.281
Sierra Leone	176	0.298
Burkina Faso	175	0.317
ASEAN members		
Singapore	25	0.907
Brunei Darussalam	33	0.866
Malaysia	61	0.796
Thailand	73	0.778
Philippines	84	0.758
Vietnam	108	0.704
Indonesia	110	0.697
Myanmar	129	0.578
Cambodia	130	0.571
Lao People's Dem. Rep.	133	0.545
Portuguese-speaking		
Portugal	23	0.896
Brazil	65	0.777
Cape Verde	103	0.727
São Tomé and Príncipe	122	0.639
Angola	164	0.377
Guinea-Bissau	166	0.373
Mozambique	170	0.356

Note : 1. Referring to value in 2004. Source: UNDP HDR (2005).

past decade – though with a dip in 1999 resulting from the phenomenal destruction and dislocation during the referendum period. Since then, however, the HDI has improved as a result of the expansion of education and a higher literacy rate, notably in 2004, which more than compensated for the income downturn due to the reduced UN presence. Despite this improvement, Timor-Leste's HDI is still the lowest among the ASEAN countries and even lower than those in South Asia (Tables 1.2 and 1.3) – though it is above those of Angola, Guinea-Bissau, and Mozambique

The 2005 global *Human Development Report* comes to a slightly different conclusion with a HDI value of 0.513 – much higher than the national estimate – and ranking Timor-Leste at 140. However, the data used in that report are not strictly comparable with those used here, so should only be considered generally indicative.

Poverty

Timor-Leste's low HDI corresponds to a high level of poverty. Poverty is a complex phenomenon involving deprivation in many aspects of life, including not just income but also health, education, nutrition and access to safe drinking water and sanitation, and the ability to exercise basic human rights – deprivations that often go together, forming a vicious cycle of poverty.

Income poverty

Income poverty is based on the amount of income or expenditure required to reach a minimum standard of living – also referred

The HDI has improved as a result of the expansion of education and a higher literacy rate

Box 1.4 – Purchasing power parity – issues and implications

Purchasing power parities (PPPs) are conversion rates that equalize the purchasing power of different currencies by eliminating the differences in price levels between countries.

Why

When comparing the human development indices, one usually wants to adjust the GDP index to reflect purchasing power rather than crude monetary income because, from the human development perspective, what matters is how many goods and services people can actually acquire than how much cash they have in their wallets.

In the global Human Development Report, which UNDP publishes annually, the HDI for each country is adjusted by using a PPP deflator for gross domestic product (GDP). This means that the nominal GDP is first converted to standard currency (the US dollar) using the market exchange rate, and then multiplied by the relative purchasing power of a dollar in that country. For example, if in a given country one dollar can buy three times more goods than in the USA, the PPP-adjusted GDP is obtained by multiplying the nominal value by three.

How?

The PPP deflators for different countries are calculated by comparing the prices of consumption baskets – i.e. a selection of goods and services that represent the consumption pattern of a typical consumer. This is not a straightforward process; consumption habits differ so there is no single basket that would adequately represent the consumption structure in all countries. These differences can arise for cultural reasons, but they can also reflect wealth: as countries and people become richer, they start to spend money on new things. Thus, the poor tend to spend a higher proportion of their income on basic food items than do the rich. As a result

even the PPP-adjusted GDPs do not give a full picture of the difference between countries at very different levels of development. Nevertheless the measure still gives a better indication of differences in standards of living than GDP alone.

The PPP has not yet been established for Timor-Leste, but it has been for Indonesia, so it is possible use the latter figure to arrive at a rough estimation by comparing consumer prices in the two countries. Assume an imaginary Indonesian who purchases everything from Timor-Leste. She changes her rupiah to dollars at that day's market exchange rate and then pays the US dollar market prices. Therefore, her purchasing power is a combination of the rupiah-dollar exchange rate and the dollar price levels in Timor-Leste.

For example, her consumption basket, which would cost 100,000 Rupiah in Indonesia, costs her US$ 19 in Timor-Leste (based on actual price data from 2004). To exhange her money to US dollars, she had to pay 8,935 Rupiah for one dollar, making the cost of the basket for her 170,000 Rupiah. We see that her purchasing power in Indonesia is much stronger, as she needs 70% more money in Timor-Leste to buy the same items.

The table below summarises the effect of PPP adjustment on the value of the HDI. These figures are obtained from consumer price index comparisons in Dili and in Indonesia, as described in detail in Notes on Statistics (Annex VII). This method produces PPP deflator values of between 2.0 and 2.2 for recent years, and the effect on the HDI value is an increase of around 10%. It can, however, be claimed that the Dili consumer price index is not an optimal measure for the whole of Timor-Leste, as it may not accurately represent the consumption structure of the rural poor. For the purposes of international comparisons, however, this report, uses a HDI value of 0.426.

Why not?

Nevertheless, this report presents HDI values using nominal GDP figures. This is partly because of the difficulties outlined above, but also because nominal GDP values are more useful locally. While the PPP adjustment helps make cross-country comparisons more pertinent, it can also distort the time-series observations within Timor-Leste. This is because the deflator varies with the nominal currency exchange rate, even though this does not necessarily have a direct short-term impact on domestic purchasing power. Obviously the changes in exchange rates affect the prices for import goods, but this is already observed as inflation, while local currency prices of domestic products may change much less. This would therefore suggest changes in the in HDI value from year to year that would not reflect real changes in domestic purchasing power.

In case of Timor-Leste, the US dollar regime eliminates the exchange rate fluctuations for present day figures, but observations back to the period when the Indonesian rupiah was used would become problematic. This was particularly evident at the time of the Asian financial crises, when the collapse of the rupiah caused the PPP-adjusted GDP to jump suddenly by almost 60% between 1996 and 1997.

Which one is correct?

Any index that attempts to measure economic welfare is inevitably a crude simplification. In these circumstance it is better to select different methodologies for different purposes. Thus, for cross- country comparisons it is better to use the PPP-adjusted GDP. For tracking development within one country, on the other hand, a more accurate picture is likely to emerge from using an index based on GDP in local currency terms.

Nominal and PPP-adjusted GDP and HDI values for Timor-Leste

	1993	1996	1997	1999	2001	2004
GDP per capita (nominal $)	374	429	442	331	466	366
GDP per capita (PPP $)	860	1,038	1,618	1,054	967	732
GDP index (nominal)	0.220	0.243	0.248	0.200	0.257	0.217
GDP index (PPP adjusted)	0.359	0.391	0.460	0.393	0.379	0.332
HDI value (with nominal GDP)	0.362	0.393	0.399	0.394	0.420	0.426
HDI value (with PPP GDP)	0.408	0.442	0.471	0.459	0.460	0.465

Figure 1.4 – Incidence of poverty by region
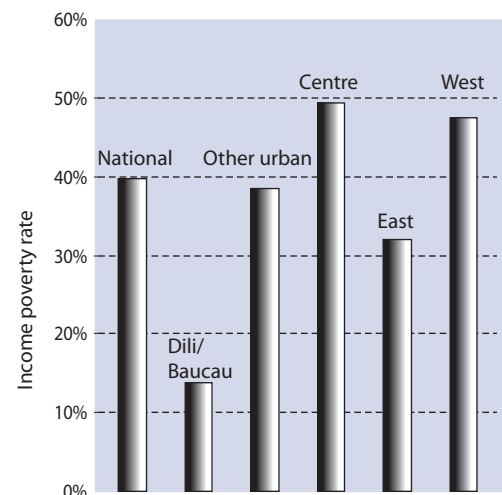
Source: PAP (2003)

to as the poverty line. Based on the findings of the 2001 Household Survey, the poverty line in Timor-Leste is set at $0.55 per capita per day[1]. On this basis, some 40% of the population, about two people in five, fail to reach a minimum standard of living – a slightly smaller proportion than in earlier years (Figure 1.3) Poverty tends to be greater among larger households. While the most recent data on poverty are not available, the situation is unlikely to have improved given the sluggish performance of the economy.

Although this 'headcount' poverty rate shows what proportion of people are living in income poverty it does not say how far they fall below the poverty line. This can be

1. The data here on the national poverty line and other poverty indicators are from the final report of the 2001 Household Survey (May 2003). They differ somewhat from those presented in earlier reports, including the NDP and the MDG report, which were based on preliminary results.

assessed using the 'poverty gap ratio' which is typically expressed as a percentage of the poverty line; in Timor-Leste the poverty gap is 11.9%. This can then be used to calculate how much money Timor-Leste's poor would need to be given to lift them all out of poverty – a sum that in 2001 amounted to around $18 million per year. A further measure of poverty is its 'severity', which indicates the extent of inequality among the poor, by giving higher weights to the poverty gaps of the poorest. Timor-Leste's severity index is 4.9%.

The incidence of poverty varies across the three regions, increasing from East to West. The Western Region (Oecussi, Bobonaro and Covalima districts), with one fifth of the total population accounts for one-quarter of the poor. In contrast, the Eastern Region (Baucau, Lautem and Viqueque districts), with one-quarter of the population, has less than one-fifth of the poor (Figure 1.4).

As in other developing countries, poverty is more pronounced in rural (46%) than urban (26%) areas. However there are also contrasts between different urban areas: lowest in Dili and Baucau (14%) and higher elsewhere (PAP, 2003). The severity of poverty is highest in the highlands and lowest in the lowlands.

Poverty also varies with the age of the head of the household. Among male-headed households – which constitute 90% of the total – the incidence of poverty is lowest when the household head is aged 15-29, rises for those aged 30-49 years and then falls again for those aged 50 years and above (Figure 1.5). Poverty also varies with the level of education: among households where

Lifting all of Timor-Leste's poor out of poverty would take $18 million per year

Figure 1.5 – Poverty and education
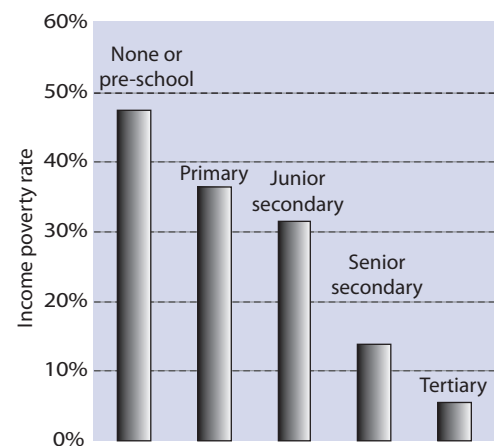
Source: PAP (2003)

Figure 1.6 – Poverty and occupation
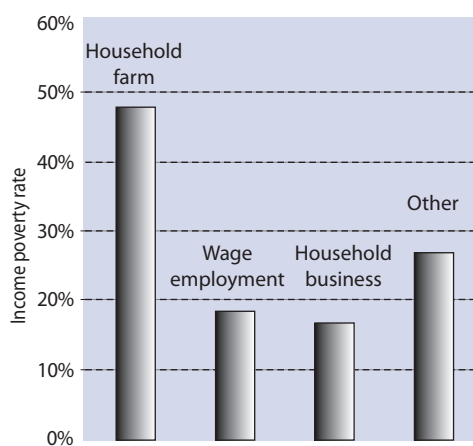
Source: PAP (2003)

Table 1.4 – Human poverty index

	1996	1999	2001	2004
Probability at birth of not surviving to age 40 (% of cohort)[1]	41.1	35.6	32.2	27.3
Adult illiteracy rate (age 15 and above, %)	59.6	59.6	57.0	49.9
Unweighted average of deprivation in a decent standard of living	49	46	48	49.5
Population not using improved water sources (%)[2]	47	47	52	43.8
Under-weight children under age 5 (%)[2]	51	45	45	43
Human Poverty Index	51.0	49.0	48.9	44.6
Population below national poverty line (%)	41.5	42.4	41.1	..

Notes: 1. Probability at birth of not surviving to age 40 in 2004 was based on the extrapolation of previous estimates from various data sources, including the 2004 Census of Population and Housing. See 'Notes on Statistics' for more explanation on methods of measuring mortality indicators and life expectancy; 2. Using estimates from the result of the MICS for the situation in 2002, as these are the latest data available on both indicators of deprivation in decent living standards. Thus, the rates are presumably unchanged in 2004; .. : data are not available.
Source : UNDP (2002b) ; The 2004 Census of Population and Housing; UNICEF (2003)); East Timor Household Survey 2001.

the male head has had secondary education fewer than one in seven are poor, while in households where the head has not completed primary education one in two are poor. Also, poverty varies significantly with the household head's employment: those with farming as their major occupation tend to

Table 1.5 – Comparisons with HPIs of other countries

Country	HPI-1 rank	HPI-1 value 2002/3[1]
Timor-Leste	(87 – 88)[2]	44.6[3]
Top performers		
Uruguay	1	3.6
Chile	2	3.7
Costa Rica	3	4.0
Lowest performers		
Niger	103	64.4
Burkina Faso	102	64.2
Mali	101	60.3
ASEAN member countries		
Malaysia	16	8.9
Thailand	28	12.8
Philippines	35	16.3
Indonesia	41	17.8
Vietnam	47	21.2
Myanmar	50	21.9
Lao People Dem. Rep.	72	38.2
Cambodia	81	41.3
Portuguese-speaking		
Brazil	20	10.3
Cape Verde	45	18.7
Angola	83	41.5
Guinea-Bissau	93	48.2
Mozambique	96	49.1

Notes 1. Data on HPI-1 values in the Global Human Development Report 2005 refer to 2002-2003; 2. According to the Global Human Development Report 2005, the country with the HPI-1 rank of 87 was Senegal and that with the rank of 88 was Gambia; 3. Referring to 2004.
Sources: As for Table 1-1; UNDP (2005) Human Development Report 2005.

be the poorest (Figure 1.6).

In the case of the 10% of households that are female-headed the picture is mixed: on average their poverty rates are lower than those for male-headed households. This is because only better-off widows are able to survive independently; in accordance with Timorese custom most poorer women will move in with the families of their late husband's brother.

Groups likely to be impoverished also include widows and orphans of the resistance, veterans, child soldiers and the traumatized. Especially disadvantaged and vulnerable are children without parents. Years of violent conflict in Timor-Leste have left more than one in ten children with only one or no living parent – of whom the majority have lost their father. Child poverty rates are 15% higher in this group compared to those living with fathers.

Equality

Poverty is closely linked to inequality. This is normally measured using the Gini index which varies from zero (perfect equality) to 1 (one person owns everything). Timor-Leste's Gini index for 2001 was 0.37, an increase from the figure of 0.35 for 1995 (PAP, 2003). This is a fairly typical figure for the region. Inequality can also be expressed in terms of share of total expenditure: in Timor-Leste the poorest two-fifths of the population account for less than 18% of total expenditure while the richest two-fifths account for 66%. As in many developing countries, inequality is higher within urban centres than in rural areas.

Poverty and inequality are usually expressed in terms of income. But there is also

Years of violent conflict in Timor-Leste have left more than one in ten children with only one, or no, living parent

Table 1.6 – Gender-related development index (GDI)

	1999	2001	2004
Life expectancy at birth (years) [1]			
Female	57.7	59.2	56.4
Male	54.2	55.6	54.4
Adult literacy rate (% age 15 and above)			
Female	33.9	42.8	43.9
Male	46.9	43.1	56.3
Combined primary, secondary and tertiary gross enrolment ratio (%) [2]			
Female	57.9	55.1	63.6
Male	62.1	58.4	68.3
Estimated earned income (nominal $)			
Female	144	106	126
Male	513	822	621
Gender-related development index (GDI) [3]	0.353	0.338	0.369

Notes: 1. Life expectancy at birth in 2004 was calculated by extrapolating the past trends of life expectancy from various data sources, including the 2004 Census of Population and Housing. See 'Notes on Statistics' for more explanation on methods of measuring mortality indicators and life expectancy; 2. Combined gross enrolment ratio was estimated from data on the number of enrolling students in primary, secondary and tertiary education in 2004/2005 from the Ministry of Education, Culture, Youth and Sports, divided by the number of school-age population according to the level of education from the results of 2004 Census of Population and Housing. 3. Estimated earned income in nominal $ for female and male population were calculated by applying a multiplying factor of 0.2 indicating female-male wage ratio as a proxy of their contribution to the economy with per capita GDP at US $ 366 in 2004. Using the estimation of GDP per capita in PPP $ in 2004, the estimated earned income is $263.1 for females and $1,301.9 for males, resulting a GDI value of 0.434. See Box 1.4 on 'Purchasing Power Parity – Issues and Implications' and 'Notes on Statistics' for more explanation for the calculation of PPP for Timor-Leste.

Sources: UNDP (2002) East Timor Human Development Report 2002; Timor-Leste Statistical Directorate (2004) The 2004 Census of Population and Housing Timor-Leste; Information from Ministry of Education, Culture, Youth and Sports; The Government of Timor-Leste (2002) National Development Programs; International Monetary Fund (IMF) Country Report No. 04/320 Democratic Republic of Timor-Leste: Selected Issues and Statistical Appendix (June 2005).

inequality in assets. For the three-quarters of the population who rely on agriculture their greatest asset is land. Average landholdings are small at 0.4 hectares per person. However among the poorest half of the population that has access to land the average is less than 0.22 hectares. Fewer than 5% of the population with land hold more than one hectare per capita.

The next most important rural asset – and factor of production – is livestock, comprising cattle, pigs, chickens and other animals. Around 90% of the rural population live in households that own livestock. The average value of this livestock is $100 per capita – roughly four times the average monthly expenditure. However, 10% of people in the rural areas have per capita livestock holdings in excess of $200.

Human poverty

While the data on income poverty give some indication of deprivation, they show only part of the picture, since people can be deprived in many ways other than by having a low income – they may be in poor health, or illiterate, or malnourished or lack access to services. In an attempt to reflect this, UNDP has developed the human poverty index (HPI) which is a composite measure of deprivation that combines the probability of survival to age 40, illiteracy, the proportion of children who are underweight and the proportion who lack access to clean water. Timor-Leste's HPI for 2004 was 45.2, or a decline from 49.0 in 1999, with improvements in the probability of survival to age 40 and adult literacy rate being offset by a deterioration in living standards during the last three years (Table 1.4).

In 2005, the global Human Development Report calculated HPIs for 103 countries. It did not include Timor-Leste but the country's value of value of 44.6 would have placed it after the 87th ranked country, Senegal, and just above the 88th ranked, Gambia (Table 1.5).

Gender disparities

Women in Timor-Leste generally have a lower status than men. While the Constitution provides for gender equality, women and girls suffer significant discrimination – in the household, the workplace and the community. Girls are more likely than boys to drop out of school and two-thirds of women aged 15-60 years are illiterate, compared with about half of men. Women

Women and girls suffer significant discrimination in the household, the workplace and the community

also suffer discrimination at work: they have lower participation than men in the formal labour force and they are paid significantly less than men for similar work (PAP, 2003).

Women are also likely to receive less food than men. One-third of women aged 15-49 are malnourished and suffer from chronic energy depletion (UNICEF, 2003). Many women lack access to information and family planning services. As a result, fertility rates remain high and many women die in childbirth – up to 800 per 100,000 live births. Women now have more access to information on reproductive health but their right to health continues to be hindered by cultural factors, particularly in rural areas.

The gender-related development index

The extent of discrimination against women is evident in the gender-related development index (GDI). This index discounts each component of the HDI in proportion to the extent of inequality between men and women. If there is no inequality, the GDI will thus be identical to the HDI. Thus while HDI value in 2004 was 0.426, GDI calculated for the same year in Timor-Leste was 0.369. This value of GDI shows a slight increase from the value of 0.338 in 2001. This was largely due to an increase in the estimated earned income of females – from $106 in 2001 to $126 in 2004. Over the same period the earned income of men dropped from $822 to $621. However, the increased female income was offset by a poor performance in education among females, notably for literacy (Table 1.6).

The global *Human Development Report 2005* did not calculate the GDI for Timor-Leste. By applying the PPP-deflated GDP per capita to calculate an equally distributed income index, the GDI value for Timor-Leste in 2004 was 0.422 which would place it between the 125th country, Eritrea, and the 126th country, Benin (see Table 1-7).

Gender-based violence

Another serious concern is the extent of gender-based violence both inside and outside the home – an issue that has often been denied and ignored. Women continue to be subjected to domestic violence, sexual harassment in the workplace, rape and other forms of mistreatment and sexual abuse. Between January and August 2004, nearly 300 cases of gender-based violence were reported to the police, although a vast majority of cases remain unreported.

Some of this is the legacy of the traumatic sexual, physical and psychological abuses during the 24-year occupation and the post-referendum conflagration. But the problems continue, and recent statistics and anecdotal evidence are worrying: a 2002 survey on gender-based violence found that 46% of women in intimate relationships experienced some form of partner violence[2]. This poses a real threat to women's health, and exposes them to sexually transmitted diseases and HIV/AIDS.

Victims of gender-based violence find it difficult to achieve justice, through either formal or traditional mechanisms. They may even be reluctant to report the abuses. Local justice mechanisms can be deeply patriarchal in both their procedures and outcomes: traditional leaders often consider it more important to maintain the bonds of

Table 1.7 – Comparisons with GDIs of other countries

Country	GDI rank	GDI value 2002-3 [1]
Timor-Leste	(124 – 125)[2]	0.422 [3]
Top performers		
Norway	1	0.960
Australia	2	0.954
Iceland	3	0.953
Lowest performers		
Niger	177	0.271
Sierra Leone	176	0.279
Burkina Faso	175	0.311
ASEAN members		
Malaysia	50	0.791
Thailand	57	0.774
Philippines	63	0.755
Viet Nam	83	0.702
Indonesia	87	0.691
Cambodia	99	0.567
Lao PDR	102	0.540
Portuguese-speaking		
Portugal	26	0.900
Brazil	52	0.786
Cape Verde	81	0.714
Angola	124	0.438
Mozambique	133	0.365
Guinea-Bissau	135	0.326

Notes: 1. Data on GDI values in the Global Human Development Report 2005 refer to 2002-2003. 2. According to the Global Human Development Report 2005, the country the with GDI value in the 125th rank was Eritrea and in the 126th rank was Benin. 3. Referring to 2004.
Sources: As for Table 1-6; UNDP (2005) Human Development Report 2005.

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2. A proposed survey supported by UNICEF and UNDP will aim to fill in the paucity of data on domestic violence.

community and solidarity than to secure justice for individual women.

Recent research (see Carolyn Graydon, lawyer and Ph.D. Candidate who worked with UNMISET, Human Rights, 2005) provides a more intellectually subtle argument: i.e. that modern justice mechanisms are too expensive, unsustainable, and the Timorese do not feel they have 'ownership' of them. Graydon also argues that if you continually present the local justice system as rigid patriarchal ideology – this can become self-fulfilling. She recommends instead integrating the local and modern justice systems along with a strategy of cultural transformation. The Government is interested in pursuing more scientific comprehensive studies on policy options for the interface between the formal and local justice mechanisms.

Government policy on gender

The Constitution of Timor-Leste prohibits discrimination on grounds of gender, and provides for equality between women and men in all areas of life: family, political, economic, social and cultural. In 2000, during the UNTAET period, the First Congress of Women of Timor Lorosa'e, building on the work of the women's movement (Box 1.5), adopted the Platform for Action for the Advancement of Timorese Women – which analysed the situation of women and set out a series of recommendations relating to women's political participation, access to justice, economic empowerment, and improved access to health and education.

In December 2002, the Parliament ratified the 1979 UN Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) and the Optional Protocol, without reservations. The Government is currently preparing the initial report to the CEDAW committee. Together with the results of the Second Women's Congress, the initial report on CEDAW should provide a clear direction for the advancement of women in Timor-Leste.

The National Development Plan acknowledges that poverty reduction and sustainable economic growth must be based on the principle of gender equality. The Government is also determined to ensure that gender aspects are considered in all policies and processes. This may be difficult given the lack of capacity for gender analysis and the shortage of data disaggregated by sex.

Nonetheless, work is ongoing. The Government has appointed gender focal points in all line ministries and, with the support of UNIFEM and UNDP, has initiated training in issues such as gender-sensitive budgeting, and women's human rights. Current efforts are summarized in Box 1.6.

In the case of gender-based violence the Council of Ministers has reviewed a draft bill. Meanwhile, attempts are now being made to incorporate specific provisions on domestic violence into the draft penal code,

Box 1.5 – The women's movement in Timor-Leste

The women's movement in Timor-Leste began in 1974 with the founding of the Organização Popular da Mulher Timor (OPMT), which played a leading role on all three fronts of the freedom struggle – clandestine, armed and diplomatic. Since then the movement has grown, and the national women's network – REDE: Feto Timor – which was established in 2000 as a lead-up to the First Congress of Women of Timor Lorosa'e, now encompasses 21 women's organizations. Groups operate at all levels, from Dili to the smallest aldeia – including OPMT, Organização Mulher Timor (OMT), Feto Foen Sa'e Timor Loro Sa'e and Sagrada Familia. There are also women's human rights organizations such as FOKUPERS and ETWAVE as well as organizations such as the Alola Foundation that focus on economic empowerment, women's health and education.

The women's movement thrived during the UNTAET period, facilitated greatly by the Gender Affairs Unit, with a sympathetic and supportive Special Representative of the Secretary-General and support from the National Council of Timorese Resistance as well as UN specialized agencies such as UNIFEM.

REDE: Feto Timor has accepted the challenge of reorganizing and consolidating its support base and has a strong and dynamic board, including the First Lady, and Alola Foundation Director, Kirsty Sword Gusmão. REDE has also undertaken the formidable task of organizing the Second Congress of Timorese Women. It has organized four regional congresses to review the situation of women, to evaluate the progress made on the Platform of the First Congress, and to develop a five-year plan for the promotion of gender equality. The results of the regional congresses were discussed in the second national congress and the Plan of Action for 2004-2008 has been agreed.

Box 1.6 – Promoting gender equality

The National Development Plan has presented a range of programmes that aim to empower women in areas such as employment, management, training, and in the provision of legal and social services. The Office for Promotion of Equality in the Office of the Prime Minister has also initiated a range of gender-related activities through the training of its staff, gender focal points and other relevant persons within the ministries and agencies.

In addition, the Sector Investment Programmes and the Annual Action Plans in selected sectors including education, health, justice and police, and the government budget have strong gender components. UNFPA, UNIFEM, Ireland and other development partners have also embarked on programmes for women's empowerment and a number of popular campaigns have been started to raise women's awareness of their rights and opportunities at the suco and aldeia level.

Crucial to future gender programmes will be the availability of better data. The National Statistics Directorate in the Ministry of Planning and Finance is therefore working on the compilation of gender-disaggregated data on key indicators.
Source: Adapted and updated from RDTL (2003k)

which will also have provisions on trafficking and on the sexual exploitation of children.

Recent legislation has also provided that each suco council should include two women, and two young people – one male and one female. In addition it has charged suco chiefs with the responsibility to take measures to prevent domestic violence and to support initiatives to protect victims and punish the perpetrators. In Dili district the Government has also established a Vulnerable Persons Unit that has jurisdiction over a range of crimes, including rape and domestic violence. While these steps are welcome, much work remains to be done to ensure effective implementation.

The Government has also undertaken to promote affirmative action for the recruitment of women civil servants. During the UNTAET period the Special Representative of the Secretary General instructed the public administration to adopt a policy of affirmative action – with a target of 30% female recruitment. Although the target was not achieved, it did lead in the first recruitment phases to at least 18% recruitment of female public servants. The Platform also recommended the establishment of a dedicated gender equality unit within government, building on the Gender Affairs Unit of UNTAET. This led to the establishment of the current Office for the Promotion of Equality, strategically placed under the Office of the Prime Minister. The UNTAET period also produced the constituent assembly elections, which resulted in the election of 27% women parliamentarians – one of the highest percentages of female parliamentarians in the region.

The women of Timor-Leste are more aware of their rights and obligations and have become determined players in the country's development

Figure 1.7 – Rural-urban disparities in selected infrastructure

Note: In 2003, the urban population accounted for around 24% of the total population
Source: PAP (2003)

Despite the continually evolving cycle of gains and losses, the women of Timor-Leste are now markedly more aware of their rights and obligations and have become determined players in the country's development. Women are certainly skilled at managing scarce resources – as evidenced by their high repayment rates in micro-credit programmes. They should be empowered to use these skills for the greater good of the country.

Infrastructure and communications

One significant obstacle to raising standards of human development is the state of the country's infrastructure. Timor-Leste's principal road network is reasonable, but during the rainy season there is often extensive damage to roads and bridges, and maintenance of the system is a major burden on the government budget. Secondary and feeder roads are less developed and during the rainy season many sucos are difficult to reach.

Long-distance travel options are also limited. There is no air service within the country. The longest ferry route runs from Dili to the enclave of Oecussi. This has operated with a government subsidy, though is expected to continue with assistance from Germany. For international travel connections, private air and shipping companies operate services to Indonesia and Australia.

Telecommunications outside the major urban centres are underdeveloped. The UN has primarily employed two-way radio communications – a system that has also been relied on by the police and local govern-

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Box 1.7 – Lighting Timorese homes – the Inverell aid project

Lottery determines which homes will receive lighting from the Inverell aid project. The people of Ermera District in Timor-Leste have conducted a lottery to decide who will receive lighting from solar-power as part of an Inverell Rotary Club International aid mission. The equipment has already landed on the Dili docks with the Rotary team due in the capital in a little more than a week. The team will leave Inverell for Darwin on Thursday week before jumping off to Dili and making the journey up into the mountains of Ermera. The area includes the villages of Samalete, Delesuan and Railako, the sites of the Rotary Club's work on health clinics, schools and community centres set up during the team's first visit in June 2002. The lights were sought by village representatives to assist children study after school. There is no main power infrastructure in the area, a result of the Indonesian pullout in 1999. The team will install 150 lights; that's about one for every four homes spread around the villages.

Source: Timor Post, 17 March 2004

ment. It is uncertain what will happen when the UN departs: whether it will withdraw them or hand them over to the Government. Some agencies including the National Police and the Ministry of Health also have limited radio communication facilities. The telephone links to district headquarters are being restored by the country's only private utility, Timor Telecom, though telephone services are likely to be hampered by the lack of effective electricity supplies.

Access to electricity is reasonably high in urban areas, reaching 92% of households in Dili and Baucau, but for rural households access drops to 10% (Figure 1.7). Electricity remains unreliable with constant blackouts which, in turn, affects water supply. Indeed the proportion of rural residents covered by electricity has actually declined in recent years due to the breakdown of equipment, inadequate capacity to operate the facilities, and the lack of fuel. Rural electrification, using on-shore gas and oil reserves (in Viqueque and Suai) will therefore be a priority – not just for lighting the homes, schools, hospitals and clinics but also for powering private enterprises and stimulating the rural economy. Most electrification programmes are the responsibility of the Government, though some NGOs are also working to provide lighting to households (Box 1.7).

Whether people begin to use electrical appliances for domestic purposes such as cooking and heating water depends on affordability and reliability of supply. Experience in other countries shows that the shift from fuel wood to kerosene, electricity and gas will depend on improvements on income, which may take some time. Accessible energy resources would free up more productive time, particularly for girls and women, who do the bulk of the work of making food and finding water (six or more hours per day).

Environment

Most Timorese make their living from agriculture, fisheries or forestry, so are critically dependent on the state of the natural environment (Box 1.8). Unfortunately, this has been deteriorating rapidly. The land is based on clay and limestone bedrocks that do not form the basis for good soil. Added to which there has been extensive erosion. 'Slash and burn' agriculture, combined with decades of unsustainable logging as well as forest fires have exposed the land, and much of the soil has been washed away by rapid water flows. In addition, Timor-Leste has been subject to the El Niño effect (Box 1.9). All of this has undermined agricultural productivity and exacerbated poverty. But the links with poverty also work in the other direction since poor people in desperation may be driven to over-exploit natural resources.

Energy

The major source of energy for rural residents, for cooking and other purposes, is fuel wood. Even urban residents have been using more wood as fuel, following the increase in the price of kerosene resulting from the withdrawal of the subsidy. Wood burning

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Box 1.8 – The ecology of Timor-Leste

The country has a dramatic topography, dominated by the Ramelau range that stretches across the middle of the island from the eastern to the western tip. Moving from high to the low areas, the land can be divided into six ecological zones: mountainous areas; highland plains; moist lowland areas (along the southern coast); arid lowland areas (along the northern coast); marine and coastal areas; and urban areas.

Total annual rainfall ranges from under 1,000 millimetres to 1,500 millimetres in the drier coastal areas in the north, with a short rainy season that begins around November and extends to March-April, usually accompanied by a westerly monsoon. The rainy season is short and intensive. For example, Dili may receive up to 30% of its annual rainfall (900 mm) in one day.

Some areas in the north are in a rain shadow and the steep slopes and geological conditions are not conducive to retaining or storing water effectively. In the long dry season, many northern areas, particularly in the uplands, often experience water shortages. To the east and south of the central mountain range, annual rainfall ranges up to 2,000 mm. The dry season is in May and the rainy season returns at the beginning of June and lasts until August. Although the rainfall pattern is more favourable, high transport costs for supply of inputs and marketing of products in the main markets in the north are major constraints for increasing productivity and production in the south.

Box 1.9 – Effects of El Niño

El Niño significantly influences the variability in Timor-Leste's climate. In El Niño years, The Southern Oscillation alters the timing and volume of rainfall. In some places like Ainaro, Lolotoe, Lore, and Los Palos, annual rainfall could be up to 50% less than the average in El Niño years. In others, such as Baucau and Oecussi, annual rainfall is greater than average. In all places, El Niño causes reduced rainfall in the January-March wet season, with some places receiving only 25% of the usual volume. In general, in El Niño years the wet season is de- layed by two to three months, with significant adverse impacts on food production and security. In the year following an El Niño, rainfall can be higher than average, which might lead to flooding with associated damage to crops and infrastructure – especially roads and bridges. Recent episodes of droughts due to El Niño include those in 1997-98 and 2002-03, with the droughts occurring one in four years.

Source: Barnett, Dessai and Jones (2003)

Figure 1.8 – Household food security by month
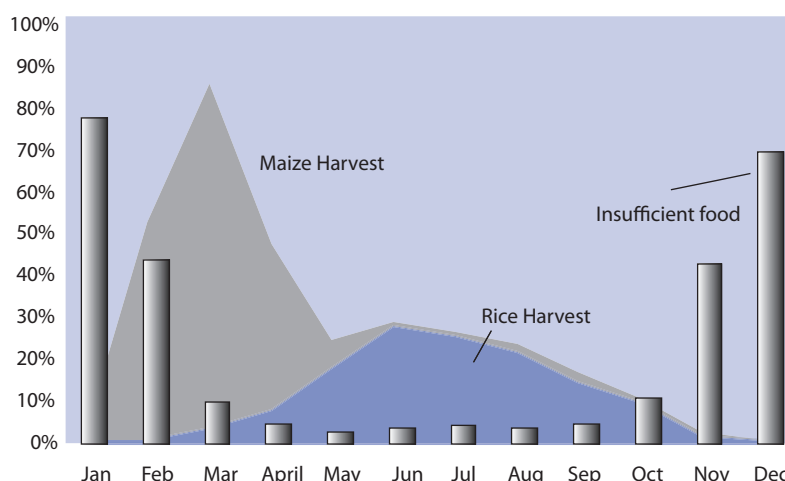
The bars indicate the percentage of sucos reporting insufficient food that month. The areas indicate the percentage of sucos reporting a maize or rice harvest in that month.

not only leads to environmental damage, it also harms people's health: inefficient burning of wood in poorly ventilated kitchens is a significant factor in respiratory diseases amongst women and children. One priority should therefore be to introduce more efficient stoves, which would not only reduce the demand for fuel wood but also improve standards of health.

Food security

Health standards are also compromised by a lack of food. Many rural households go short of food during the lean months from November to February – the period between the maize and rice harvests (Figure 1.8) – with long-lasting effects on nutrition, health and welfare. The need to distribute food to vulnerable groups during this period is also a burden on scarce government resources.

The situation is more difficult for some groups than others – but especially for the poor. According to the Household Survey, 69% of the poor said they had had inadequate food consumption in the previous month. Food insecurity is also more pronounced in rural upland areas (FAO, 2003). Currently, 64% of the population suffer from food insecurity, and 30% of the land suitable for agriculture is being used for crops alone or in association with livestock production.

Food insecurity is partly the result of low levels of food production – a consequence of poor land and low levels of technology, combined with high crop losses, both pre- and post-harvest. Another problem is distribution, since many farmers lack storage and find it difficult to get their produce to markets. Rural food insecurity is also the product of low incomes, since rural dwellers have few alternative sources of productive employment. Even the delivery of relief supplies is difficult since the lean period sub-

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Box 1.10 – Correspondence between human development objectives and the MDGs

Key capabilities for human development	Corresponding Millennium Development Goals
Living a long and healthy life	Goals 4, 5 and 6: reducing child mortality, improving maternal health and combating major diseases
Being educated	Goals 2 and 3: achieving universal primary education, promoting gender equality (especially in education) and empowering women
Having a decent standard of living	Goal 1: reducing poverty and hunger
Enjoying political and civil freedoms to participate in the life of one's community	Not a Goal but an important global objective included in the Millennium Declaration
Environmental sustainability	Goal 7: ensuring environmental sustainability
Equity-especially gender equity	Goal 3: promoting gender equality and empowering women
Enabling global environment	Goal 8: strengthening partnerships between rich and poor countries

stantially overlaps with the rainy season.

Nor has there been much progress recently. In 2002-03, overall agricultural performance was low. Total production of maize, rice and cassava (in cereal equivalent) was estimated at 123,000 tonnes, a decline of 21%, due to the late onset of the rains, the lack of maize seeds and other inputs, and generally unfavourable growing conditions. Worst affected were upland areas above 500 metres, the eastern district of Lautem, the enclave of Oecussi, and the island of Atauro. After two consecutive years of drought, household food stocks have now been depleted, leaving no cushion on which to fall back during the lean period, which consequently has been more severe and prolonged. To cover the shortfall in domestic production, cereal import requirements in 2003-04 were estimated at 62,000 tonnes.

The Millennium Development Goals

These challenges to human development in Timor-Leste are reflected in the country's performance against the Millennium Development Goals. Adopted by leaders of the then 189 member countries of the United Nations at the Millennium Assembly in September 2000, as a part of the Millennium Declaration, the MDGs comprise eight global objectives, each with one or more time-bound quantitative targets. They encompass the reduction of income poverty and hunger, and improvements in education, gender equality, health, the environment and other aspects of human welfare, as well as global partnerships for achieving the targets. The full list of goals and targets is in Annex III.

The relationship between the MDGs and human development is illustrated in Box 1.10. And that between the MDGs and the National Vision is in Box 1.11. While the MDGs do not explicitly mention civil and political freedoms, the Millennium Declaration nevertheless underlines the importance of solidarity, tolerance, participation, democracy and human rights. Furthermore, there are substantive linkages between the MDGs and key articles in the Universal Declaration of Human Rights.

At the time of the Millennium Assembly, Timor-Leste was being governed by the United Nations Transitional Administration in East Timor (UNTAET). But since then the independent Government has strongly endorsed the MDGs. The now President

of the Republic attended the assembly as an observer and, following the handover of responsibility by UNTAET to the National Government in May 2002, Timor-Leste became the newest member of the United Nations in September 2002 – and thus assumed responsibility for compliance with various UN conventions, including the Millennium Declaration and the MDGs.

As a newly independent country, Timor-Leste is making a late start on the MDGs. Independence was achieved around halfway through the 25-year timeframe over which the goals were to be achieved. A more appropriate base year would be 2001 rather than 1990. So rather than aiming to halve poverty between 1990 and 2015 Timor-Leste should instead be aiming to reduce it by around one-third between 2001 and 2015. Even with this adjustment Timor-Leste faces a stiff challenge. The global *Human Development Report* for 2003 placed Timor-Leste in the category of the 59 top-priority and high-priority countries that need urgent actions to achieve the MDGs.

All UN member nations are requested to report on progress and challenges faced in

As a newly independent country, Timor-Leste is making a late start on the MDGs

Box 1.11 – Correspondence between National Vision and MDGs	
National Vision to Year 2020	**Millennium Development Goals and Millennium Declaration**
Timor-Leste will be a democratic and prosperous society with adequate food, shelter and clothing for all people and a sustainable environment.	Goal 1: Eradicate extreme poverty and hunger Goal 7: Ensure environmental sustainability
People will be literate, skilled, healthy and live a long and productive life	Goal 2: Achieve universal primary education Goal 4: Reduce child mortality Goal 5: Improve maternal health Goal 6: Combat HIV/AIDS, malaria and other diseases
They will actively participate in economic, social and political development, promoting social equality, nationalism and unity.	Goal 3: Promote gender equality and empower women
Production and employment will increase in all sectors.	Goal 1: Eradicate extreme poverty and hunger
Living standards and services will improve for all East Timorese, and income will be fairly and equally distributed.	Goal 1: Eradicate extreme poverty and hunger
The economy and finances of the state will be managed efficiently, transparently, and will be free from corruption.	Millennium Declaration (Good Governance)
The state will be based on the rule of law.	Millennium Declaration (Good Governance)

achieving the national MDG targets at least once every three years and Timor-Leste issued its first report in February 2004 (Box 1.12). Many of the data in the MDG report are reproduced in Annex V of this report. A brief summary is presented below:

Goal 1 – Eradicate extreme poverty and hunger

One indicator of poverty is the proportion of the population living on less that $1 per day. In Timor-Leste in 2001, this proportion was 21%.

In order to achieve this goal, the percentage of poor must be reduced to 14% in 2015, meaning a reduction of 2.73% per year from 2001 to 2015. Moreover, the poverty gap must be reduced from 11.9% in 2001 to 8% in 2015.

To halve the proportion of people suffering form hunger, the prevalence of underweight children under-five years of age should be stabilized at less than 31%, which is half of 1990 level. Agricultural land productivity and rural employment must also be increased.

Already, the Government of Timor-Leste has committed one-third of its annual budget to pro-poor policies.

Goal 2 – Achieve universal primary education

Here the picture is more positive. This goal, for Timor-Leste means that by 2015, every boy and girl will be enrolled in school by the age of six, and will complete six years of quality primary-school education. To achieve this, the net enrolment ratio must grow by at least 2% per annum, the completion rate should double to more than 90%, and dropout and repetition rates must decrease to less than 2% per year. Some of the measures needed would be:

– Approve and implement the National Policy on Education, which places priority on basic education;
– Improve school infrastructure in areas of low enrolment.
– Eradicate school and substantive fees.
– Establish school feeding programmes and de-worming programmes for school children
– Continue to improve teachers' knowledge and skills towards child-centred, participatory learning methods
– Strengthen community involvement and support through the establishment of parent-teacher associations to assist in school management.

Goal 3 – Promote gender equality and empower women

Given strong government commitment, Timor-Leste should be capable of reaching the target of eliminating gender disparities at all levels of education. That means a 1:1 ratio of girls to boys in primary and secondary education, and a 1:1 ratio of literate woman to men between the ages of 15 and 24 years. Gender-based violence must also be addressed – ensuring that a Domestic Violence Law is in place, implemented and enforced by key actors in the justice sector, and that key services such as a referral network for victims of domestic violence and sexual assault are in place and functional.

Goal 4 – Reduce child mortality

For Timor-Leste, there should be less than 56 deaths for every 1,000 live births for the under-five population. The Demographic and Health Survey (DHS) conducted in 2003 found that in the period between 1989 and 1993, the under-five mortality rate was 165 per 1,000 live births.

Goal 5 – Improve maternal health

By 2015, the maternal mortality ratio in Timor-Leste must be reduced by 30% from

The target is to reduce income poverty from the current value of 40% to around 30% by 2015

Box 1.12 – The Timor-Leste MDG report

As a first step in the preparation of Timor-Leste's first MDG report, the Government of Timor-Leste and the United Nations Country Team organized a workshop in Dili in March 2003 – to raise awareness and increase understanding of the MDGs, help to take stock of the present position and understand the links between NDP objectives and the MDGs, and explore potential means to adapt the MDGs to the situation of Timor-Leste.

Approximately 200 people attended the workshop. They included the Special Representative of the United Nations Secretary General, the Prime Minister and virtually all the ministers and secretaries of state, along with senior and middle-level government officials, representatives of a wide range of development partners, civil society organizations and media along with UN agencies, programmes and funds.

Following the workshop, the Government set up a Steering Committee to oversee the preparation of the first National MDG Report. The Committee comprised key ministers and representatives of the UN Country Team including the World Bank, and was coordinated by the Ministry of Planning and Finance. The report presented a number of national targets based on pro-rata adaptation of the global MDG targets to the remaining time frame – about 12.5 years. The report was finalised in 2003 and printed in February 2004. It was sent to the UN Secretariat in mid-May 2004 with a pledge to work toward achieving the MDGs. The Prime Minister launched the report at the Opening Session of the Timor-Leste and Development Partners Meeting in Dili on 18 May 2004.

Figure 1.9 – Linkages between MDG goals and poverty reduction

Though the Government should be able to fund some activities from Timor Sea oil and gas it will continue to need international assistance
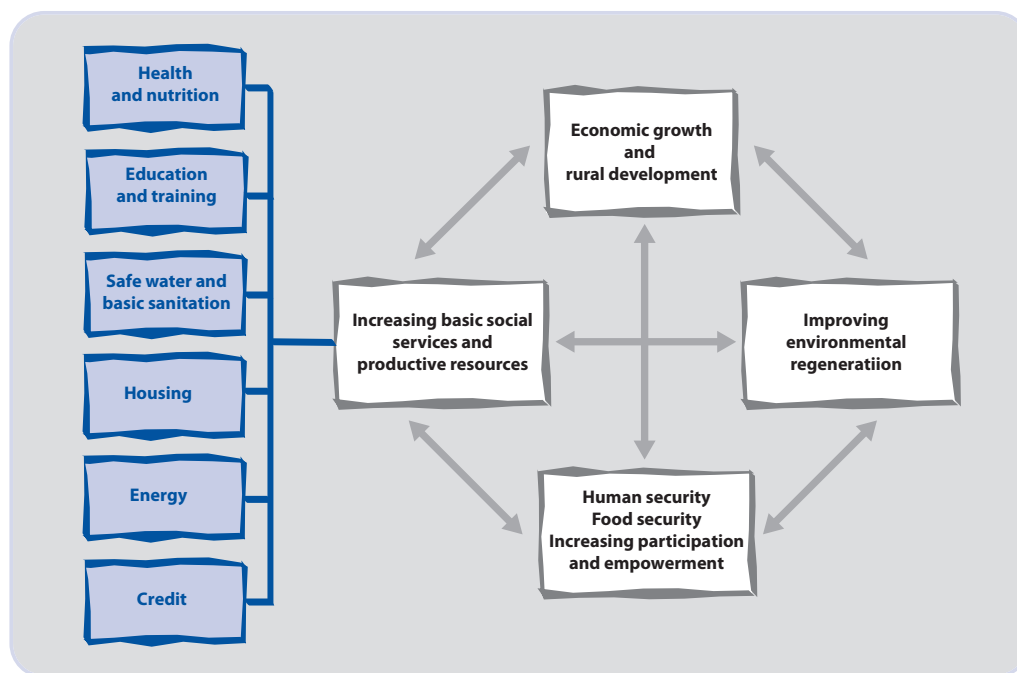
the current estimated ratio of between 420 and 800 deaths per 100,000 live births. The proportion of births attended by skilled health personnel should increase from 19% to 60%.

Goal 6 – Combat HIV/AIDS, malaria and other diseases

For Timor-Leste the national goal is to curtail and reduce the HIV/AIDS prevalence rate, to reduce tuberculosis mortality by 90% and to treat 90% of detected cases using Directly Observed Therapy Short course (DOTS). It is also to increase coverage and quality of the early detection of malaria cases, provide appropriate treatment, and provide insecticide- treated bed nets to children under five and to pregnant women.

Goal 7 – Ensure environmental sustainability

For Timor-Leste, this means that 86% of the urban population and 75% of the rural population should have access to adequate water supply by 2015, and approximately 65% of the urban population and 40% of the rural population should have access to improved sanitation.

The proportion of land area covered by forest should be at a reasonable level. The GDP per unit of energy use should also be augmented.

Goal 8 – Develop a global partnership for development

Production and employment should increase in all sectors and people should be able to receive adequate health care and education to meet their basic needs.

Achieving this goal will also require that the majority of youth completing their education should be provided with opportunities for gainful employment.

Significant petroleum revenues should be used to improve social infrastructure and generate economic activities that would result in a sustained increase in gross domestic product of 5% per year, through improved productivity in the agricultural, manufacturing and service sectors.

Linkages among the MDGs and sectors

Though the MDGs are linked to individual sectors it should be emphasized that all the MDGs and the sectors are inextricably interlinked.

• *Poverty and income* – Reducing levels of poverty will allow people to boost their standards of nutrition and health, for example and send more of their children to school for longer periods.

• *Health* – Better health and nutrition will improve the ability of children to learn at school and make workers more productive. Lower levels of sickness will also reduce

medical expenses.

• *Education* – Better schooling will also make people more productive and open doors to community and political participation. In Timor-Leste there is a strong link between a lack of education and poverty.

• *Gender equity* – Apart from fulfilling the rights of women, gender equity has great benefits for the society as a whole. When women are in a stronger position they can exert a beneficial influence on family welfare. That is why educating girls is one of the best investments a country can make – though international experience suggests that six to eight years of education of women is the minimum threshold necessary for them to improve the health and educational attainment of their children.

The inter-linkages of various dimensions of poverty, the MDGs and human development in Timor-Leste are illustrated in Figure 1.9. Better access to safe water and sanitation, for example, can have positive benefits for all the goals. A large proportion of rural people drink unsafe water and fall victim to a range of water-borne diseases, particularly diarrhoea, which are a leading cause of death for children. These preventable diseases tax people's resources and put pressure on the limited health services.

Similarly, poverty itself is a cause of many health problems – and the reason why many children do not get adequate schooling.

Conclusion

Timor-Leste has survived centuries of colonialism and occupation and the people suffered the turbulent transition to independence. Politically, it is free but its people continue to be chained by poverty. And while Timor-Leste has made progress in human development, it remains one of the poorest countries in East Asia.

The main priority must be to improve incomes in the rural areas – both farm and non-farm. How this might be achieved is considered in the following chapter.

Tackling rural poverty

Poverty in Timor-Leste is most severe in the rural areas. The primary task therefore is to create a more dynamic rural economy that will enable farmers and rural communities to raise their own standards of living – and work their way out of poverty.

Timor-Leste's challenge now is to design and implement programmes that will promote human development and drive the country forward towards the Millennium Development Goals. The Government has already laid the groundwork for this in its first National Development Plan (NDP) which emerged after a process of widespread consultation and was released in May 2002. The NDP identifies the country's overall priorities as being to reduce poverty and to achieve rapid, equitable and sustainable economic growth that will improve the well being of all Timorese. The main challenges identified by the NDP are listed in Box 2.1.

The poverty reduction strategy

One of the primary requirements for poverty reduction will be sustained economic growth. Poverty reduction and economic growth are inextricably linked and should be mutually reinforcing. On the one hand growth provides the resources that individuals can use to escape from poverty and that governments can invest in anti-poverty programmes. On the other hand as poverty rates come down and standards of health and education improve, so the Timorese will become more productive and their efforts will in turn boost future economic growth.

The immediate prospect however, seems to be that economic growth will slow down – largely due to the phased downsizing of UNTAET and UNMISET and a decline in the operations of the Trust Fund for East Timor. The worst-hit sectors have included transport, hotels and construction. The NDP had predicted that negative growth in 2002-03 would be followed by years of steady recovery. In fact, the decline seems likely to continue for a few years more, followed perhaps by a modest revival from 2005-06 onwards. The state budget expenditure is expected to rise by over 35% in 2005-06 and the intention is to spend more in the years

beyond. However, the Government's forecasts indicate that total GDP growth will remain negative in 2005-06. In a briefing to the Development Partners in August 2004, the Government indicated that GDP growth per capita in 2003-07 will remain negative, at -1.4%. It should be noted, however, that data on GDP are by no means firm and that these projections, which come from the Ministry of Planning and Finance, are more pessimistic than those from the IMF.

Although growth will be essential, it has to be the right kind of growth. If increased economic activity is accompanied by increasing inequality it will have little chance of reducing poverty; indeed it may well exacerbate it. What is needed is 'pro-poor growth' that is equitable and that can create sufficient employment for Timor-Leste's growing labour force. It will also need to be sustainable, and not over-exploit the natural

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Box 2.1 – Challenges for the National Development Plan

Timor-Leste's National Development Plan identifies the following main challenges:

– Helping the poor East Timorese help themselves, and reduce poverty

– Improving the position of women to achieve gender parity and their empowerment

– Improving human resource capacities in the Government, private sector and civil society to administer and manage the country

– Facilitating an orderly and cost-effective transition to the new official languages of Tetun and Portuguese

– Transforming the agrarian subsistence production to a market-based economy

– Improving productivity in all sectors through the introduction of appropriate technologies and practices, reducing risk and mod-

ernising production processes

– Creating an enabling environment for the private sector (including farmers, fishermen, small, medium and large investors and entrepreneurs, traders and others) to generate the jobs and economic growth necessary to improve the welfare of the people

– Managing public finances in an efficient and pragmatic way to enhance good governance and attract adequate budgetary support from donor partners, to provide essential services during the next three to five years, until significant revenue flows from the exploitation of oil and gas reserves in the Timor Sea begin to materialise

– Developing a sound administration and sustainable utilisation of the oil and gas revenues from the Timor Sea to benefit present and future generations of Timorese.

resources – as well as being based on activities that can help enhance national culture and identity.

Above all it needs to be based on the skills and work of the Timorese themselves. The farmers, the fishermen, the traders and the labourers, as well as investors large and small all have important roles to play. And critical to all this is the participation of the two-fifths of the population who live under the poverty line. They are among the country's most valuable resources and their efforts can help Timor-Leste accelerate economic growth.

A small minority of the population, however, is likely to need financial support – including widows, for example, and the disabled. The Government will need to investigate the best ways of helping those in need and ensuring that the mechanisms chosen are fiscally sustainable. The overall objective therefore should be to enable the poor to participate in development – and reap the benefits – while protecting the few who cannot help themselves.

The main planks of the Government's poverty reduction strategy are:

• *Increase the productivity of the poor* – Creating an enabling environment that can generate economic opportunities for the poor, enhance their productivity and boost their incomes.
• *Ensure adequate social services* – In addition to providing its own services the Government will encourage others to offer services to the poor at affordable prices.
• *Provide security* – The Government's aim is to protect the poor from external shocks and disasters and in particular to build systems for food security.
• *Promote empowerment* – Enable the poor and other vulnerable groups to participate in and manage development in their own ar-

Table 2. 1 – Selected indicators for the rural population by region, 2003

	East	Central	West	National
Demographics				
Rural households (thousands)	45	61	33	139
Subsistence households (thousands)	36	7	10	54
Average size of household	4.3	5.0	4.5	4.7
Total population (thousands)	184	290	140	614
Children under age 15 (thousands)	79	142	63	284
Poverty				
Poverty headcount (%)	32	49	48	44
Population below the poverty line (thousands)	59	143	46	268
Food security				
Inadequate consumption (% of population)	66	68	54	64
Population (thousands)	121	197	76	394
Agricultural labour force (thousands)	72	113	55	241
Education				
Illiteracy rate (% 15 years and above)	55	58	62	58
Population illiterate	58	86	48	192
Basic services				
Drinking water (% of population)	50	48	32	45
Sanitation (% of population)	25	39	30	33
Electricity (% of population)	16	10	9	12
Agriculture				
Total agricultural land (ha. thousands)	61	139	41	241
Total irrigated land (ha. thousands)	28	17	7	52
Agricultural land irrigated (%)	46	13	17	22
Per capita agricultural land (ha.)	0.33	0.48	0.29	0.39
Per capita irrigated land (ha.)	0.15	0.06	0.05	0.08

Source: PAP (2003)

eas – at all levels: aldeias, sucos, postos and districts.

This will mean paying close attention to agriculture, to employment creation particularly in the informal sector, to social services, and to infrastructure.

Agriculture and rural development

Most of the poor in Timor-Leste are engaged in agriculture, which employs around three-quarters of the labour force (Table 2.1). But productivity is low: output per worker is less than one-tenth of that in industry and services and, as a result, agriculture generates only one-fifth of GDP. With a forecast 4% real growth for agriculture, agricultural value-added per worker is likely to remain unchanged over the next 10 years, at $480[1]. Most farmers are engaged in subsistence cultivation, employing family members on small plots of land: average landholdings are around 1.2 hectares: only 5% of farming households have more than two hectares (Figure 2.1). Although land is distributed inequitably, only a few rural households are landless.

The main crops are maize, which is grown by 81% of households, and rice, which is grown by 23%. The producing households consume around two-thirds of their crops. Most also have some kind of livestock and many farm families sell chickens, pigs and eggs to provide a source of cash income. The largest source of cash, however, is coffee, which provides an income for around one-quarter of households, though these tend to be those with more land.

Some rural households also earn an income from forestry. Around 35% of the country has forest cover and there are some valuable timbers, such as sandalwood, teak, kayu mera, and eucalyptus. There is very little information on current forest conditions though it is generally believed that forests have been over-exploited. For example, the rate of forest loss during 1972-1999 was estimated at 1.1% per year. The loss of forest area will have significant implications for incomes, water supplies and ecological balance.

Fisheries also generate income, through a number of different styles of fishing operation, ranging from industrial off-shore fishing for pelagic and demersal stocks to near-shore fishing for tuna and other species, and in-shore and subsistence fishing by smaller boats for fish for market sale or for family consumption.

Currently, agriculture and fisheries do not produce enough for local needs, leaving Timor-Leste heavily dependent on imports. Currently the agricultural trade deficit is around one-third of the GDP, which indicates the trade dependant nature of the economy.

Since mid-2003 the trade statistics have collected according to the Harmonized System (HS) of coding, and the Automated System for Customs Data Administration (AYCUSDA) system delivers import and export figures directly into the Department of Statistics at the level of HS six digits. According to these statistics, in 2004 Timor-Leste imported goods worth $113 million while the only offsetting food export was $7 million-worth of coffee. From this amount $52 million-worth consist of foodstuffs – equivalent to around 40% of local production. This included $12 million for rice, $9 million for livestock and fish products and $9 million for fruits, vegetables and nuts. Exports of other products are negligible, but include agricultural vanilla, hard wood and some handicraft products. There are no industrial exports.

Following the violence and destruction in 1999, agricultural output dropped by around 50%. Subsequently it appears to have returned to previous levels, though estimates of output differ considerably between different sources, of which the Timor-Leste Living Standards Measurement Survey

Most of the poor in Timor-Leste are engaged in agriculture, which employs around three-quarters of the labour force

Figure 2.1 – Per capita land holding
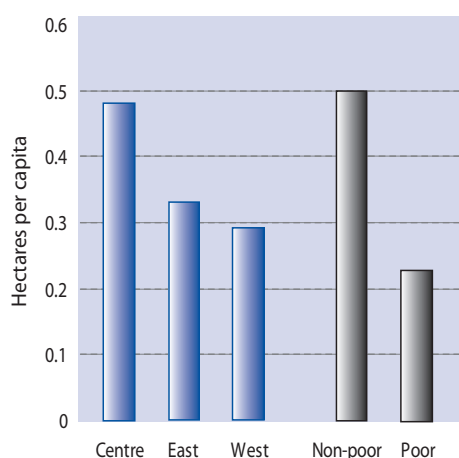
Source: PAP (2003)

1. Ministry of Planning and Finance in a presentation to the Development Partners in August 2004

(TLSS) or Household Survey is considered the more reliable (Table 2.2). The National Development Plan envisaged that agricultural output would subsequently grow by 6% per year, though in fact there is still little sign of sustained growth, largely due to large fluctuations in output.

Main constraints to agriculture

Across almost all agricultural activities, yields in Timor-Leste, per hectare and per production unit, are lower than Asian standards. In addition to an unfavourable climate and poor soils, there are a number of constraints to agricultural development:

• *Inadequate skills of farmers* – Farmers generally lack management and other skills that would enable them to take advantage of higher levels of technology. Some of these deficits could be addressed through classes for both functional literacy and simple arithmetic. But for the future it will be important to keep children at school longer. International research suggests that the minimum threshold for increases in agricultural productivity is four to six years of schooling – or even longer if the quality of education is low.

• *Lack of inputs and machinery* – Few farmers in Timor-Leste use inputs to boost production. One survey found that only 3% of households used external inputs such as fertilizers, pesticides, manure or improved varieties of seeds. And few can afford to feed their livestock with commercial feeds, raising them instead through open grazing and foraging. Nor do they have much machin-ery: the hundreds of tractors donated since 1999 are now largely non-functional due not just to the lack of diesel fuel and spare parts but also to inappropriate use and poor maintenance. The Government and the development partners have made some efforts to improve the supply of inputs but these have been minuscule compared to the needs. Nor has the private sector made much of a contribution.

• *Limited irrigation* – In 2002, of the country's 60 larger irrigation schemes, only 16 were fully functional, 22 had suffered light to moderate damage and the rest had suffered serious damage (JICA, 2002). To deal with the effects of rapid water flows and heavy silting, these systems need regular maintenance. But this is expensive and has often had to rely on development cooperation funds: according to some estimates, more than half of external aid to the agricultural sector over the period 2000-03 – some $80 million – was devoted to rehabilitation of irrigation. Irrigation systems also suffered during the violence, particularly due to the destruction of the generating plants that many farmers relied on to pump water into their irrigation schemes.

• *Lack of diversification* – Farmers tend to cultivate a narrow range of crops. This is partly because the infrastructure and local markets are not well developed. In principle, farmers could increase production of fruits and vegetables but transport is expensive and there is always the risk of spoilage. The situation could be improved with more refrigerated storage and better transport facilities which

> Only 3% of farmers use external inputs such as fertilizers, pesticides, manure or improved varieties of seeds

Table 2.2 – Crop production before and after the violence (metric tons)

	1997		2001 MAFF estimate		2001 TLSS estimate	
	Production	Yield per hectare	Production	Yields per hectare	Production	Yield per hectare
Food Crops						
Rice	40,286	2.7	38,340	2.9	54,302	1.54
Maize	106,600	1.8	113,527	2.0	68,959	0.57
Peanuts	3,200	1.0	3,301	1.1	1,677	0.51
Soybeans	1,200	0.8			821	0.39
Cassava	66,500	4.0	68,237	4.2	55,349	0.61
Sweet Potato	16,200	3.9	43,976	4.1	31,663	0.47
Tree Crops						
Coffee dry bean	9,700	0.2	9,491	0.405	14,984	0.52
Coconuts	9,900	0.2	8,040	0.702	2,137	1.01
Candlenut	690	0.2	1,063	0.472	n.a.	n.a.
Cocoa	42	0.08	n.a.	n.a.	n.a.	n.a.
Cloves	12	0.05	n.a.	n.a.	n.a.	n.a.

Note: MAFF = Ministry of Agriculture, Food and Fisheries; TLSS = Timor-Leste Living Standards Measurement Survey.
Source: RDTL, 2003d

would help increase access to markets and make local produce more competitive with imported food. This would also be valuable for fish and livestock products. However diversification is unlikely to extend beyond produce for local markets as prospects for exports are limited.

• *Competition in the international coffee trade* – Coffee has been the major export for many years but international competition has become ever more intense and if farmers in Timor-Leste are to compete they will have to improve the quality and quantity of their output. At present, however, they are reluctant to rehabilitate their plantations, or even prune their trees adequately, because they know that production will fall for the first couple of years after pruning – leading to a temporary drop in income that the poorest farmers cannot afford. This problem could be addressed by better flows of credit that could help smooth out farmers' incomes, improve production in the medium-term and contribute to increased exports. This could also enable farmers to intercrop coffee with other valuable cash crops.

• *Lack of credit* – Credit is also a problem for the rural sector generally. Prior to 1999, Indonesian agencies such as BULOG used to provide credit for inputs and accept repayment in-kind after the harvest. Other sources of credit were banks, village cooperative credit unions, and traders. Timor-Leste, however, has yet to reinstate official forms of credit. Meanwhile, according to a survey by JICA, around half of farmers are borrowing from traders and 14% from relatives and friends while the rest have no sources of credit (JICA, 2002). It seems unlikely that small farmers and other rural entrepreneurs will be able to get credit from the commercial banks. The Ministry of Development and Environment is, however, exploring the feasibility of resuscitating the cooperative credit unions. And there are efforts to build up micro-finance institutions (Box 2.2). But Timor-Leste could also take advantage of other successful models of rural credit in the region, perhaps consulting the Asia Pacific Regional Agricultural Credit Association.

• *Poor infrastructure* – The road network is reasonably extensive – with 1,200 km of main arterial roads, 2,000 km of district roads and 1,800 km of feeder roads. But about 20% of sucos are connected only by dirt roads that are difficult to pass in the rainy season: the difficult terrain and weather conditions lead to land slips, road slips and flooding, often making the roads impassable and the Government has found it difficult to maintain the feeder roads – which are vital for marketing. The poor in particular tend to live in more remote and inaccessible areas. There have been some efforts at road repair: of the 3,020 km of rural roads around 1,000 km were built or repaired during the Community Empowerment Project that concluded in 2003. And communities should be able to rehabilitate some farm-to-market access roads as part of the Second and Third Agricultural Rehabilitation Projects funded through TFET. But there seems to be no other formal means of maintaining rural feeder roads on a regular basis.

• *High cost of transport* – The lack of roads also contributes to high transport costs. Around one-quarter of the gross value of crop production is marketed, but most farmers have difficulty in reaching markets: around 80% have to go on foot to the nearest sub-district centre, which on average is a two-hour walk.

• *Lack of information* – Linked with poor access to markets is the general lack of market information. Farmers need to know where and when they can get the best prices for their crops – and to know which crops they should diversify into. Correspondingly, traders lack information on what farmers

More refrigerated storage and better transport facilities would help increase access to markets and make local produce more competitive with imported food

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Box 2.2 – Micro-finance Development Project

The Asian Development Bank (ADB) is administering a Micro-finance Development Project with a grant of $4 million from TFET. The project was completed at the end of 2004 and aimed to to revive and strengthen the country's micro-finance policy and legal framework. This was followed by the establishment of a micro-finance institute, the Instituição de Microfinanças de Timor-Leste (IMfTL), which is owned by the Foundation for Poverty Reduction in Timor-Leste and has a board of directors drawn from the Government, civil society and the ADB.

As of 31 May 2004, some 8,220 borrowers had taken loans totalling more than $2.24 million. In addition, over 6,700 depositors had opened savings accounts with an outstanding balance of about $0.95 million. The consolidated repayment rate is 91% – creating ratios that are within safe levels. IMfTL's total assets are $2.91 million and its net worth is $1.95 million.

The project could not, however, fully implement its intention to rehabilitate local credit unions – due to poor governance of the country's Credit Union Federation. Instead, it may consider focusing on building up the capacity of local IMFTL staff to implement a direct credit scheme for credit unions and promote branch-level transactions with them.

There is also a proposal to change IMFTL's status, possibly transforming it into a rural bank, which would enable it to considerably expand its saving and lending operations. ADB technical assistance to IMFTL is set to continue for several more years.

Source: Asian Development Bank, 2004

could produce and instead rely heavily on imports.

• *High crop losses* – Many farmers can lose up to one-third of their crops before or after harvest. A recent survey estimated that pests and diseases destroy as much as 12% of rice and 20% of maize. Then after the harvests, damage by rodents among others destroys around 20% of maize and 13% of rice. Total pre-harvest losses have been valued at around $10 million and post-harvest losses at around $9 million (Acharya, 2003). These losses could be reduced dramatically by more effective use of traditional methods of protection against rodents, birds and animals, along with modern methods such as the introduction of disease-resistant varieties.

• *Inefficient agro-processing technologies* – Timor-Leste has relatively few agro-processing enterprises and even these generally use outmoded and inefficient equipment. In the case of rice, for example, milling yields are below 50%, compared with the regional average of 65%. Since the output of the mills contains up to 50% of broken grains local rice tends to be uncompetitive with imported produce.

• *Insecure land titling* – At present many farmers do not have secure title to their land, so may be reluctant to invest. The Government is formulating laws on land dispute mediation, land titling and registration systems, and on legal and technical systems for compensation for land expropriated by the State for common use. Participatory forms of decision making involving customary landowners will be required if land registration and titling is to proceed harmoniously.

Off-farm employment

Many people in the rural areas are trapped in poverty because they have few opportunities for off-farm employment. People with arithmetical skills commonly engage in petty trading. But most of the off-farm jobs in recent years have been generated by public expenditure for road construction and other development projects, many of which have now finished or are nearing completion. Replacing these sources of income will be difficult but some opportunities exist – for example, offering training to local entrepreneurs drawing on the experience of the small enterprise project (Box 2.3). What is needed is a dynamic agricultural sector that would itself create more opportunities for off-farm employment.

Potential approaches to agricultural and rural development

The Government's current policy on rural development is to confine its own activities to the provision of infrastructure and social services while offering some limited economic services. In this way it hopes to create the conditions in which most economic services can be provided by the private sector. This is a marked contrast with public policy during the period of occupation when Indonesian government agencies also provided many essential economic services such as inputs and credit as well as facilities for storage, agro-processing and marketing.

Whether this new strategy will be effective is open to question since the private sector in Timor-Leste is still at an embryonic stage. It could take up to ten more years for sufficient entrepreneurs to emerge; meanwhile rural communities are being deprived of many essential services – and of opportunities to increase their incomes and escape from poverty.

Under these circumstances the Government and the development partners might

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Box 2.3 – The Second Small Enterprise Project

The Trust Fund for East Timor is funding the Second Small Enterprise Project with $7.5 million. The aim is to generate employment, accelerate economic growth and improve the competitiveness of small and medium enterprises. The project supports five business development centres in Dili, Baucau, Maliana, Oecussi and Maubisse, offering several types of basic management and entrepreneurship courses, lasting from one day to three weeks. To date, over 1,000 East Timorese entrepreneurs have attended the training courses, about 70% of them men and 30% women. Future offerings will include courses on intermediate and advanced management, and sector-specific courses as determined by the needs of participants.

The project is also supporting the construction and rehabilitation of 74 markets across the country. The management and operation of each market is handled by market management committees whose members are selected among market vendors – most of them women – some of whom attend basic training on subjects such as record keeping and finance, handling of goods, parking and waste disposal.

In addition, the project will create an Investment and Export Promotion Agency to facilitate and promote foreign investment as well as promote the export of goods and services produced in Timor-Leste. The agency will provide services and information to potential investors, highlight issues that the Government should address to improve the investment environment, nurture linkages between foreign investments and domestic enterprises; and assist domestic investors in securing access to overseas markets. Another project component will support the preparation of a feasibility study for the creation of a Special Economic Zone and, responding to a demand from the business community, the project will also support Business-Government Dialogue Promotion forums.

Source: World Bank, June 2004

reconsider this strategy and take a more pragmatic approach – adopting a proactive role in the provision of essential economic services. There are four basic options:

1. *Develop government services* – The Government would provide these services for the next five to ten years until the private sector is sufficiently developed to take over. This would involve creating a number of new agencies with commensurate staffing levels, along with a significant number of international advisers. This may not be the best approach: apart from the inevitable expense involved, there are doubts about the capacity and efficiency of government staff. This kind of activity, particularly in the supply of inputs and in marketing also creates opportunities for corruption.

2. *Encourage local organizations* – The government and the development partners could encourage the formation of cooperatives, farmers' associations and user groups. Larger irrigation schemes, for example, usually require the formation of local rice cooperatives. However this option would need to be closely assessed. The experience of cooperatives was unsatisfactory prior to 1999 due to the ethos of corruption and dependency encouraged by the occupying regime. Hopefully attitudes will have changed as a result of independence, but caution would be appropriate – and it would be important to ensure full participation of all sections of society, including the poor and women. The Ministry of Development seems to be moving in this direction by organizing or resuscitating some cooperatives. And projects supported by external partners have promoted the formation of various associations and user groups. The more successful of these could be strengthened and enlarged.

3. *Involve NGOs* – An expansion of the previous option would be to strengthen NGOs and other organizations of civil society so that they could provide services. But since these organizations also have limited capacities, strengthening them would entail considerable time and expense. And here too there may be concerns about their efficiency.

4. *Give greater encouragement to the private secto*r – The Government could offer tax breaks and access to credit for entrepreneurs who interested in delivering services. But even with such incentives the private sec-

tor may not have the necessary appetite or capacity.

The way forward will probably be through a combination of one or more of the above options. When making the choice the Government should be able to draw upon the experience of rural development projects in Timor-Leste and other countries in the region (Box 2.4).

Linkages

Although the Government has to take action in a number of different sectors there are inevitably important linkages between them (Figure 2.2). As a result there can be important synergies in the rural areas between economic services and social services. The sector investment programmes (SIPs) on health and on water supply and sanitation have taken advantage of these and have devised special strategies and programmes for delivering rural services, along with time-bound quantitative targets. Other SIPs, such as that for education and training, could benefit from a similar approach. At the same time the agriculture, livestock and natural resources SIP could benefit from the same disciplines.

Box 2.4 – Lessons learned from a rural development project

Phase I of the Australia-East Timor Rural Development Programme was implemented during 2001-2003. The project completion report, finalized in February 2004, highlights a number of lessons relevant for future rural development projects. These include:

• *Design processes, implementation and timing* – Close attention should be paid to sequencing to avoid conflict between the time required for consultative processes and the imperative of rapid delivery of project inputs to beneficiaries. A genuinely flexible approach should avoid prescribed timetables and processes that may later be found to be impractical.

• *Community consultation and participation* – A significant amount of time is required for consultation to ensure that planned activities are appropriate and sustainable. The problems should not just be assumed but must be clearly identified in consultation with the farmers. Although strong community leadership is essential, attention needs to be paid to village power structures, ensuring that participants really want to be a part of the

process rather than feeling obliged to. Allowing for cultural traditions in Timor-Leste can absorb considerable time, money and material resources. It is also preferable to support farmers through sustainable innovation and improvements rather than one-off interventions.

• *Agricultural interventions* – Modernizing agriculture is not always the best answer. Solutions should be sought first within traditional agriculture systems and with crops already known to farmers. Subsistence farmers are understandably risk averse but they are very receptive to cost-reduction techniques and making better use of existing resources such as cattle.

• *Capacity building* – Communities, community-based organisations and NGOs have an extremely limited capacity to implement and monitor projects. But it is difficult to train staff and communities at the same time and it is often impossible to keep to rigid timeframes while training staff and communities.

Source: AusAID, June 2004.

A pro-poor strategy

Timor-Leste urgently needs a clearly laid out strategy for pro-poor agricultural and rural development and for rural service delivery. Although this should involve close integration between the different sectors and activities it would be more manageable if broken down by target group, or major commodity, or geographical area – with simple monitorable targets.

This would also require much stronger coordination within the Government. At present the responsibility for rural development spreads across a number of ministries and agencies. The Government will also need to coordinate and cooperate with civil society organizations, NGOs and the development partners if the rural areas are to receive essential social and economic services in an integrated way. Such coordination is often difficult, however, and will probably require a more structured organizational set-up. It will also require significant resources – an issue that is addressed in the following chapter.

Conclusion and policy implications

The poor in Timor-Leste depend on agriculture, which is the primary source of livelihood for over 80% of households. But productivity in agriculture has been low and Timor-Leste has not been able to produce enough staple food to meet domestic needs. This situation needs to be reversed in order to enable farmers and rural communities to raise their own standards of living – and work their way out of poverty.

This should involve increasing the local production of field crops, horticultural products and tropical fruits. Timor-Leste can also promote itself as a source of as ecologically acceptable and fair trade crops such as spices – as has been demonstrated by the success of 'Café Timor' (Box 2.5).

Some options for promoting pro-poor growth and rural development are:

• *Credit* – Establish and operationalize a Rural Development Bank that will provide short-term credit. This could purchase inputs and carry out required farm operations for crop production and provide working capital for SMEs. It could also provide medium-term credit for both agricultural and non-agricultural investments. It would be best if such a bank were established in cooperation with the Bank Pertanian (agricultural bank) of Malaysia or the Bank Rakyat (people's bank) in Indonesia, both of which have extensive experience in this field. Ideally this would be through a sub-contracting arrangement with one of these banks to provide technical backstopping for several years.

• *Cooperatives* – Facilitate the establishment and operationalization of rice and maize production and marketing cooperatives for each of the major irrigation schemes in Maliana, Manatuto and Manufahi.

• *Feedstock* – Encourage the production of crops that can serve as intermediary products for other sectors – such as feed for poultry or aquaculture.

• *Poultry* – Investigate the potential for poultry products, such as eggs and poultry meat, for local consumption and for the tourist resorts.

• *Fisheries* – Through licensing, expand the

Box 2.5 – Cooperativa Café Timor

In 1994 USAID made a grant of $6.8 million to the US National Cooperative Business Association to develop coffee cooperatives in East Timor. In 1995 several cooperatives were involved in the procurement, processing and export of coffee produced by 800 smallholder families. By 1999, the project involved 15 primary cooperatives, four wet-processing factories in the highlands, and a dry-processing factory in Dili. Unfortunately, during the civil troubles of 1999 many of the project's rural facilities and offices were partially destroyed.

Rehabilitation began early in 2000 and the East Timor Provincial Federation of Cooperatives was converted into the fully East Timorese-owned and operated Cooperativa Café Timor (CCT). Since late 2001, the project's infrastructure has been restored and operations with East Timorese cooperatives have been greatly expanded to involve 16 primary rural organic coffee cooperatives, encompassing 493 farmers' groups from the districts of Liquica, Ermera, Aileu, Ainaro and Manufahi. During the harvest season these operations employ over 2,000 staff and use more than 100 trucks.

One of the main issues is processing. If farmers use their traditional dry-processing methods the final price will be 30% to 50% below that of correctly handled and wet-processed Arabicas. The farmers are better off concentrating their efforts on harvesting and having their coffee wet-processed by specialized facilities. Currently the CCT owns and operates two wet-processing facilities that can handle 300 metric tons per day.

Other activities include a seedling nursery facility and coffee-farming demonstration plots. All participating farmers have been trained in organic farming techniques and the CCT is accredited to the international Fairtrade Labelling Organization – enabling the country's coffee to be marketed as 'organic' and sold at a higher price. As a result, Timor-Leste has become the world's largest single-source producer of organically certified coffee. In addition the CCT has developed primary health care facilities for all families in their area of operations; with USAID funding, these facilities currently treat 21,000 patients a month free of charge. To diversify its economic base the CCT has undertaken a number of other economic activities, covering vanilla and cattle and has established a tree nursery – activities that it plans to expand in the years ahead.

Source: USAID/NCBA, The Timor Economic Rehabilitation and Development Project, Dili, June 2004.

Figure 2.2 – Rural development linkages
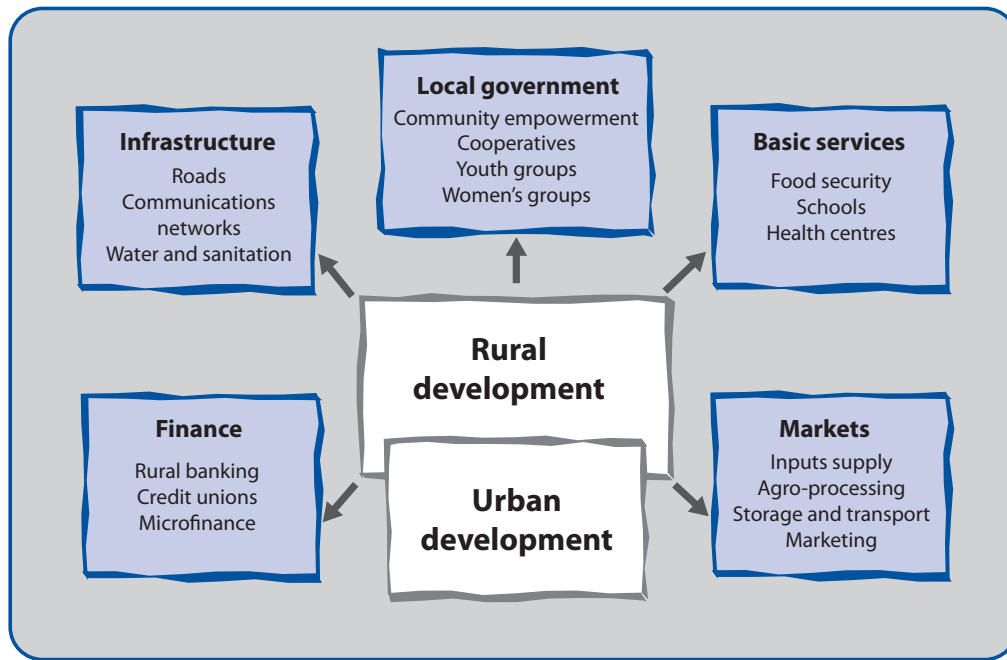
catch of high sea tuna species such as yellow fin, big eye and albacore – either fresh or frozen.

• *Transport* – Encourage transport cooperatives connecting the main production areas with major consumer markets such as Dili, Baucau and other district centres.

• *Road construction* – Encourage construction and maintenance cooperatives, especially for rural and feeder road construction, and for maintenance of roads and public facilities (schools, health posts and district and sub-district offices).

• *Fishing-related industries* – Select one port on the northern coast and another on the southern coast for the development of clusters of enterprises that can cater for up- and down-stream activities, such as production of vessels and gear, flake ice, and boxes for marketing.

• *Private sector* – Encourage the private sector, particularly the small and medium-sized enterprises. The Government can provide credit and incentives to entrepreneurs who have the ability to take risks to set up their businesses in the rural areas – which could

include those for supplying agricultural inputs or for exporting agricultural produce.

• *Livestock* – Invest in wells and in herd support institutions to boost the productivity of animal husbandry.

• *Responsible ministry* – Assign rural development responsibilities and related functions to the most relevant existing ministry.

• *Land reform* – Initiate land reform to prevent further degradation of overused (and misused) land. This should include redistributing land and issuing titles to provide security of tenure, as well as prohibiting cultivation of staple crops on the most critical lands.

• *Resettlement* – Encourage resettlement of dispersed communities to allow a more effective and efficient provision of public services.

• *Governance* – Support the governance dimensions of rural development, such as fiscal decentralization. Increase substantially the share of public funds allocated in the central budget to rural areas to accelerate poverty reduction.

Land reform should include issuing titles to provide security of tenure

Costing the Millennium Development Goals

If Timor-Leste is to reduce poverty and to achieve the other Millennium Development Goals, it will need to assemble the necessary resources, both human and financial. Current estimates indicate a substantial resource gap that will need to be filled by external assistance.

Estimating costs should be a key element in strategies to achieve the MDGs

Reducing poverty and achieving the other Millennium Development Goals in Timor-Leste will require a determined effort on the part of the Government, civil society, and the population as a whole. But as well as choosing the most appropriate development strategy, Timor-Leste will also have to find the resources – both human and financial – to meet this challenge.

It is important therefore to have some indication of what the costs might be – not just to get a perspective on the task ahead but also to illuminate alternative development paths. In the case of health, for example, cost estimates will help resolve the critical question on whether to improve provision in the rural areas by organizing mobile clinics or by increasing the number of fixed health posts; the former may be cheaper; the latter would probably offer a more consistent service.

Estimating costs is thus an essential component for the overall development strategy – and should be a key element in strategies to achieve the MDGs. But arriving at those costs is not easy. First, it requires good information on the current situation across a range of indicators, with baseline data on which to build projections. Second, it requires a comprehensive and detailed policy framework rooted in a full understanding of the potential for progress in each sector – be it health or education or infrastructure – along with an appreciation of how each of these sectors interact.

Some guidance is available from efforts to cost the MDGs at the global level. These are useful but clearly have a number of limitations (Reddy and Heuty, 2004). Often, for example, they build up estimates using standard unit costs of inputs regardless of the number of units involved – when unit costs will usually vary according to the

number of people. They also frequently cost the goals individually, without taking into account how success in one goal will make it easier to achieve another: reducing poverty, for example, will also allow people to eat better food and thus reduce malnutrition. And boosting nutrition would also improve educational performance.

More generally there is the question of how to correlate inputs with outputs. How do we know which interventions have produced which results? Good health, for example, is an outcome of a host of factors: from personal attitudes to safe water and sanitation, to clean air. So to what extent will investment in more clinics contribute to better health? Costing this and the other MDGs will it seems inevitably be an imperfect exercise with no definitive methodology.

Nevertheless it is important to make the attempt, if only to appreciate the general order of magnitude of the resources required and to illuminate the policy discussions. Very broadly, the complete exercise should be a four-step process.:

1. *Project economic growth* – Determine what rate of economic growth would be required to meet the income poverty target, bearing in mind the way in which the benefits of growth are likely to be distributed. Then estimate what resources would be required to achieve and sustain that rate of growth.

2. *Estimate costs of provision* – Gather the unit costs of various services such as those for primary education, basic health care, clean water and safe sanitation – taking into account the levels of efficiency required and the potential for synergy between programmes in different sectors. These costs can then be scaled according to the likely

number of service users.

3. *Estimate the costs of effective demand* – Achieving the goals will not just mean providing services but also encouraging people to use them – to drink safe water, for example, and to send children to school at the appropriate age. For this purpose the Government will also need to fund campaigns by public services, civil society and others to encourage families and communities to make best use of the available services.

4. *Estimate the costs of monitoring* – Provision should also be made for constant monitoring at all levels, by government, civil society and communities. Apart from ensuring accountability, this would also suggest opportunities for mid-course corrections in policies, strategies and programmes.

The sum total of these four costing exercises, if realistic, should suggest an overall total. This is likely to be the maximum of potential cost, because of the difficulty of allowing for positive synergies between the different sectors, but the overall figure could then be adjusted following a process of consultation between the Government and civil society, with the help of informed experts and the development partners.

That would be the ideal process. Timor-Leste, however, presents some distinctive complications. The first is that the economy is still highly distorted. The vast destruction in 1999 required massive inflows of external aid that had a major impact on local prices. And it is not clear what will be the effect on the economy of the general downsizing of the international presence and the potential reduction in aid flows.

Timor-Leste, given its short history, also has very little data and has accumulated few empirical studies that can suggest the impact of different types of investment. As a result, there is very little information on input-output relationships – on how planned investments will lead to the achievement of the objectives. Nor is there sufficient information on the cultural and social norms and behaviour that will affect the demand for services such as health and education; planners need to know why people are not using services before deciding what level and character of services to offer.

As a first contribution to the overall exercise, however, this report looks at the first two steps in the process. First, it estimates the cost of reducing the incidence of poverty by one-third between 2001 and 2015. Then it looks at the cost of delivering services that can help fulfil the other goals.

The cost of achieving the MDG poverty goal

Preliminary estimates have been made for what would be required to reduce income poverty by one-third by 2015 (Kakwani, 2004). These involves considering what level of economic growth would be required between 2001 and 2015 to reduce the rate of income poverty from 40% to around 27%.

The starting point is the 2001 household survey which shows not just how many people are below the poverty line but also how poor they are – how far they fall below the poverty line. The simplest approach is to assume that Timor-Leste's population will not grow over the period and that the pattern of economic growth will be neutral – i.e. there will be no increase or decrease in inequality. In this case if economic growth is 2% annually, say, then everyone's income should increase by 2% annually. Based on the 2001 survey a mathematical model could then indicate how the proportion of people living below the poverty line would fall over time.

Clearly, however, the model should take into account the fact that the population will continue to increase so the benefits of economic growth have to be spread over a greater number of people. Population growth rates are not readily available for Timor-Leste, but for the purpose of this exercise it is assumed that in 2004 the rate was 3.5% and that by 2015 it will have fallen steadily to 2%.

Then there is the question of distribution. This is reflected in the country's Gini coefficient a number that can vary from 0 (perfect equality) to 1 (one person owns everything). Timor-Leste's Gini value, calculated from the 2001 household survey, is 0.37 – a fairly average value for countries in the region, and this ratio is likely to be unchanged in 2004. If future economic expansion is pro-poor, and concentrated on rural development and on improving the lives of subsistence farmers, then the Gini coefficient should fall. But if growth were to occur primarily in the urban areas, or in the tourist industry, say, it would benefit a smaller proportion of the population. 'Anti-poor growth' would cause the Gini coefficient to rise – which com-

If growth were to occur primarily in the urban areas, or in the tourist industry it would benefit a small proportion of the population

Figure 3.1 – Rates of economic growth required to reach the MDG target

Source: Kakwani (2004)

Gini-coefficient, then annual growth would need to be around 4%. If it were pro-poor it would be 3% to 4%. But if it were anti-poor it would need to be around 5%. In all cases, however the required growth rate falls over the period due to a gradual decline in the population growth rate and an improvement in capital efficiency.

Growth can occur as economic activities work more efficiently, but boosting growth also typically requires higher levels of investment. How much investment would be needed to achieve the required levels of growth? This requires an estimate of the incremental capital-output ratio – the value of output that can be expected from each additional dollar of capital. For the purpose of this exercise a value has been assumed of 5 for the urban areas and 3 for the rural areas, giving a weighted average of 3.7. Combining this with the estimates for GDP growth indicated in Figure 3.1 enables a calculation of the required investment. This is shown in Table 3.1, suggesting that under the pro-poor growth scenario the total average annual investment, public and private, would need to be $48 million; and under the neutral scenario, $55 million; while under the anti-poor growth scenario it would need to average $65 million.

This calculation is necessarily suggestive. It does not allow for the fact that in the first three years of this period growth has already been negative or flat. And of course, as in any model, the result is sensitive to changes in the underlying assumptions. Nevertheless it does give a rough overall indication.

However, the difference between the requirements under the three scenarios highlights the importance of having a growth strategy that is biased towards the poor. Devising such a strategy will require a detailed analysis of how the poor can participate in growth and how the different sectors of the economy and groups of people interact. It will also mean knowing how the achievement of the other MDGs interacts with the poverty goal. The incremental capital output ratio for example will be affected by improvements in levels of education and health that can boost productivity.

Given pro-poor growth, the total investment needed to achieve the poverty target would be $48 million per year

monly happens when countries modernize and achieve rapid growth.

The model here takes this into account by considering three different scenarios: pro-poor growth where the Gini coefficient falls by 0.5% per year; neutral growth where it stays the same; and anti-poor growth where the Gini coefficient increases by 0.5% per year.

The levels of economic growth required to hit the MDG poverty target are indicated in Figure 3.1. This shows that if growth is neutral, and there is no change in the

Table 3.1 – Resource requirements for reducing poverty under alternative growth scenarios ($ millions)

Year	Anti-poor growth	Neutral growth	Pro-poor growth
2004	71	59	56
2005	72	60	52
2006	68	57	51
2007	72	54	51
2008	71	54	50
2009	64	54	49
2010	60	52	47
2011	61	52	46
2012	60	52	45
2013	60	50	44
2014	61	49	43
2015	60	48	42
Total	780	641	576
Average	65	55	48

The cost of achieving the remaining MDGs

Achieving the poverty goal should itself contribute to the achievement of the other

MDGs. But achieving all the other goals will also require specific investment in such sectors as education, health, water supplies and sanitation. Here it is even more difficult to arrive at a predictive model. The data are scarce, and those that are available have to be handled with caution as they are generally based on Timor-Leste's short-term transitional phase, covering, among other things, rehabilitation and reconstruction, as well as new construction. They may thus not be relevant to the longer term. Moreover relatively little is known about the intersectoral linkages.

This chapter makes an estimate based on current unit costs. These are derived from the strategy that the Government has produced for implementing the National Development Plan – the 'Road Map' – augmented by data presented in the relevant sector investment programmes. The resulting annual average investment requirements are projected over the 12-year period 2004-05 to 2015-16.

These estimates should be treated with caution, since they refer to the cost of inputs – on what it is assumed it would take to provide a satisfactory service in each of these areas. They are not directly linked with the outputs – the goals and the targets. Since the costs are based on current expenditures they would also need to be adjusted according to increases in costs as a result of inflation, as well as potential reductions as a result of increases in efficiency or economies of scale.

The results are shown in Table 3.2 based on various cost-change and population-growth scenarios. As can be seen, potential annual costs range quite widely, from $63 million to $137 million per year. Under the most plausible assumptions of a 3% annual reduction in unit costs and a population growth rate of 2.5%, the average would be $63 million per year.

This can be compared with current plans as summarized in the sector investment programmes which have estimated their resource requirements for the period 2004/05 to 2007/08. Table 3.3 extrapolates this expenditure to 2015. In fact for the first three items the total average requirement is similar to the exercise above: $68 million.

On the basis of these two exercises, for poverty and for these three sectors, the total costs would range from $122 million per year over the next 12 years under the most favourable and plausible circumstances, to $203 million per year under the least favourable. The former are in the general range of investment over the past three years: $125 million per year. Even so it is clearly important to engage in a more thorough analysis that would explicitly bring out the various trade-offs and uncertainties under alternative scenarios and allow policy-makers to make the most appropriate choices.

Pro-poor budgeting

Although ultimately private investment should play an increasingly important part

Table 3.2 – The cost of achieving the MDG education, health and water supply targets ($ millions) over the period 2004/5 to 2015/16

	Total	Annual Average
Base case	811	68
With 2% population growth	1,029	86
With 2.5% population growth	1,091	91
With 3% population growth	1,1567	96
With decrease in unit cost of 3% per year	563	47
With increase in unit cost of 3% per year	1,157	96
2% population growth and 3% decrease in unit costs each year	714	60
2.5% population growth and 3% decrease in unit costs each year	757	63
2% population growth and 3% increase in unit costs each year	1,457	123
2.5% population growth and 3% increase in unit cost each year	1,556	130
3% population growth and 3% increase in unit costs each year	1,649	137

Table 3.3 – Estimates of current planned investment in different sectors ($ millions)

Sector	Annual average	Total to 2015	Percent of total
Education	33	395	26%
Health	32	383	26%
Water	3	34	2%
Agriculture	14	169	11%
Transport	33	400	27%
Communications	2	25	2%
Private sector	7	88	6%
Total	124	1,493	100%

Source: Sector Investment Programmes

The Government has made a deliberate effort to keep public expenditure pro-poor

in stimulating economic development, for the next ten years at least the predominant source of funds will be public expenditure. Clearly it is important that these should be pro-poor and so far this seems to have been the case. This is evident in the expenditure priorities for the Consolidated Fund for East Timor (CFET). The Government has made a deliberate effort to keep public expenditure through the CFET pro-poor by allocating about 35% of the total to education and health. Moreover within the CFET allocation to education the Government has said that around 45% of the total should go to primary education; and in the health budget the Government has similarly maintained a focus on primary care and kept expenditure on hospitals at or below 40%. These are in

accord with the agreed actions under the three-year Transition Support Programme, under which 10 to 12 donors provide support to cover the fiscal deficit in the CFET budget.

Another important issue is the distribution of investment between Dili and the districts. The lion's share of CFET expenditures continues to go to Dili. Only one-third of the total public expenditure and one-fifth of goods and services are going to the districts – a significant urban bias in public spending (World Bank, 2003b). This is understandable since at present the districts and the lower levels lack the capacity to manage and account for resources. However, the Government will need to pursue ways of shifting resources and decision-making authority to the districts, both through community involvement in the management of facilities and through participation at district, sub-district and suco levels. This is not just a question of equity, but also one of empowerment – allowing people to take greater responsibility for managing their own resources.

While it has been feasible to monitor the pro-poor focus of public expenditures through the CFET budget, it has been more difficult to gauge the character of other expenditures such as those through TFET, UNMISET, UNOTIL and projects and programmes directly funded by donors. This situation should improve as a result of the sector investment programmes, which will enhance the capacity of the Government to establish expenditure priorities within and between individual sectors and sub-sectors.

Where will the investment funds come from?

Determining what funds are actually likely to be available will require first a review of the projected performance of the national economy – including such issues as productivity, inflation, and savings and investment rates. Then an estimate will have to be made of government income – which will be determined by tax revenues and how these respond to growth as well as to fiscal policy. In addition there is the potential contribution of foreign assistance. Finally one of the most crucial components will be revenue from oil and gas in the Timor Sea.

Many of these estimates have already been made. Timor-Leste has put in place a

Box 3.1 – Resource mobilization for the MDGs at the global level

Although a large part of the resources required for achieving the MDG targets in developing countries will be mobilized within the countries themselves, the resource gaps need to be met by the international community. The UN Conference on Financing for Development held at Monterrey, Mexico, in March 2002 helped the international community to focus on the commitments. At the global level, the Report of the High-level Panel on Financing for Development made a rough estimate that the additional resources required to attain the MDGs by 2015 would be $50 billion per annum (United Nations, 2001). World Bank estimates for achieving the MDGs similarly range between $40 billion and $60 billion a year (Devajaran et al, 2002). Both studies caution, however, that these estimates are indicative and need to be validated through more detailed and specific country studies.

Prior to the Monterrey Conference, six UNDP country offices participated in a pilot project that helped to estimate the costs of achieving the MDGs. A number of other countries have also included such estimates in their second-generation MDG reports.

However, the methodologies used at both the country and global levels vary considerably, demonstrating the difficulties in devising a method for obtaining consistent and accurate figures. To address this the Millennium Project of the UN and the World Bank has launched important projects to estimate the costs of achieving the goals at the national level.

Table 3.4 – Combined Sources Budget and financing requirements ($ millions)

	2003-04	2004-05	2005-06	2006-07	2007-08	4-year Total
Total Combined Sources Expenditure	219	245	246	248	243	983
CFET	75	75	79	82	84	320
Bilateral and multilateral	144	170	167	167	159	663
Available Financing	214	195	116	108	83	503
CFET	75	75	59	81	74	290
Donor support (Grants)	36	31	0	0	0	31
CFET revenues*	53	41	59	81	74	256
Change in CFET reserves (- increase)	-14	3	0	0	0	3
Bilateral and multilateral	139	120	57	27	9	213
TFET	35	24	12	1	0	37
Bilateral and multilateral projects	96	89	46	25	9	169
UN Assessed Posts	8	7	0	0	0	7
Additional Financing Required	5	50	130	141	160	480
CFET	0	0	20	1	10	30
Bilateral and multilateral	5	50	110	140	150	450

Note: * Excluding First Tranche Petroleum.
Source: RDTL, 2003j

reasonable medium-term fiscal framework for the CFET. The Road Map and the Registry of External Assistance also provide a preliminary indication of the medium-term combined sources budget (CSB) and identify potential resource gaps. The SIPs too can be used to refine investment and other expenditures and contribute to the integration of both investment and recurrent costs into the CSB framework – which should take place first in the 2004-05 mid-year budget update at the end of 2004, and be achieved fully in the budget for fiscal year 2005-06.

The fiscal estimates available in May 2004 based on the draft budget for 2004-05 are presented in Table 3.4. The total resource requirement over the four years 2004-05 to 2007-08 is projected at $983 million. Domestic revenues, including those from the Timor Sea, would cover more than half of the resource requirements, leaving a fiscal gap over the next four years of over $480 million, or an average of about $120 million per year.

How can this resource gap be filled? Goal 8 of the MDGs emphasizes that achieving the goals is not just a national but also a global responsibility. Timor-Leste, like other low-income countries, should therefore be able to rely on support from the develop-ment partners, including bilateral donors, international organizations, public and private foundations and international NGOs.

At the time of the December Timor-Leste Development Partners' Meeting in 2004, it was projected that there would be a financing gap of about $126 million over fiscal years 2005-07, and the Government issued a call to donors to extend their support in fiscal year 2005-06 and beyond. The Government has so far expected revenues to come from oil and gas. However, these are subject to very large uncertainties related to potential variations in both price and production, illustrated by a 'low case' scenario[1] with a deficit of $138 million to a 'high case' scenario[2] generating a surplus of $90 million (Table 3.5).

Several factors are contributing to the reduced financing gap. First, projected oil and gas tax revenues have increased for fis-

The Government has reduced the financing gap both by increasing domestic revenue and by constraining expenditure growth

1. The *low case scenario* is based on an average world oil price of $22 per barrel, and production levels that are about 16% lower than those for the base case. In the low case scenario, the projected deficit is $138 million, which would be extremely difficult for Timor-Leste to absorb given that there is no room for further cutting projected expenditures.
2. The *high case scenario* assumes an average world oil price of $28 per barrel as well as production levels that are about 18% higher than those for the base case. Under the high case scenario, there is no longer a financing gap over the medium term, but rather a surplus of $90 million.

Table 3.5 – Fiscal gap under different scenarios ($m)

	2004-05	2005-06	2006-07	2007-08	Total
Central Case (Fiscal year 2005 Budget)	0.0	-19.9	-0.5	-9.9	-30.3
High Case	10.7	11.2	33.4	34.7	90.0
Low Case	-2.8	-47.0	-44.4	-43.9	-138.1

Source: World Bank. 2004. Background Paper for the Timor-Leste and Development Partners Meeting, 18-19 May. Dili, World Bank.

Goal 8 of the MDGs emphasizes that achieving the goals is not just a national but also a global responsibility

cal years 2005-08, reaching $158 million, as opposed to $104 million at the time of the 2004 mid-year budget update 15.5 million barrels of petroleum in 2004, as opposed to 12 million barrels as projected in December 2003. In addition to this, there is a delay in the scheduled depreciation of taxable capital assets and improved tax administration, which may have a positive effect on oil and gas revenues over the next four years.

Second, the Government has made impressive efforts to reduce the financing gap both by increasing domestic revenue and by constraining expenditure growth. These efforts amount to a total reduction in the projected deficit of about $40.5 million. Following improved administration of customs and other domestic taxes, domestic revenue forecasts have been revised upward from $88 million to $98 million for the 2005-08 period. Moreover, the Government has also proposed following a very conservative expenditure path, with proposed CFET spending totalling $320 million as compared to $350 projected at the mid-year budget update. It will focus on consolidating and improving existing services with increased funding directed only to the highest NDP priorities. The World Bank believes that the proposed cut in expenditure growth is large and any further reductions in projected expenditures would be detrimental to Timor-Leste's sustainable development, and would postpone important human development activities.

In line with the updated medium-term fiscal framework, and cognizant of the uncertainties surrounding projected oil and gas revenues, the Government will have limited possibilities unless requesting for additional financial support from its development partners and UN agencies with programmes in Timor-Leste.

Conclusion

The estimates in this chapter provide a rough indication of the resources needed to reach the Millennium Development Goal of reducing poverty by one-third by 2015, Timor-Leste will need to sustain an average annual GDP growth of the order of 5% to 7%. Given the likely revenues from oil and gas, this is technically feasible and financially affordable, so it would be difficult to justify any plan that did not aim to achieve the poverty goal.

This will require higher levels of both domestic and foreign investment – averaging $48 million per year. For this purpose the Government will have to raise the domestic savings rate and attract foreign direct investment – both of which will depend on sound and consistent economic governance.

At the same time, the Government will need to diversify its sources of revenue and to steer the economy away from dependence on donor assistance. This will mean, over the medium term, raising tax and non-tax revenues from 12% to around 25% of GNP. On the expenditure side, the Government will need to restrain expenditure in those sectors that have minimal benefits for the poor, and particularly rural, households.

Budgetary constraints should not be cited as reasons for inadequate attention to human development. Failure to promote human development not only denies many people their basic rights, it can also result in political instability, which in itself will undermine economic growth and slow human development.

Achieving the Goals will demand therefore not just additional financial resources but also committed leadership and meaningful participation of the poor. This will also mean developing strong partnerships. The state cannot provide all services; it needs to create more space for NGOs and CBOs and the private sector – all of which can make a vital contribution to achieving the Millennium Development Goals.

Working together: institutions & partnerships

Reducing poverty and achieving the other MDGs in Timor-Leste will not only require sufficient investment it will also depend on a sound framework of governance and on solid institutions.

Poverty reduction is intricately intertwined with good governance – one is unsustainable without the other. The Prime Minister himself has emphasized that "creating the enabling conditions for the people to work themselves out of poverty" is a hallmark of good governance. The Millennium Declaration also emphasized the importance of "participation by all citizens".

Timor-Leste has been in the vanguard of popular participation. From the period of resistance onwards, the national institutions of the State have maintained a partnership with the people – a partnership that was evident, for example, in the process of mass consultation that led to the National Vision in preparation for the National Development Plan.

There is thus no shortage of political resolve at the top. The challenge will be to ensure that people throughout the country have the capacity to take advantage of these opportunities. This means not just keeping open the lines of participation and dialogue between the Government and the people but also forging other alliances that engage a range of civil society organizations, including NGOs, the Church and other religious bodies, as well as the private sector and bilateral and multilateral agencies.

Institutional development

The bedrock of these partnerships must be sound national institutions. Timor-Leste has made a good start in establishing the basic institutions of public administration, though most of these, including the Office of the President, the Parliament and the Judiciary will need strengthening in the years ahead. There are also efforts underway to establish new institutions such as the Office of the Provedor (ombudsman). These and other bodies can help set the legal and regulatory framework of checks and balances

needed for the functioning of an open market economy and an inclusive and participatory democracy.

Timor-Leste also has the broad institutional framework for promoting equitable economic growth and poverty reduction. On the planning side, the Planning Commission, which formulated the National Development Plan, has now been replaced by a small Directorate for External Assistance Coordination in the Ministry of Finance and Planning. Other ministries and agencies have also been reasonably effective in preparing their Annual Action Plans and in reporting on progress through the Quarterly Reporting Matrices. Nevertheless, for much of this activity Timor-Leste has relied on many external advisers and has a long way to go before its public institutions are sufficiently robust to manage the many challenges of human development.

The need for skilled people

One of the most critical issues will be acquiring sufficient skilled staff for public administration. Starting virtually from scratch in 2000, the public service has been recruiting personnel and, in order to keep the service lean and efficient, has resolved to limit the number of permanent public servants to 17,200. This is an admirable objective and in some cases has produced the right results: the police and the defence forces appear to have been staffed and equipped to a reasonable level. But elsewhere the numbers appear inadequate. There are, for example, far too few agricultural extension workers to support farmers and boost agricultural development. And virtually all the sector investment plans highlight the shortage of skilled personnel in the relevant sectors. Just as serious is the lack of capacity of those who are employed: the quality of staff is very variable and most require ongoing training.

Timor-Leste has been in the vanguard of popular participation.

Some of this deficit might be met by contributions from civil society organizations – which can take the initiative in promoting and implementing programmes, as well as in maintaining efficient lines of communication between the Government and the people. But they too are short of qualified staff and it will be some time before they have the capacity to share this task. The Government should also be able to turn to the private sector: the Ministry of Health, for example, has contracted out some activities such as food catering and laundry services. But the opportunities for widespread contracting out are limited since the formal private sector too remains very small.

Meanwhile the priority must be to make the most efficient use of existing government personnel and foreign advisers – an issue that many government departments have not really addressed.

Local government and institutions

Achieving the MDGs requires effective national policies, but most of the execution will take place at the local level and particularly in the rural areas. To have any serious impact on poverty Timor-Leste will need to boost agricultural production and promote rural development. The Government must therefore develop effective local institutions and create a system of local government that is not just effective and efficient but also operates in a way that mobilizes and involves local communities.

Timor-Leste's Constitution sets out the necessary vision of decentralized government. At present the country is divided into three regions, 13 districts, 65 sub-districts, 442 sucos and more than 2,500 aldeias. But power mostly remains concentrated at the centre. There have been some moves towards decentralization but these have largely taken the form of deconcentration: the Government has established administrative structures down to the district and sub-district levels, and uses these to deconcentrate the delivery of such services as health and education. But local officials, in principle, still have to report to their respective parent ministries in Dili, which provide the budgets and take the key decisions. The Government may also need to consider, stronger arrangements for inter-ministerial coordination at the district or sub-district levels.

Timor-Leste's Constitution sets out the necessary vision of decentralized government. But power mostly remains concentrated at the centre

Options for decentralization

The Government has long-term plans for decentralization and after independence in May 2002 set up an inter-ministerial committee to recommend the most appropriate options. In August 2003 a technical working group duly identified six alternatives and in January 2004, following study visits to Uganda and Cape Verde, reduced the number of options to two:

1. *Based on sub-districts* – This would abolish the districts and turn the sub-districts into 'municipalities' – devolved local government bodies that would control their own budgets and staff and ensure the delivery of basic services. The central ministries would then organize themselves regionally around the country according to their own criteria and service delivery requirements.

2. *Based on the districts* – In this case it is the districts that would assume the characteristics of municipalities. Each would have a district assembly, with policy-making and legislative powers within defined areas – including powers to approve the district plan and budget. The district administrator, who can be either appointed by the Government or elected, would coordinate and supervise all government staff at the district level. She or he would still report to the central Government in Dili, but to some degree would also be responsible to the district assembly. The sub-districts would remain, but serve as agencies of the district administration. Service provision would thus be managed either by the district or the sub-district.

The Government has yet to decide on the preferred option.

Decision-making at the suco level

Under neither option would the Government's administrative structure extend to the sucos. Instead it is proposed that these should have their own system for local-level representation and decision making. The decentralization options study proposed that each suco should have its own community council with elected members. This would allow local people to help identify projects and would encourage community-led initiatives that could produce timely responses to local problems – as well as generally promote synergies between the communities and the different levels of government. The Government is in the process of organizing elections

for suco councils and their chiefs; these will be held over a period of two years.

The political dimensions

The successful delivery of public services in accord with local demands depends not only on decentralization of administration, but also has to take into account the political dimensions including local power structures. Thus as well as transferring responsibilities and resources vertically from central to regional and local governments, the Government will need to foster horizontal networks that will allow regional and local governments to interact with non-state actors such as the private sector, NGOs and civil society.

Such networks can help mobilize additional resources for local development, enhance the accountability of local political leaders and officials and generally bring all the relevant groups into a common framework that encourages innovation and leads to higher levels of productivity.

Decentralized service delivery

In principle decentralization should make services more efficient by allowing them to be tailored more closely to local needs. It should also increase accountability by allowing local people, who have a better understanding of local circumstances, to supervise service providers and ensure that they make the most appropriate decisions. However, this presupposes that the administrative system of decentralization works effectively and that people have a real voice on local issues. In practice, international experience suggests that things do not always work out that way, and early studies in Timor-Leste indicate that the system will develop only slowly: given the shortage of personnel and resources it could take ten years or more to implement decentralization effectively.

In the initial years therefore, the Government should focus on decentralized delivery of services – either by organizing this from the centre or by establishing offices of the national departments in a few regional centres. Then, as resources allow, and as more skilled personnel become available, the Government can gradually transfer authority to local bodies (Box 4.1).

Community involvement

The cornerstone of rural development is community involvement that allows the poor, women and other vulnerable groups to participate actively in decision making. Communities need to be involved at all stages, from the selection of projects to their implementation (Box 4.2). Nevertheless the capacity of communities is frequently undervalued or underestimated.

Outsiders frequently, and mistakenly, conclude that community institutions in the countryside are either non-existent or inadequate. In fact Timor-Leste has many traditional rural structures that have survived centuries of colonial rule or occupation. Indeed the resistance movement itself was organized largely using the pool of skill from traditional organizations.

Many recent development projects have not, however, taken this lesson on board, ignoring traditional structures and instead trying to build new ones that seem unlikely to survive when the project stops. The TFET Community Empowerment Project, for example, initially tried to bypass the existing suco leadership and instead established a parallel mechanism for decision making. While this appeared appropriate in theory, in practice it failed to build any consensus behind its decisions and thus was unable to implement them. Only when this mistake was rectified, by involving the suco chiefs

Successful delivery of public services also needs to take into account the political dimensions including local power structures

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Box 4.1 – The Local Development Programme

At present some 95% of all public expenditures are planned and managed out of Dili. Virtually no public resources are available to local communities or to the local administration. This not only compromises the effectiveness and efficiency of public expenditure, through ill-tailored budget allocations and inefficient and delayed budget execution, it also undermines local accountability and ownership and fuels frustration and disenchantment with public programmes.

The Government is committed to decentralization and establishing a system of local government, not only to allow greater decentralization of services, but also to create greater space for local democratic activity and improved local governance. To support theses efforts, To support these efforts the Ministry of State Administration has joined forces with UNDP and the United Nations Capital Development Fund (UNCDF) to prepare and implement a Local Development

Programme (LDP) in three districts. The first district in which implementation of the LDP has started is Bobonaro while the other two districts will be decided upon at the end of 2005, when the first results of the LDP will be known. In addition to having a direct poverty impact in these districts the LDP aims to pilot decentralized planning, financial and procurement procedures for the management of local public expenditure. Through piloting these procedures, the LDP aims to provide practical lessons to inform the policy-discussion on the future establishment of local government bodies.

The budget for the LDP for the 3-year period is $1.6 million, of which $1 million will finance the Local Development Fund block grant facility, and $0.5 million will cover capacity-building and policy-development activities.

Source: UNDP 2005

Figure 4.1 – An institutional framework for participation in the rural areas
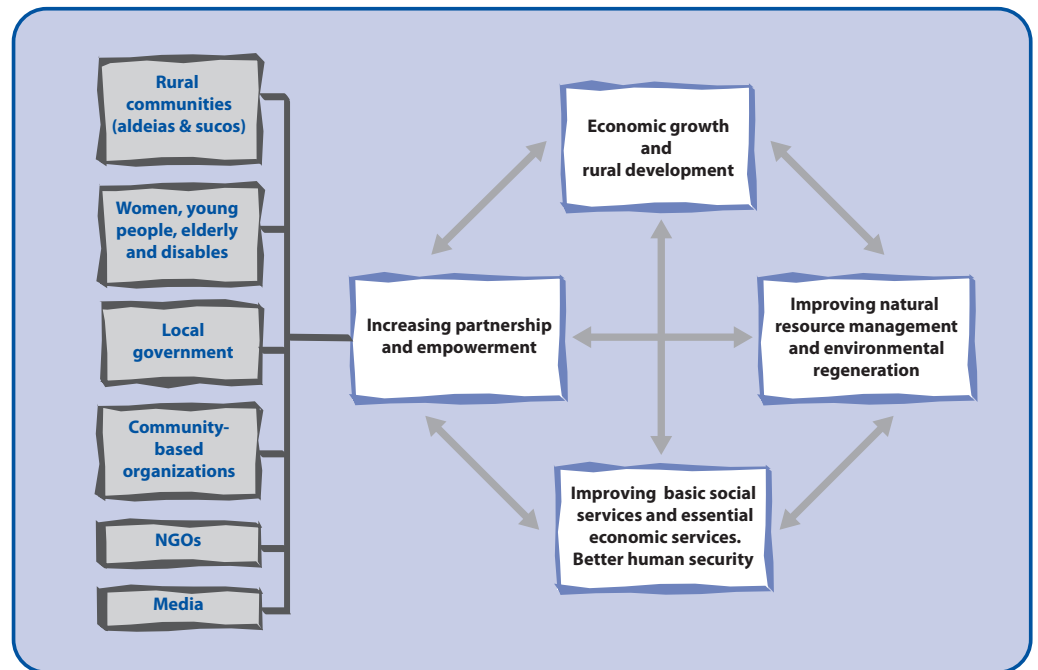
and co-opting them into the project-sponsored local councils, were these problems solved.

Partnerships and alliances

The Government recognizes that, given its own paucity of resources and capacity, it will have to seek the help and participation not just of local communities but also of a whole range of different actors. The potential connections between these are illustrated in Figure 4.1.

Meaningful partnership that empowers all these groups needs to be based on mutual respect and trust. This cannot be created overnight; it requires time and constant

engagement.

Fortunately, Timor-Leste is not starting from scratch. Many of these links already exist. The struggle for liberation brought together a wide range of groups including Church-based associations, student and youth groups, women's organizations, and other NGOs and community-based organizations. They were at the forefront of the struggle and often suffered the consequences. Since 1999, these groups have continued their activities in nation building and a range of poverty reduction efforts – often with the support of donors and international NGOs.

According to the Timor-Leste NGO Forum (FONTIL, Box 4.3) the country has 402 NGOs. These generally maintain good relations with the Government – a legacy of the UNTAET administration when some international NGOs worked on national reconstruction and NGOs served as conduits for projects and service delivery. In future, they may also take a more political line if they focus on awareness raising since that can involve criticizing the Government. Thus far, relatively few NGOs in Timor-Leste have been very active in this area and it remains to be seen how the Government will respond.

International NGOs

More than one-quarter of the NGO members of FONTIL are international – and

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Box 4.2 – The power of volunteers

Achieving the MDGs in Timor-Leste will depend not just on the activities of the Government and the contribution of NGOs and other institutions, but also on the contribution of thousands of volunteers. People make development happen.

Timor-Leste has a solid base of involvement in community organizations and voluntary activities. During the resistance to occupation, activists in a whole variety of organizations worked without compensation for their goals and their vision; often by choice, sometimes out of necessity.

Volunteering promotes a positive self-image and provides benefits both to the volunteer and the society – helping to build trust within and between communities and providing a practical demonstration of the survival of humanitarian ideals. People who work together in this way learn to address the past, adjust to the present, and plan for the future.

The Government can enhance opportunities for volunteering by taking legal, regulatory and fiscal measures that encourage the active participation of citizens. Key issues include the legal status and registration requirements of local voluntary organizations, funding mechanisms, and tenure rights over local resources.

there are others that are not FONTIL members. Some of the better known include OXFAM, World Vision, CARE International, Caritas, and Catholic Relief Services,. Table 4.1 lists their areas of work. As this table indicates, one of their main functions is capacity building through education and training, with the next largest areas of activities being in the health services and in community development.

National NGOs

National NGOs have been active in many areas including education, health, water and sanitation projects and research and advocacy, as well as in human rights and development. A number of these are affiliated to the Catholic Church – including Delegado Social, Caritas and the Peace and Justice Commission. And there are also a number of women's NGOs including Fokupers (Women's Communication Forum), ET-WAVE (East Timor Women Against Violence), REDE (Rede Feto Timor Lorosa'e), OMT (Organisation of Timor Women) and GFFTL (Young women's student group of East Timor). Others that specialize in particular sectors include the East Timor Agriculture and Development Foundation (ETADEP), Yayasan Hak (Foundation for Law) and Yayasan Bia Hula (water and sanitation). And along with these there are a number of student and youth bodies offering voluntary services to the wider community.

Cooperatives

Co-operatives have an important place in Timor-Leste's heritage. Section 138 of the Constitution refers to the co-operative sector as an important form of economic organization. And the National Development Plan says that the country should 'establish and strengthen formal social institutions such as co-operatives, savings and loan associations and marketing groups' and also emphasises the need to 'establish and/or strengthen women's co-operatives.'

The rural areas also have a number of similar organizations. Subsistence farming households have a culture of cooperation through a network of farmers' organizations that enable them to take advantage of economies of scale in buying agricultural inputs and selling surpluses: the 2001 suco survey reported that 58% of the sucos had farmers'

Table 4.1 – Activities of international NGOs in Timor-Leste

Areas of work	Number
Education and training	48
Health services	37
Community development, micro-credit, handicrafts and eco-tourism	34
Food and agriculture	20
Law, justice and human rights	15
Shelter	13
Culture and language	10
Safe water and sanitation	8
Public information and media	4
Buildings and Infrastructure	3
Total	192

Source: Database compiled by the Centre for International Conflict Resolution (CICR), Columbia University, Dili. Some of the NGOs may have ceased to work in Timor-Leste.

associations, 11% water users' associations, 8% livestock organizations, 18% fishermen's groups and 4% traders' organizations. One of the largest is Cooperativa Café Timor (Box 2.5, page 32).

Banking and credit

Timor-Leste has no rural commercial bank-

Box 4.3 – The NGO Forum

Established in 1998, the NGO Forum is the umbrella organization for about 386 national, mainly community-based, organizations and over 122 international NGOs operating in Timor-Leste. The Forum plays an important role in coordinating and facilitating their needs at local, national and international levels.

In accordance with this vision, the Forum is committed to the development of an independent Timor-Leste, and to the establishment of a pluralistic and democratic society, with strong commitment to responsibly defend human rights, to ensure that every member of the society enjoys freedom and development. To realize this vision, the Forum endeavours to promote a culture of mutual learning, cooperation and partnership with communities, as well as respect for human rights, the practice of democracy, the principle of non-partisanship among NGOs, and collective services based on the principles and values of humanity, justice and democracy.

The Forum is made up of four divisions – empowerment, advocacy, information technology, and an internal division that oversees administration and finance. The empowerment division manages a district outreach programme that allows district-based NGOs to communicate and coordinate their visions and programmes. It also employs a training coordinator to facilitate training for its members. Furthermore, the division operates an information collection and dissemination programme to assist in the two-way flow of information.

The advocacy division helps organize and coordinate regional advocacy groups in order to have input from organizations outside Dili. This division, in consultation with the membership, has identified, outside of its regular activities, three main areas of concentration for 2004. These focus on land and property rights, the Timor Gap Treaty defining the Maritime Boundaries between Timor-Leste and Australia and the surrounding issues, and the establishment of an International Tribunal for justice in the aftermath of the occupation.

Source: The NGO Forum, Dili.

ing service. The Government urgently needs therefore to develop a flexible and efficient regulatory framework for financial organizations, formal banks or micro-credit entities that will provide incentives for lenders and protection for poor borrowers. It could also provide farmers and other rural entrepreneurs with appropriate education and information about the different sources of credit.

Another important resource for poverty reduction is micro-finance. In the last four years, a number of programmes have been initiated, offering small loans to micro-enterprises in different areas, mostly concerned with trading. The majority have benefited from external funding. Bilateral donors and NGOs have started some schemes but among the largest are the Micro-Finance Foundation administered by ADB and the credit component of the Community Empowerment Project administered by the World Bank – both of which are funded from TFET. Some micro-finance schemes have failed because the business they financed could not compete with foreign

competition, but overall, those that have worked best have been used for micro trading. An example of a micro-finance operation in Timor-Leste is provided in Box 2.2 on page 29.

The media

The Constitution guarantees freedom of expression and since the establishment of democratic governance, Timor-Leste's media have flourished. The most widely accessible medium is radio to which 60% of people listen (Box 4.4). Around 30% have access to newspapers and 23% to magazines and newsletters (Asia Foundation, 2001). Although only around 8% of people live in households that have their own TV sets, more than one-fifth of the population – in Dili and the surrounding sucos – have access to the only national TV station, Televisaun Timor-Leste.

The dominant languages of communication in the media are Tetun and Bahasa Indonesia: between 76% and 99% of the audience can understand these languages, whereas Portuguese ranks a distant third (18%-23%), and English last (4%-6%).

The media clearly have a crucial role in an embryonic democracy, not only acting as sources of information and public education in such areas as agriculture, health and sanitation but also serving as public watchdogs that can expose corruption and human rights and other abuses.

Capacity development

All of these national institutions will play and important part in Timor-Leste's future development. But they share a common weakness – a lack of skilled people. One of Timor-Leste's most urgent priorities therefore must be to raise the country's levels of education, skill and capacity – whether in the public service, in NGOs and civil society, or in the private sector – through a dynamic process of development that responds to emerging needs. The National Development Plan recognizes this and in a number of its programmes the main focus is on capacity building and training.

The public sector

The capacity deficit in the public sector is largely a legacy of the period of occupation. During that time Indonesians filled most of the senior and middle management posi-

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Box 4.4 – The state of radio in Timor-Leste

Radio is a major channel for communication of information in Timor-Leste. The National Survey of Citizen Knowledge (2002) conducted by Asia Foundation reveals that 42% of the population listens to the radio every day, 13% between three to four days a week, and 8% from one to two days a week, bringing the overall total to about 63%.

Radio services are provided by the public service broadcaster, Radio Timor-Leste, and by local, community radio stations. Radio Timor-Leste is based in Dili, and has 12 transmitters throughout the country and plays a major role in the development of democracy, in national dialogue and reconciliation, and in providing information about health, education, agriculture, and other sectors. Around 75% of those who listen to radio name Radio Timor-Leste as the one they listen to most. All the assets of Radio Timor-Leste have been received from UNTAET and donors such as RTP/RDP (Portugal), USAID, JICA, Swiss Development Cooperation, and some UN agencies. According to an engineering study carried out by TV New Zealand, the transmission towers are in

urgent need of rehabilitation.

There are 18 locally-run not-for-profit radio stations broadcasting to local communities throughout Timor-Leste. Prior to 1999 there was only one – Radio Timor Kmanek in Dili, but since 1999 another 16 locally owned and operated community radio stations have started operations. These have been established with help from a range of aid agencies and all stations are either solar powered or wind powered. Eight of the stations have received funds from the Community Empowerment Programme and have district-level media culture boards, or Kliburs, to oversee their management.

In addition the international network of Christian broadcasters has established a radio station in Dili – Voice FM. There are also four stations that relay the signals of international broadcasters: one station in Dili and one in Baucau relay RDP (Portugal), one station in Dili relays JJJ from ABC (Australia), and one relays the Perth ABC station (Australia).

Sources: Asia Foundation (2001) and RDTL (2004), Dili.

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tions as well as those in office management and administration. There were also a few East Timorese employed in such roles but they left the country in 1999 and have not returned.

As a result, few of the current cadre of civil servants have the necessary training or experience. Most have only high-school diplomas, and the few who have a college education usually have degrees in general arts subjects; only a small number have specialist training from reputable institutions. This means that Timor-Leste is seriously short of people with even basic skills in management, administration, and accounting and finance, and has a similar shortage of specialists in important areas such as curriculum development, health sciences, engineering, and legal drafting.

Acquiring a basic foundation in some of the more common skills will require courses and programmes of six months to two years or longer – and even these will need to be augmented through on-the-job training. Without such training it will be difficult for civil servants to sustain effective services.

The current system of capacity development is not really adequate to the country's needs. In a few hundred cases it has involved Timorese taking advantage of fellowships for study abroad. While this can provide valuable specialist training, it is very expensive and can benefit only a small number of people. There is also the risk that such students may not return.

But even local capacity building has had its limitations. This has generally involved placing international consultants and advisors in government agencies for periods ranging from a few weeks to two years to advise and assist key personnel and give them on-the-job training. This 'one-on-one' mentoring and skills-transfer approach has had only modest results. One problem is that the line between advice and implementation has become very blurred and advisers have often spent a disproportionate share of their time fulfilling line functions. Also, they have been of extremely variable quality and competence; only a few have been good at imparting skills to their counterparts. In response, the Government is considering a new approach to capacity building with more deliberate 'one-to-many' training.

This is part of the Government's process of developing a medium- and long-term strategy for capacity development in the public sector. The general responsibility for all this falls on the Capacity Development Coordination Unit in the Prime Minister's Office. But even this unit itself will need more support and technical assistance if it is to fulfil its functions adequately. Capacity development is a priority across most government activities: the sector investment programmes also focus on capacity development: the SIP for public administration, for example, focuses specifically on the needs of the civil service.

The private sector and civil society

The weaknesses in government are mirrored in the private sector and civil society. So far there have been a few initiatives to build private-sector capacity – as through the Small Enterprise and Micro-Finance projects. But there have been a number of interventions to support civil society organisations through the activities of various government ministries. Bilateral agencies, UN Agencies including UNDP, and international NGOs have also been involved in capacity building. Indeed, most service delivery and community development projects have significant capacity-strengthening components. The establishment of the High Level Mechanism to oversee the implementation of the National Development Plan should also help. The Government is considering a more deliberate capacity-development strategy for all these actors since their levels of skill and ability will have a strong bearing on the success of rural development.

Capacity retention and utilization

So far, a lot of attention has been focused on capacity development, and perhaps not enough on capacity retention and utilization. People do not just need to develop their skills they also need the opportunities to use and refine them. The Government will therefore need to pay careful attention to the work environment for public servants – including promotion opportunities, incentive structures and cultural factors to ensure that staff are encouraged to practice and develop their skills. This should be part of building a sound and effective public service that is free from political influence, promotes job stability, satisfaction and security and follows such principles as merit-based recruitment, performance-based promotion, and remains

Few of the current cadre of civil servants have the necessary training or experience. Most only have high-school diplomas

free from political influence. The Civil Service Statute, approved by Parliament in April 2004, incorporates many of these elements.

Conclusion

Timor-Leste has survived a traumatic period in its history. Its people have shown extraordinary resilience and a determination to keep their destiny in their own hands. Now they are in the process of shaping that destiny, making many of the critical decisions that will determine the country's course for decades ahead.

In this they should be able to rely on the support of their many friends overseas, whether in terms of effective forms of development cooperation, or being allowed fair access to their own natural resources. But most of the struggles will be closer to home, as the Timorese make the difficult transition from a society dominated and distorted by external forces to one based on the country's own social traditions and economic realities. They have their vision of where they want to go, of the nation that they want to be. But realizing that vision will be a difficult task and many painful decisions lie ahead.

An anti-poverty agenda

Timor-Leste has been making very slow progress and remains one of the poorest countries in East Asia. Its people have low standards of health – with high levels of fertility and mortality. And with very little education they are generally underemployed and typically depend for survival on subsistence agriculture. Any credible strategy to reduce poverty in Timor-Leste has to acknowledge this bleak picture.

Previous chapters have addressed Timor-Leste's challenges squarely and presented several sets of policy implications and recommendations. Which of these should take priority? How can Timor-Leste best boost human development and reduce poverty in an effective and sustainable way?

Lessons learned from many low-income countries show that rapid and politically sustainable progress in poverty reduction can only be achieved by pursuing a strategy that has two equally important elements.

The first is to boost the capabilities of the poor – by providing basic social services, including those for primary health care, education, family planning, and nutrition. The second is to enable the poor to make use of their most abundant asset – their labour – by focusing on agriculture and rural development, as well as by offering the necessary market incentives, while improving social and political institutions, infrastructure and technology.

Since resources are limited, however, policies and programmes need to be sternly selective. For this purpose, decisions on sectoral priorities should be based on two key criteria. First, are they pro-poor? Second, do they help people to help themselves – enabling poor individuals, households and communities to better their own social and economic conditions?

Strengthening human capabilities

Ensuring that the benefits of development are distributed widely and fairly will mean offering everyone access to services for basic education, health and nutrition. In addition to fulfilling people's basic rights this will also help boost their productivity and thus stimulate economic growth. The trust fund from oil must therefore be used to support such services – through selective and relevant programmes that lead to tangible outcomes and increase the capabilities of the next generation.

Basic education for all

Few children in Timor-Leste get an adequate education – on average they spend only four years at school. If the country wants to move to a higher stage of development it needs to implement compulsory basic education for all. This means ensuring that tuition is free, or at least affordable, that the country has sufficient high quality teachers – and also that pupils and teachers work in decent school buildings with adequate equipment.

And if adults are to catch up on some of their lost years of education they should be able to take advantage of innovative and inexpensive education and training systems. Women should receive special attention, since the more education and knowledge they have, the better they can fulfil their own potential, and also take good care of their children.

For both children and adults, special efforts will be needed to fulfil the rights of those living in mountainous and isolated rural areas. In all of this the primary responsibility lies with the Government but it will also need to work closely with local communities and religious leaders.

Health

One of the most persistent effects of poverty is poor health – particularly for children: around 90 per 1,000 children in Timor-Leste die before reaching their first birthday. As a result parents feel they have to have as many children as possible to ensure that at least some survive, so fertility rates are high.

Improving health performance will re-

If the country wants to move to a higher stage of development it needs to implement compulsory basic education for all

quire action on many fronts – particularly better public health care, along with improved access to safe water and sanitation. Special attention also needs to be paid to reproductive health, with widely available family planning services, and better maternal health through effective provision of ante-natal and post-natal care.

Nutrition and food security

Food insecurity and poverty are leading to high levels of child malnutrition. This shortage of sufficient calories and protein not only denies children their rights to healthy development it also reduces their mental capacity and slows their learning at school. Addressing child malnutrition will mean paying close attention to children's progress from the first days of life, monitoring their weight to detect when growth is faltering and then giving mothers the necessary advice.

In addition, under-five children and school children should be able to rely on feeding programmes – which can be based on nutritious foods that are locally grown so as to also boost local production and incomes.

In order to raise public awareness and ensure local ownership of food security and nutrition programmes, the Government will have to cooperate with many partners – including local women's organizations, community-based organizations and local NGOs.

Broadening opportunities and providing decent employment

The best way for poor people to get out of poverty – and stay out of poverty – is to have sufficient opportunities for decent work and to be able to build up their assets. With almost three-quarters of the work force dependant on subsistent farming and fishing, this essentially means boosting agriculture and rural development.

Increasing agricultural productivity

When people in the rural areas become more productive, they not only increase their incomes, they can also start to create new businesses and new jobs. As a result they are less likely to migrate to urban areas in search of work. Opportunities for investment here include agricultural intensification by subsidizing inputs of appropriate high-yield crop varieties, fertilizers, and pesticides, as well as by expanding irrigation networks, and helping farmers diversify to crops that bring higher prices and have greater export potential.

At the same time, the development of agriculture should also create more off-farm employment in the rural areas. This will involve small-scale agribusiness activities – including cooperatives – as well as different types of home industry, trade, transportation and personal services.

Improving rural infrastructure

Both agricultural development and increased off-farm employment will require better rural infrastructure, particularly road and irrigation networks, along with facilities for clean water and sanitation. As well as improving the long-term economic and health prospects of the rural poor, this also creates jobs immediately. Public works generally, such as building hardened roads and temporary bridges, and improving sewage systems, can provide temporary jobs and incomes for the needy and unemployed. Depending on the available resources, these activities can be based on 'work for cash' or 'work for food'. According to international evidence (ILO, 2000), infrastructure programmes that are labour-intensive are between 10% and 30% less costly than those that are more equipment-intensive, create up to five times as many jobs for the same investment – and can halve the requirement for foreign exchange.

An anti-poverty agenda

In sum, an anti-poverty agenda should concentrate on providing demonstrable benefits for the poor, building their capabilities, boosting their incomes and removing the constraints that hamper their progress.

Sustained success for such an agenda, however, will rely on strong political commitment and continuing public support.

Agricultural development and increased off-farm employment will require better rural infrastructure

Bibliography

Acharya, S. S. 2003. *Agricultural Development for Poverty Reduction in East Timor*. Dili, UNDP and ILO.

AFP Lusa, 2005, *"Dengue epidemic kills more than 40 in Timor-Leste"*, 30 March 2005

Asia Foundation, 2001, *East Timor National Survey of Voter Knowledge* (Preliminary Findings), Dili, May 2001.

Asia Foundation, 2002, *Timor Lorosa'e National Survey of Citizen Knowledge*, Dili, May 2002.

Asian Development Bank, 2001, *The Survey of Sucos in Timor Lorosa'e – Summary of Initial Results and Implications for Poverty Reduction*, Dili, August 2001.

Barnett, J., Dessai, S. and Jones, R. 2003. *Climate Change in Timor-Leste: Science, Impacts, Policy and Planning*. Melbourne, University of Melbourne and CSIRO, December.

Bourguignon, F. 2001. *The Pace of Economic Growth and Poverty Reduction* LACEA. Montevideo, Uruguay.

Bruns B., Mingat A. and Rakotomalala R. 2003. *Achieving UPE by 2015: A Chance for Every Child*. Washington D.C., The World Bank, August.

Devarajan S., Miller M.J. and Swanson E. V. 2002. *Goals for Development: History, Prospects and Costs*, World Bank Policy Research Working Paper 2819.

Development Committee. 2003. *Support Sound Policies with Adequate and Appropriate Financing*, September.

Fan, S. and Hazell, P. 1999. *Linkages between Government Spending, Growth and Poverty in Rural India*. Research Report 110. International Food Policy Research Institute (IFPRI).

FAO. 2003. *Special Report, FAO/WFP Crop and Food Supply Assessment Mission to Timor-Leste*. Italy, Rome, June.

House, W. J. 2001. *A Study of the Potential Contribution of the Micro and Small Enterprise (Informal) Sector to the Economic Development of Timor Loro Sa'e (East Timor)*. Project TIM/01/014. Dili, United Nations Development Programme and International Labour Organization.

IMF. 2003. *Democratic Republic of Timor-Leste: Selected Issues and Technical Appendix*. Country Report No. 03/228, Dili, International Monetary Fund, July.

Jahan, S. 2002. *Human Rights and MDGs*. Keynote Paper at the International Policy Dialogue on Human Rights and Developing Countries.

JICA and Ministry of Agriculture, Forests and Fisheries, 2002, *Study on Integrated Agricultural Development of East Timor: Development Plan Report*, prepared by Sanyu Consultants, Dili, 2002.

Kakwani, N., 2004, *Cost of reducing income poverty to half between 1990 and 2015 in Timor-Leste*. Dili, United Nations Development Programme.

Kakwani, N. and Pernia, E. M. 2000. *Pro-Poor Growth and Income Inequality*, draft, Asian Development Bank.

McKinley T. 2003. *The Macroeconomics of Poverty Reduction. Initial Findings of the UNDP Asia-Pacific Regional Program*. New York, United Nations Development Programme (mimeo).

Millennium Project. 2004. *Millennium Development Goals Needs Assessments: Country Case Studies: Bangladesh, Cambodia, Ghana, Tanzania and Uganda*. Working Paper, 16 January.

Ministry of Education, Youth, Culture, and Sports and Secretary of Labour and Solidarity, 2004, *Education and Training Priorities and Proposed Sector Investment Program*, September 2004 (unpublished)

Moxane, B. 2004. *The World Bank's land of kiosks: Community-driven development in East Timor*, Dili, Timor-Leste International and Local Media Monitoring, February.

PAP. 2003. *Timor-Leste: Poverty in a New Nation: Analysis for Action*. Report of the Poverty Assessment Project – a partnership between the Government of Timor-Leste, the Asian Development Bank, the World Bank, Japan International Coordination Agency, United Nations Development Programme, United Nations Children's Fund, and the United Nations Mission Support in East Timor.

Ravallion M. and Datt G. 1999. *When is Growth Pro-Poor? Evidence from the diverse experiences of India's States*. Wash-

ington, D.C., The World Bank (mimeographed).

RDTL and UNCT. 2004. *Timor-Leste: Millennium Development Goals Report*. Dili, República Democrática de Timor-Leste and the United Nations Country Team.

RDTL. 2002. *East Timor 2020: Our Nation, our Future*. Dili, Planning Commission, April.

RDTL. 2003a. *Agriculture, Forestry and Fisheries: Priorities and Proposed Sector Investment Program*. Dili, Ministry of Agriculture, Forest and Fisheries, November.

RDTL. 2003b. *Education and Training: Priorities and Proposed Sector Investment Program*. Dili, Ministry of Education, Youth, Culture and Sports, Secretary of State for Labour and Solidarity and Ministry of Agriculture, Forestry and Fisheries, November.

RDTL. 2003c. *Inter-Ministerial Report: Timor-Leste Agriculture and Livestock Sector Investment Program*. Dili.

RDTL. 2003d. *National Development Plan*. Dili, Planning Commission.

RDTL. 2003e. *Natural Resources and the Environment: Priorities and Proposed Sector Investment Program*. Dili, Ministry of Agriculture, Forestry and Fisheries, Ministry of Development and Environment and Ministry of Transport, Communications and Public Works, November.

RDTL. 2003f. *Power Sector: Priorities and Proposed Sector Investment Program*. Dili, Ministry of Transport, Communications and Public Works, November.

RDTL. 2003g. *Private Sector Development: Priorities and Proposed Sector Investment Program*. Dili, Ministry of Development and Environment, Ministry of Agriculture, Forestry and Fisheries, Ministry of Transport, Communications and Public Works, Ministry of Planning and Finance, Ministry of Justice, Secretariat of Trade and Industry, Secretariat of Labour and Solidarity, Banking and Payments Authority and Timor Sea Office, November.

RDTL. 2003h. *Timor-Leste: Ita Iha Nebe Ona Ohin Loron*. Dili, Governo da República Democrática de Timor-Leste, February.

RDTL. 2003i. *Transport Sector: Priorities and Proposed Sector Investment Program*. Dili, Ministry of Transport, Communications and Public Works, November.

RDTL. 2003j. "The Democratic Republic of Timor-Leste Combined Sources of Budget 2003-04. Budget Paper No. 1". Dili, Ministry of Planning and Finance.

RDTL 2003k. Background Paper for the Timor-Leste and Development Partners Meeting (TLDPM), Dili, 3-5 June 2003.

RDTL 2003l *The Road Map for the Implementation of NDP Programmes,* Dili, April 2003.

RDTL 2004. *Communication: Priorities and Proposed Sector Investment Programme*. Ministry of Transport, Communications and Public Works, 2004, Dili, May 2004.

RDTL 2005. *Millenium Development Goals. Where are we now?*

Reddy, S. and Heuty, A. 2004. *Achieving the Millennium Development Goals: a Review and a Strategy*, April. Available at: www.hsph.harvard.edu/hcpds/calendar_presentation.htm.

Timmer, P. 2001. "Food Policy in East Timor: Linking Agriculture, Economic Growth and Poverty Alleviation to achieve Food Security" in Hal Hill and João Saldanha, (eds.) in *East Timor Development Challenges for World's Newest Nation*. Canberra, Asia Pacific Press, pp. 99-109.

Turnbull, P. 2003. *Review and Action Plan for the Statistical System in Timor-Leste*. Final Report. Pacific Financial Technical Assistance Centre, September.

UNDP and NORAD, 2002, *Assessing Environmental Needs and Priorities in Timor-Leste*. Dili, United Nations Development Programme.

UNDP. 2002. *Financing the Development Goals: An Analysis of Tanzania, Cameroon, Malawi, Uganda, and the Philippines*. March.

UNDP. 2002. *East Timor National Human Development Report 2002: Ukun Rasik A'an, The Way Ahead*. Dili, United Nations Development Programme.

UNDP, 2002, *Facilitating Community Development: Participatory Potential Assessment* – East Timor, Dili, 2002.

UNDP. 2003. *Human Development Report 2003: Millennium Development Goals: A compact among nations to end human poverty*. New York, Oxford University Press.

UNDP 2005. *Human Development Report 2005. International cooperation at a crossroads: Aid, trade and security in an unequal*

world. New York, Oxford University Press.

UNDP. Nd. *Human Development Report Tool Kit for National and Regional HDR Teams: Practical Guidelines, Examples and Resources for Achieving Excellence in HDRs*. New York, Human Development Report Office.

UNESCAP and UNDP. 2003. *Promoting the Millennium Development Goals in Asia and the Pacific*. New York, UNES-CAP and UNDP.

UNICEF. 2003. *Multiple Indicator Cluster Survey (MICS-2002) Timor-Leste*. Dili, UNICEF, May.

United Nations Development Group. 2003. *Country Reporting on the Millennium Development Goals – Second Guidance Note*, October.

United Nations. 2001. *Report of the High Level Panel on Financing for Development* (Zedillo Report). Technical Report.

United Nations. 2001. *Road Map: Towards the Implementation of the United Nations Millennium Declaration*. A/56/326.

United Nations. 2002. *Report of the International Conference on Financing for Development*. Monterrey, Mexico, 18-22 March 2002". A/CONF. 198/11.

Vandemoortele, J. and Roy R. 2004. *Making Sense of MDG Costing*. New York, UNDP, March (mimeo).

Vandemoortele, J. 2003. "The MDGs and Pro-Poor Policies: can external partners make a difference?" United Nations Development Group (mimeographed).

World Bank. 2002. *East Timor Policy Challenges for a New Nation*. Washington, D.C.

World Bank. 2003. *Progress Report and Critical Next Steps in Scaling Up Education for All, Health, HIV/AIDS, Water and Sanitation*. Dili.

World Bank, 2003a, *Timor-Leste – Education: The Way Forward*, Dili, October 2003.

World Bank, 2003b, *Draft Public Expenditure Review*, December 2003

World Health Organization, 2004, *Demographic Health Survey*, 2004 (unpublished)

Process for the preparation of this report

This second National Human Development Report (NHDR 2006) is the outcome of a consultative process, which began in the latter half of 2003. To kick-start the process, a Brainstorming Workshop on NHDR 2006 was held during 6-7 August 2003, which provided an opportunity for stakeholders from the Government (including some key ministers), civil society and the UN Country Team (including the World Bank) to discuss and agree on the focus of the Report. The Workshop participants agreed that reducing poverty in its multiple dimensions should be the focus. As poverty in Timor-Leste is predominantly rural, they felt that the Report should concentrate on rural development as a major means to poverty reduction in the country.

The steering committee set up to oversee the preparation of the first National MDG Report was been enlarged to include the Asian Development Bank, bilateral donor representatives and members of the Timorese civil society and tasked to oversee the preparation of NHDR 2006. The committee, in turn, established a working group mirroring the membership of the steering committee and co-chaired by the Minister of Health, Rui Maria Araujo (alternate: Abel Ximenes, Vice Minister of Development),

and the Deputy Resident Representative, UNDP, Haoliang Xu (alternate: Elisabeth Huybens, Country Manager, World Bank), to guide the preparation of the report.

The Working Group met on 16 October 2003 and directed the Secretariat to draft the terms of reference for local contributors. A brief presentation on the costing of Goal 1 of the MDGs (cutting the incidence of income poverty in half) was made to the working group in November 2003. The group met again in December 2003 to finalize the orientation of NHDR 2006, and reaffirmed that its thrust should be on revitalizing the rural economy and society to achieve the MDGs.

Timorese professionals under the direction of sector ministries and secretariats prepared background papers. These were pulled together and assimilated into an early draft that was discussed at a seminar of the working Group and other interested persons on 22 March 2004. They reiterated the need to place rural development as a central platform of the Report. A revised draft of the Report was presented to the working group and their feedback is incorporated in the final report. Thus, the preparation of NHDR 2006 followed a participatory process.

Definitions

Human Development – The process of widening people's choices and their level of wellbeing. The choices change over time and differ among societies according to their stage of development. The three essential choices for people, no matter where they are located, are (i) to lead a long and healthy life, (ii) to acquire knowledge and (iii) to have access to the resources needed for a decent standard of living. Other choices, highly valued by many people, include political, economic and social freedom, access to opportunities for being creative and productive and enjoying self-respect, and guaranteed human rights.

The Human Development Index (HDI) – This is based on three indicators: longevity as measured by life expectancy at birth; educational attainment as measured by a combination of adult literacy (two-thirds weight) and combined primary, secondary and tertiary gross enrolment ratios (one-third weight); and standard of living, which is measured by real GDP per capita expressed in purchasing power parity.

Life expectancy – The number of years a newborn infant would live if prevailing patterns of mortality at the time of birth were to stay the same throughout the child's life.

Adult literacy rate – The percentage of people aged 15 and above who can, with understanding, both read and write a short, simple statement on their everyday life.

Enrolment ratios – These are based on the reference school cycle and the reference age cohort for each cycle. The *gross primary enrolment ratio* is the total number of children (irrespective of their age) currently attending primary school as a percentage of the total number of children of primary school age (6 to 10 years). The *net primary enrolment ratio* is the total number of children of primary age currently attending school as a percentage of the total number of children of primary school age. The difference between the gross and net enrolment ratios may be used as an indicator of the proportion of over-aged pupils in a cycle. The relevant age cohorts for pre-secondary and secondary education are 11 to 13 and 14 to 17 years.

The *tertiary enrolment ratio* is calculated by dividing the number of students enrolled in all post-secondary institutions and universities by the population in the 20 to 24 year age groups. Students attending vocational schools, and adult education and other programmes are included. UNESCO adopted the age cohort 20 to 24 years as the denominator since it represents an average tertiary cohort even though people above and below this group may be registered in tertiary institutions.

Gross Domestic Product (GDP) – The output of goods and services for final use produced by an economy, by both residents and non-residents, regardless of the allocation to domestic and foreign claims. It does not include deductions for depreciation of physical capital or depletion and degradation of natural resources, hence the reference to gross rather than net product.

Purchasing Power Parity – The United Nations International Comparison Programme (ICP) has developed measures of GDP on an internationally comparable scale, using purchasing power parities instead of exchange rates as conversion factors. The ICP defines the purchasing power of a country's currency as the number of units of that currency required to purchase the representative basket of goods and services that the reference currency would buy in the United States of America (USA). The purchasing power parity (PPP) in Timor-Leste is estimated to be of the order of 3, that is, the purchasing power of $1 in Timor-Leste would be equivalent to that of $3 in the USA.

Gender – The socio-cultural classification of men and women and contrasts with sex, which is a biological classification of females and males.

Gender Development Index (GDI) – This measures gender disparities in the level of achievement in human development. It has been developed in recognition of the disparities in achievement between men and women particularly in the Least Developed Countries (LDCs), which are characterised by low income per capita, poor economic growth, low levels of human resource devel-

opment and massive reliance on foreign assistance. Timor-Leste is classified as a LDC. The GDI uses the same variables as the human development index. However, separate indices are computed for both men and women. The maximum value for male life expectancy is 82.5 years and the minimum value is 22.5 years, while the corresponding values for female are 87.5 and 27.5 years, reflecting biological differences in survival rates favouring women. In the case of literacy, school enrolment and income, the potential of the two groups do not differ and the maximum and minimum values are the same as for the HDI.

Gender Empowerment Measure (GEM) – This was introduced in the 1995 HDR, and shows the relative empowerment of men and women in political and economic spheres. This measure has been developed to help address the discrepancy in political and economic empowerment, participation and decision making by both men and women in society. The Least Developed Countries are characterised by low female participation in the political arena and in managerial, administrative, technical and professional positions.

Capability Poverty Measure (CPM), introduced in the 1996 HDR, is a multi-dimensional index of poverty based on capabilities, namely, a life free of avoidable morbidity (as measured by the percentage of births unattended by trained health personnel), being informed and educated (adult illiteracy), and proper nourishment (underweight children under age five). The three variables are given equal weight in the composite index.

Source: UNDP, Human Development Reports

Millennium Development Goals, Targets and Indicators

Goal 1. Eradicate extreme poverty and hunger

Target 1. Halve, between 1990 and 2015, the proportion of people whose income is less than $1-a-day
1. Proportion of population below $1 per day
2. Poverty gap ratio (incidence x depth of poverty)
3. Share of poorest quintile in national consumption
Target 2. Halve, between 1990 and 2015, the proportion of people who suffer from hunger
4. Prevalence of underweight children (under five years of age)
5. Proportion of population below minimum level of dietary energy consumption

Goal 2. Achieve universal primary education

Target 3. Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling
6. Net enrolment ratio in primary education
7. Proportion of pupils starting grade 1 who reach grade 5
8. Illiteracy rate of 15 to 24 year olds

Goal 3. Promote gender equality and empower women

Target 4. Eliminate gender disparity in primary and secondary education, preferably by 2005, and to all levels of education no later than 2015
9. Ratio of girls to boys in primary, secondary and tertiary education
10. Ratio of literate females to males of 15 –to 24 years old
11. Ratio of women to men in wage employment in the non-agricultural sector
12. Proportion of seats held by women in national parliament

Goal 4. Reduce child mortality

Target 5. Reduce by two thirds, between 1990 and 2015, the under-five mortality rate
13. Under-five mortality rate
14. Infant mortality rate
15. Proportion of 1 year-old children immunized against measles

Goal 5. Improve maternal health

Target 6. Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio
16. Maternal mortality ratio
17. Proportion of births attended by skilled health personnel
Goal 6. Combat HIV/AIDS, malaria and other diseases
Target 7. Have halted by 2015 and begun to reverse the spread of HIV/AIDS
18. HIV prevalence among 15 –to 24 years old pregnant women
19. Contraceptive prevalence rate
20. Number of children orphaned by HIV/AIDS
Target 8. Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases
21. Prevalence and death rates associated with malaria
22. Proportion of population in malaria risk areas using effective malaria prevention and treatment measures
23. Incidence of tuberculosis (per 100,000 people)
24. Proportion of tuberculosis cases detected and cured under directly observed treatment short course
Goal 7. Ensure environmental sustainability
Target 9. Integrate the principles of sustainable development into country policies and programmes and reverse the losses of environmental resources
25. Proportion of land area covered by forest

26. Land area protected to maintain biological diversity

27. GDP per unit of energy use (as proxy for energy efficiency)

28. Carbon dioxide emissions (per capita)

Target 10. Halve by 2015 the proportion of people without sustainable access to safe drinking water

29. Proportion of population with sustainable access to an improved water source

Target 11. By 2020 to have achieved a significant improvement in the lives of at least 100 million slum dwellers

30. Proportion of people with access to improved sanitation

31. Proportion of people with access to secure tenure (urban/rural)

Goal 8: Develop a global partnership for development

Target 12: Develop further an open, rule-based, predictable and non-discriminatory trading and financial system. Includes a commitment to good governance, development, and poverty reduction – both nationally and internationally

Target 13: Address the Special Needs of the Least Developed Countries

Includes: tariff and quota free access for LDC exports; enhanced programme of debt relief for HIPC and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction

Target 14: Address the Special Needs of land-locked countries and Small island developing states (through Barbados Programme and 22nd General Assembly provisions)

Target 15: Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term

OFFICIAL DEVELOPMENT ASSISTANCE

32. Net ODA as percentage of DAC

donors' GNI [targets of 0.7% in total and 0.15% for LDCs]

33. Proportion of ODA to basic social services (basic education, primary health care, nutrition, safe water and sanitation)

34. Proportion of ODA that is untied

35. Proportion of ODA for environment in small island developing states

36. Proportion of ODA for transport sector in land-locked countries

MARKET ACCESS

37. Proportion of exports (by value and excluding arms) admitted free of duties and quotas

38. Average tariffs and quotas on agricultural products and textiles and clothing

39. Domestic and export agricultural subsidies in OECD countries

40. Proportion of ODA provided to help build trade capacity

DEBT SUSTAINABILITY

41. Proportion of official bilateral HIPC debt cancelled

42. Debt service as a percentage of exports of goods and services

43. Proportion of ODA provided as debt relief

44. Number of countries reaching HIPC decision and completion points

Target 16: In co-operation with developing countries, develop and implement strategies for decent and productive work for youth

45. Unemployment rate of 15-24 year olds

Target 17: In co-operation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries

46. Proportion of population with access to affordable essential drugs

Target 18: In co-operation with the private sector, make available the benefits of new technologies, especially information and communications

47. Telephone lines per 1,000 people

48. Personal computers per 1,000 people

Millennium Development Indicator definitions

Goal 1 – Poverty

Population below $1 a day – The percentage of the population living on less than $1.00 a day at 1993 international prices (equivalent to $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 $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% – 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 0 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 aged 15-24 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 5 mortality rate – 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 post-partum 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 ages 15-24 that is infected with HIV. (Joint United Nations Programme on HIV/AIDS [UNAIDS])

Contraceptive prevalence rate – The percentage of women who are practising, or whose sexual partners are practising, 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). (World Health Organization) 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. (World Health Organization)

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. (Food and Agricultural Organization)

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 and the manufacture of cement. 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. (World Health Organization and United Nations Children's Fund, Global Water Supply and Sanitation Assessment 2000 Report)

Proportion of people with access to secure tenure – Data not yet available.

Goal 8 – Partnerships

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 unweighted 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 ages 15-24. (International Labour Organization)

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)

Sources: World Bank and UNDP

Status of Millennium Development Goals

	Status 2001-02	Target 2010	Target 2015	Global Target

Goal 1 – Eradicate extreme poverty and hunger

Target 1 – Halve the proportion of people whose income is less than one dollar a day

	Status 2001-02	Target 2010	Target 2015	Global Target
1. Proportion of population below $1 per day (PPP-values)	20%		14%	Half of 1990 level
1a. Proportion of population below national poverty line	40%			
2. Poverty gap ratio [incidence x depth of poverty] based on national poverty line	12%			
3. Share of poorest quintile in national consumption	7%			

Target 2 – Halve the proportion who suffer from hunger

	Status 2001-02	Target 2010	Target 2015	Global Target
4. Prevalence of underweight children under-five years of age	45%		31%	Half of 1990 level
5. Proportion of population below minimum dietary energy consumption	No data			

Goal 2 – Achieve universal primary education

Target 3 – Ensure that, by 2015, children will complete primary schooling

	Status 2001-02	Target 2010	Target 2015	Global Target
6. Net enrolment ratio in				
a. Primary education	73%	86%	95%	100%
b. Secondary education	21%	30%	40%	
c. Tertiary education	1.2%	2.5%	3.0%	
7. Proportion of pupils starting grade 1 who reach grade 5	47%	75%	90%	
8. Literacy rate of 15-24 year olds	50%	80%	95%	

Goal 3 – Promote gender equality and empower women

Target 4 – Eliminate gender disparity in primary and secondary education

	Status 2001-02	Target 2010	Target 2015	Global Target
9. Ratio of girls to boys in primary, secondary and tertiary education				
a. Primary	91%	99%	100%	100%
b. Secondary	128%	99%	100%	
c. Tertiary	58%	–	–	
10. Ratio of literate females to males of 15-24 year olds	96%	98%	100%	
11. Share of women in wage employment in the non-agricultural sector	35%	–	–	
12. Proportion of seats held by women in national parliament	28%	–	–	

	Status 2001-02	Target 2010	Target 2015	Global Target
Goal 4 – Reduce child mortality				
Target 5 – Reduce by two-thirds the under-five mortality rate				
13. Under-five mortality rate	128	108	96	
14. Infant mortality rate	88	66	53	
15. Proportion of children 12-23 months with measles vaccination	47%	68%	100%	
Goal 5 – Improve maternal health				
Target 6 – Reduce by three-quarters the maternal mortality ratio				
16. Maternal mortality ratio	420-800	480	252	
17. Proportion of births attended by skilled health personnel	24%	60%	80%	
Goal 6 – Combat HIV/AIDS, malaria and other diseases				
Target 7 – Have halted and begun to reverse the spread of HIV/AIDS				
18. HIV prevalence among 15-24 year old pregnant women In major urban areas	Not known			
19. Condoms use rate	<1% (est.)			
20. Number of children orphaned by HIV/AIDS	Not known			
Target 8 – Have halted and begun to reverse the incidence of malaria and other major diseases				
21. Prevalence and death rates associated with malaria	Not known			
Prevalence	9%	6.1%	4.6%	
Death rate	200	140	140	
22. Proportion of people in malaria risk areas using effective malaria prevention and treatment measures	20%	45%	60%	
22a. Proportion of households with at least one mosquito net (%)	Not known			
23. Prevalence and death rates associated with tuberculosis				
Prevalence (no. of cases per 100,000 people)	139/100,000	95/100,00	70/100,000	
Death rate	Not known			
24. Proportion of TB cases detected and cured under DOTS (directly observed treatment short course)				
Detected	1,288	874	644	
Cured	80%	90%	90%	

	Status 2001-02	Target 2010	Target 2015	Global Target

Goal 7 – Ensure environmental sustainability

Target 9 – Integrate principles of sustainable development into country policies and programmes and reverse loss of environmental resources

	Status 2001-02			Global Target
25. Proportion of land area covered by forest	35%			30%
26. Land area protected to maintain biological diversity				
27. GDP per unit of energy use (as proxy for energy efficiency)				
28. Carbon dioxide emissions (metric tons per capita)				

Target 10 – Halve the proportion of people without access to safe water

	Status 2001-02		Target 2015	Global Target
29. Proportion of people with access to improved water				Halve proportion without access from 1990 level
a) Urban	72%		86%	
b) Rural	51%		75%	
c) Total	56%		78%	

Target 10 – By 2020, achieve a significant improvement in the lives of at least 100 million slum dwellers

	Status 2001-02		Target 2015	Global Target
30. Proportion of people with access to improved sanitation				Halve proportion without access from 1990 level
a) Urban	44%		63%	
b) Rural	10%		41%	
c) Total	19%		46%	
31. Proportion of people with access to secure tenure				

Goal 8 – Develop a Global Partnership for Development

Target 16 – In co-operation with developing countries, develop and implement strategies for decent and productive work for youth

	Status 2001-02			
45. Unemployment rate of 15-24 year olds (urban)	43%			

Target 17 – In co-operation with pharmaceutical companies, provide access to affordable, essential drugs in developing countries

46. Proportion of population with access to affordable essential drugs				

Target 18 – In co-operation with the private sector, make available the benefits of new technologies, especially information and communications

47. Telephone lines per 1,000 people				
48. Personal computers per 1000 people				

Calculating the human development indices

Human development index (HDI)

The HDI is a summary measure of human development. It measures the average achievements in a country in three basic dimensions of human development, namely:

• A long and healthy life, as measured by life expectancy at birth.
• Knowledge, as measured by the adult literacy rate (with two-thirds weight) and the combined primary, secondary and tertiary gross enrolment ratio (with one-third weight).
• A decent standard of living, as measured by GDP per capita (PPP $).

As such, the HDI is constructed by combining each of these three dimensions into a single measure. However, since each dimension is measured in different units, that is, years, percentages and in PPP $, each of dimensions is standardized before a composite index of HDI can be calculated.
To calculate the dimension indices —the life expectancy, education and GDP indices —minimum and maximum values (goalposts) are chosen for each underlying indicator. Performance in each dimension is expressed as a value between 0 and 1 by applying the following general formula:

Dimension index
= actual value – minimum value
maximum value – minimum value

Goalposts for calculating the HDI

Indicator	Maximum value	Minimum value
Life expectancy at birth (years)	85	25
Adult literacy rate (% age 15 and above)	100	0
Combined gross enrolment ratio (%)	100	0
GDP per capita (PPP $)	40,000	100

The HDI is then calculated as a simple average of the dimension indices
The calculation of the HDI for Timor-Leste is presented below.

1. Calculating the life expectancy index

The life expectancy index measures the relative achievement of a country in life expectancy at birth. For Timor-Leste, with a life expectancy of 55.5 years in 2004, the life expectancy index is 0.508.
Life expectancy index
= $\frac{55.5 - 25}{85 - 25}$ = 0.508

2. Calculating the education index

The education index measures a country's relative achievement in both adult literacy and combined primary, secondary and tertiary gross enrolment.
    First, an index for adult literacy and one for combined gross enrolment are calculated.

Then these two indices are combined to create the education index, with two-thirds weight given to adult literacy and one-third weight to combined gross enrolment.

For Timor-Leste, with an adult literacy rate of 50.1% in 2004 and a combined gross enrolment ratio of 66.0% in the school year 2004/05, the education index is 0.554.

Adult literacy index = $\frac{50.1 - 0}{100 - 0}$ = 0.501

Gross enrolment index = $\frac{66.0 - 0}{100 - 0}$ = 0.660

Education index = 2/3 (adult literacy index) + 1/3 (gross enrolment index)
= 2/3 (0.501)   +   1/3 (0.660) = 0.554

3. Calculating the GDP index

The GDP index is calculated using adjusted GDP per capita (in nominal $). In the HDI income serves as a surrogate for all the dimensions of human development not reflected in a long and healthy life and in knowledge. Income is adjusted because achieving a respectable level of human development does not require unlimited income. Accordingly, the logarithm of income is used. For Timor-Leste, with a GDP per capita of $366 (in nominal $) in 2004, the GDP index is 0.217.

GDP index = $\frac{\log (366) - \log (100)}{\log (40,000) - \log (100)}$ = 0.217

When GDP per capita in PPP $ – estimated at $732, GDP index for Timor-Leste in 2004 is 0.332.

4. Calculating the HDI

Once the dimension indices have been calculated, determining the HDI is straightforward. It is a simple average of the three dimension indices.

HDI   = 1/3 (life expectancy index) + 1/3 (education index) + 1/3 (GDP index)
= 1/3 (0.508) + 1/3 (0.554) + 1/3 (0.217) = 0.426

When GDP per capita in PPP $ is used – that is estimated at $ 732, the value of HDI for Timor-Leste in 2004 is 0.465.

The human poverty index for developing countries (HPI-1)

While the HDI measures average achievement, the HPI-1 measures deprivations in the three basic dimensions of human development captured in the HDI, namely:

• A long and healthy life – vulnerability to death at a relatively early age, as measured by the probability at birth of not surviving to age 40.
• Knowledge – exclusion from the world of reading and communications, as measured by the adult illiteracy rate.
• A decent standard of living – lack of access to overall economic provisioning, as measured by the unweighted average of two indicators, the percentage of the population without sustainable access to an improved water source and the percentage of children under weight for age.

Calculating the HPI-1 is more straightforward than calculating the HDI. The indicators used to measure the deprivations are already normalized between 0 and 100 (because they are expressed as percentages), so there is no need to create dimension indices as for the HDI. The calculation of the HPI-1 for the year 1999 for Timor-Leste is as follows.

1. Measuring deprivation in a decent standard of living

An unweighted average of two indicators is used to measure deprivation in a decent standard of living.

Unweighted average = 1/2 (population without sustainable access to an improved water source) + 1/2 (children under weight for age)

Population without sustainable access to an improved water source = 43.8%

Children under weight for age = 55.2%

Unweighted average = 1/2 (43.8) + 1/2 (55.2) = 49.5%

2. Calculating the HPI-1

The formula for calculating the HPI-1 is: HPI-1 = $[1/3 (P_1^\alpha + P_2^\alpha + P_3^\alpha)]^{1/\alpha}$

Where:

P_1 = Probability at birth of not surviving to age 40 (times 100)

P_2 = Adult illiteracy rate

P_3 = Unweighted average of population without sustainable access to an improved water source and children under weight for age

α = 3

Timor-Leste's HPI indicator values in 2004:

P_1 = 21.3%

P_2 = 49.9%

P_3 = 49.5%

HPI-1 = $[1/3 (21.3^3 + 49.9^3 + 49.5^3)]^{1/3}$ = 44.6

The gender-related development index (GDI)

While the HDI measures average achievement, the GDI adjusts the average achievement to reflect the inequalities between men and women in the following dimensions:

• A long and healthy life, as measured by life expectancy at birth.
• Knowledge, as measured by the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratio.
• A decent standard of living, as measured by estimated earned income (PPP $).

The calculation of the GDI involves three steps. First, female and male indices in each dimension are calculated according to this general formula:

$$\text{Dimension index} = \frac{\text{actual value} - \text{minimum value}}{\text{maximum value} - \text{minimum value}}$$

Second, the female and male indices in each dimension are combined in a way that penalizes differences in achievement between men and women. The resulting index, referred to as the equally distributed index, is calculated according to this general formula:

Equally distributed index = $\{[\text{female population share (female index}^{1-\epsilon})] + [\text{male population share (male index}^{1-\epsilon})]\}^{1/1-\epsilon}$

ϵ measures the aversion to inequality. In the GDI ϵ = 2.

Thus the general equation becomes:

Equally distributed index = $\{[\text{female population share (female index}^{-1})] + [\text{male population share (male index}^{-1})]\}^{-1}$

which gives the harmonic mean of the female and male indices.

Third, the GDI is calculated by combining the three equally distributed indices in an unweighted average.

Goalposts for calculating the GDI

Indicator	Maximum value	Minimum value
Life expectancy at birth (years)	87.2	27.5
Male life expectancy at birth (years)	82.5	22.3
Adult literacy rate (%)	100	0
Combined gross enrolment ratio (%)	100	0
Estimated earned income (PPP $)	40,000	100

Note: The maximum and minimum values (goalposts) for life expectancy are five years higher for women to take into account their longer life expectancy.

The calculation of GDI value for Timor-Leste in 2004 is presented below.

1. Calculating the equally distributed life expectancy index

The first step is to calculate separate indices for female and male achievements in life expectancy, using the general formula for dimension indices.

FEMALE
Life expectancy: 56.6 years

MALE
Life expectancy: 54.4 years

Life expectancy index = $\dfrac{56.6 - 27.5}{87.5 - 27.5}$

Life expectancy index = $\dfrac{54.4 - 22.5}{82.5 - 22.5}$

Life expectancy index, female = 0.485

Life expectancy index, male = 0.532

Next, the female and male indices are combined to create the equally distributed life expectancy index, using the general formula for equally distributed indices.

FEMALE
Population share: 0.491
Life expectancy index: 0.485

MALE
Population share: 0.509
Life expectancy index: 0.532

Equally distributed life expectancy index = $\{[0.491 \, (0.485^{-1})] + [0.509(0.532^{-1})]\}^{-1}$
$= 0.488$

2. Calculating the equally distributed education index

First, indices for the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratio are calculated separately for females and males. Calculating these indices is straightforward, since the indicators used are already normalized between 0 and 100.

FEMALE
Adult literacy rate: 43.9%
Adult literacy index: 0.439
Gross enrolment ratio: 63.6%
Gross enrolment index: 0.636

MALE
Adult literacy rate: 56.3%
Adult literacy index: 0.603
Gross enrolment ratio: 68.3%
Gross enrolment index: 0.683

Second, the education index, which gives two-thirds weight to the adult literacy index and one-third weight to the gross enrolment index, is computed separately for females and males.

Education index = 2/3 (adult literacy index) + 1/3 (gross enrolment index)
Female education index = 2/3 (0.439) + 1/3 (0.636) = 0.505
Male education index = 2/3 (0.603) + 1/3 (0.683) = 0.629

Finally, the female and male education indices are combined to create the equally distributed education index.

FEMALE
Population share: 0.491
Education index: 0.505

MALE
Population share: 0.509
Education index: 0.603

Equally distributed education index = $\{[0.491(0.505^{-1})] + [0.509(0.603^{-1})]\}^{-1} = 0.550$

3. Calculating the equally distributed income index

First, female and male earned income (PPP $) are estimated (for details on this calculation, see the addendum to this technical note). Then the income index is calculated for each gender. As for the HDI, income is adjusted by taking the logarithm of estimated earned income (PPP $):

Income index = $\dfrac{\log \text{(actual value)} - \log \text{(minimum value)}}{\log \text{(maximum value)} - \log \text{(minimum value)}}$

FEMALE
Estimated earned income
(nominal $): 126.5

MALE
Estimated earned income
(nominal $): 625.9

Income index = $\dfrac{\log (126.5) - \log (100)}{\log (40,000) - \log (100)}$ = 0.039

Income index = $\dfrac{\log (625.9) - \log (100)}{\log (40,000) - \log (100)}$ = 0.306

Second, the female and male income indices are combined to create the equally distributed income index:

FEMALE
Population share: 0.491
Income index: 0.039

MALE
Population share: 0.509
Income index: 0.306

Equally distributed income index = $\{[0.491(0.039^{-1})] + [0.509(0.306^{-1})]\}^{-1} = 0.071$

4. Calculating the GDI

Calculating the GDI is straightforward. It is simply the unweighted average of the three component indices—the equally distributed life expectancy index, the equally distributed education index and the equally distributed income index.

GDI = 1/3 (life expectancy index) + 1/3 (education index) + 1/3 (income index)
= 1/3 (0.488) + 1/3 (0.550) + 1/3 (0.071) = 0.369

When estimated earned income applies PPP $ deflator – that is $ 263 for female and $ 1,302 for male, GDI value in 2004 for Timor-Leste is 0.422.

Notes on statistics

The indicators presented in the report are based on the best use of readily available data from various sources. Since the first Human Development Report for Timor-Leste was published in 2002, there have been several new data available in the country, including Multiple Indicator Cluster Survey (MICS) 2002, Demographic and General Health Survey 2003, and the latest one was the results of 2004 Census of Population and Housing. However, the availability of data on human development indicators and other social-economic indicators in Timor-Leste are limited, and where the data exist their reliability is questionable. Different sources frequently produce different estimates for the same indicators. It is therefore important to use the data with caution, especially when comparing data in 2001 and 2004 with previous years.

The calculation of human development index (HDI), human poverty index (HPI-1), gender-related development index (GDI) and other related indicators in this report uses the standard measurement methods, as applied in Global Human Development Report. While indicators presented in the report may become a benchmark in assessing the extent of human development progress, a further improvement in data and monitoring system should provide more reliable human development indicators in the future. This section describes data sources and limitation of indicators and statistics presented in the report.

Life expectancy at birth

The life expectancy at birth is estimated by applying indirect method from the observed data of various surveys conducted in the last fifteen years in Timor-Leste. These include the 1990 Indonesia's population census 1990, the 1995 intercensal survey (SUPAS), a series of household surveys for core information (SUSENAS 1993, 1996, 1999), the result of East Timor's household living condition survey in 2001, Multiple Indicator Cluster Survey (MICS) 2002, and the 2004 Census of Population and Housing Timor-Leste. Data on the average number of live births among women aged between 15 and 50 years old were entered into the Mortpak program. The output produces the following indices: probability of dying before age X, infant mortality rate, probability of dying between ages 1 and 5, and life expectancy at birth. The output also provides two models with their possible variants, but for Timor-Leste – as for other developing countries – the estimations of these indicators use Coale-Demeny Models (Trussel equations) with a variant of the West model. Each estimate of life expectancy at birth and other corresponding mortality indices refers to four years backward from the reference time survey.

Since the resulting estimates of these indices produce an erratic trend, because of different sample sizes covered in those surveys, the final estimates presented in this report were based on the extrapolation, applying a best-fitted curve of logistic regression with the formula as follows:

$$Y = L + \{U/(1 + be^{at})\}$$

Where Y is the projected indicator, L is an estimate of lower asymptote, U is an estimate of upper asymptote, a and b are logistic coefficients, e is an exponential constant, and t is time (year).

Figure A VII.1 depicts the fitting curve line for Infant Mortality Rate (IMR) in Timor-Leste, on the basis of the 1993-2001 trend.

Adult literacy rate

The adult literacy rates in this report were based on SUSENAS core data (for estimates in 1993, 1996, 1997 and 1999), the East Timor Household Living Condition Survey 2001 (for estimate in 2001), and the 2004 Census of Population and Housing Timor-Leste (for figures in 2004). The adult literacy rates are measured as the percentage of population aged 15 or over who can read and write in Tetun, Portuguese, and or Bahasa Indonesia to total population aged 15 or over. These data sources may not be exactly comparable due to different sample coverage. The 2004 Census of Population and Housing Timor-Leste provides a good baseline for indicator of adult literacy, as it

Figure A VII.1 – The fitting curve line of IMR for Timor-Leste
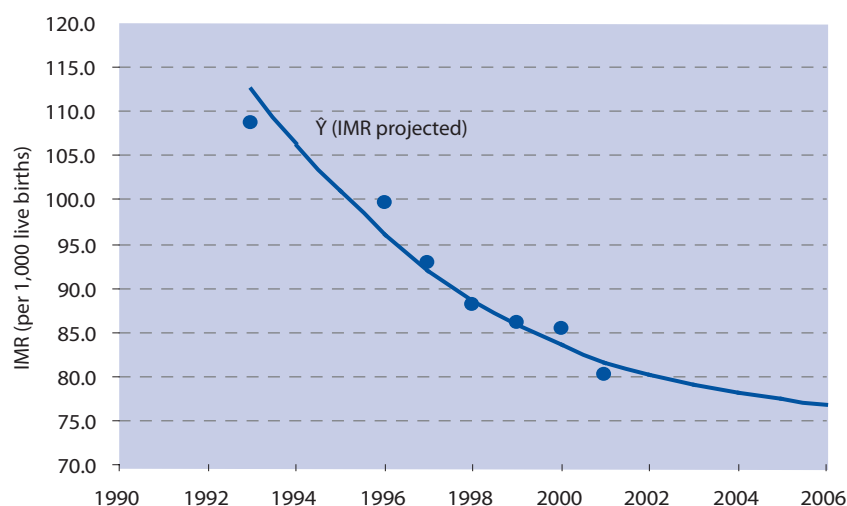
had a complete nation-wide coverage.

Combined primary, secondary and tertiary gross enrolment ratio

The combined gross enrolment ratios (GER) in this report also use the estimates from SUSENAS data, the 2001 East Timor Household Survey 2001, and the 2004 Census of Population and Housing Timor-Leste. Comparability in the combined GER between these data sources is crucial to bear in mind. Ratios in 2001 and the previous years used information on the number of students enrolled in each level of education and the number of specific school-aged population that were both collected in the respective surveys. The 2004 Census did not ask the information about the enrolled students, though it can provide data on the number of specific school-aged population. Information on the number of enrolled students for the school year of 2004/2005 was obtained from the Ministry of Education, Culture, Youth and Sports.

Gross enrolment ratios are defined as the number of students enrolled in each level of schooling as a percentage of the number of population in age group corresponding to that level (primary school age: 6-11 or 7-12, lower secondary school age: 12-14 or 13-15, upper secondary school age: 15-17 or 16-18, and tertiary school age: 18-23 or 19-24). The ratios are thus affected by the age- and sex-specific population estimates. They also may hide important differences among countries because of differences in the age range corresponding to a level of education and in the duration of education programs.

The incidence of grade repetition may also produce distortion in the ratios. Net enrolment ratios are better indicators as a proxy of access to education or knowledge, as they measure enrolments only for a particular age group. However, this report uses the combined gross enrolment ratio for a proxy of knowledge (with adult literacy rate) as a component of human development index (HDI) in order to maintain international comparison.

GDP per capita in nominal and PPP $

GDP per capita (in nominal $) data used in this report are based on International Monetary Fund (IMF) Statement at Donors' Meeting on East Timor in Oslo (11-12 December 2001) and a series IMF Country Report on 'Selected Issues and Statistical Appendix'. It is very difficult to come up with one single GDP estimate that is reliable, provided the lack of economic statistics in the country. Not only the statistics on total GDP are lacking, the calculation of GDP per capita also poses a problem in determining the denominator – that is the estimated total population. The estimates of GDP per capita in nominal $ are used for the calculation of HDI in Timor-Leste for observing progress in human development within the country.

However, for the purpose of international comparability, HDI for each country is adjusted by using a purchasing power parity (PPP) deflator for GDP per capita as the component of decent living standard. The nominal GDP is first converted into $ applying market exchange rate, then multi-

plied by the relative purchasing power of a dollar in a country. Since PPP deflator for Timor-Leste is not available yet, it is estimated by comparing consumer prices in Timor-Leste and Indonesia given the PPP deflator for Indonesian rupiah is already known. Timor-Leste/USA deflator can be roughly calculated by using a simple algebra as (Timor-Leste/Indonesia)*(Indonesia/USA). Timor-Leste/Indonesia deflator is estimated by comparing consumer price index (CPI) between both countries.

Statistics on other indicators

This report also presents other indicators that are related to human development, such as indicators on basic demography (population size and structure, fertility and mortality), education, health, labour force, and economy. These indicators are derived from various data sources, including the most contemporary data from the first Census of Population and Housing Timor-Leste 2004, Multiple Indicator Cluster Survey (MICS) 2002, a series of Indonesia' SUSENAS core data, the East Timor household survey 2001 and a series of IMF Country Reports. Different data sources and methodology thus must be borne in mind in looking at temporal comparisons of these indicators.

Definitions of statistical terms

Adult illiteracy rate: Calculated as 100 minus the adult literacy rate.

Adult literacy rate: The percentage of people aged 15 and above who can, with understanding, both read and write a short, simple statement on their everyday life.

Births attended by skilled health staff: The percentage of deliveries attended by a doctor (a specialist, a non-specialist or a person with midwifery skills who can diagnose and manage obstetrical complications as well normal deliveries), nurse or midwife (a person who has successfully completed the prescribed course of midwifery and is able to give the necessary supervision, care and advice to women during pregnancy, labour and postpartum period and to care for newborns and infants), or trained traditional birth attendant (a person who initially acquired his or her ability by delivering babies or through apprenticeship to other traditional birth attendants and who has undergone subsequent extensive training and is now integrated in the formal health care system.

Children ever born to women aged 15-49, average number: Refers to the number of children ever born to women aged 15-49 years, as a percentage of total population of women aged 15-49 years.

Child-woman ratio: Refers to the number of population aged 0-4 years, as a percentage of the number of female population aged 15-45 years.

Consumer price index (CPI): Refers to changes in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or change at specified time periods.

Contraceptive use rate for modern methods, total: The percentage of currently married women aged 15-49 years using modern methods of contraception as a percentage of all currently married women aged 15-49.

Contributing family workers: Defined according to the International Classification by Status in Employment (ICSE) as a person who works without pay in an economic enterprise operated by a related person living in the same household.

Dependency ratio: Refers to the number of population aged < 15 years and ≥ 65 years old as a percentage of working-aged population of 15-64 years old.

Earned income (PPP $), estimated (female and male): Roughly derived on the basis of the ratio of 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 (PPP $). For details on how the index is calculated see 'Technical Note'.

Earned income, ratio of estimated female to male: The ratio of estimated female earned income to estimated male earned income.

Education index: One of the three indices on which the human development index is built. It is based on the adult literacy rate and the combined primary, secondary and tertiary gross enrolment ratio. For details on how the index is calculated see 'Technical Note'.

Educational level: Categorized as pre-primary, primary, secondary or tertiary in accordance with the International Classification of Education (ISCED). *Pre-primary education* (ISCED level 0) is provided at such schools as kindergartens, nursery and infant school, and is intended for children not old enough to enter school at the primary level. *Primary education* (ISCED level 1) provides the basic elements of education at primary and elementary schools. *Secondary education* (ISCED level 2 and 3) is based on at least four years of previous instructions at the first level and provides general or specialized instruction, or both, at middle school, secondary school, high school, teacher training school at this level and vocational or technical school. *Tertiary education* (ISCED level 5-7) refers to education at such institutions as universities, teacher colleges and higher-level professional schools – requiring as a minimum condition of admission for the successful completion of education at the

second level or evidence of the attainment of an equivalent level of knowledge.

Employment structure by major sector: Employment in industry, agriculture or services as defined according to the International Standard Industrial Classification (ISIC) system (revision 2 and 3). Industry refers to mining and quarrying, manufacturing, construction and public utilities (gas, water and electricity). Agriculture refers to agriculture, hunting, forestry and fishing. Services refers 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.

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. See educational 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 for that level. See educational level.

Female-headed household: The number of households headed by females as a percentage to total households.

Female longevity advantage in life expectancy rate: indicates the difference in life expectancy (in years) between females and males.

Female-male gaps: calculated by dividing female figures by male figures in particular indicators.

GDP (gross domestic product): The total output of goods and services for final use produced by an economy, by both residents and non-residents, regardless of the allocation to domestic and foreign claims. It does not include deductions for depreciation of physical capital or depletion and degradation of natural resources.

GDP index: One of the three indices on which the human development index is built. It is based on GDP per capita (PPP $). For details on how the index is calculated see 'Technical Note'.

GDP per capita (PPP $): See GDP (gross domestic product) and PPP (purchasing power parity).

GDP per capita annual growth rates: Least squares annual growth rate, calculated from constant price GDP per capita in local currency units.

Gender-related development index (GDI): A composite index measuring average achievement in the three basic dimensions captured in the human development index – a long and healthy life, knowledge and a decent standard of living – adjusted to account for inequalities between men and women. For details on how the index is calculated see 'Technical Note'.

Gini index: Measures the extent to which the distribution of income (or consumption expenditure) among individuals or households within a country or region deviates from a perfectly equal distribution. A value of 0 represents perfect equality, a value of 100 refers to perfect inequality.

GNP (gross national product): Comprises GDP plus net factor income from abroad, which is the income residents receive from abroad for factor services (labour and capital), less similar to payment made to non-residents who contribute to the domestic economy.

Household size, average: the average number of persons per a household.

Household with less than 10 square meters of floor area per capita: Refers to the number of households with less than 10 square meters of floor area per capita as a percentage of total number of households.

Household with main floor of earth/bamboo: Refers to the number of households living in houses with main floor of earth/bamboo as a percentage of total number of households.

Household with main lighting of electricity: Refers to the number of households living in houses with main lighting of electricity as a percentage of total number of households.

Household with main roof of wood/grass/leaves: Refers to the number of households living in houses with main roof of wood/grass/leaves as a percentage of total number of households.

Household with main wall of bamboo: Refers to the number of households living in houses with main wall of bamboo as a percentage of total number of households.

Household with own drinking water facilities: Refers to the number of households living in houses with own drinking water facilities as a percentage of total number of households.

Household with own sanitation facilities: Refers to the number of households living

in houses with own sanitation facilities as a percentage of total number of households.

Household with pipe/pump source of drinking water: Refers to the number of households living in houses with pipe/pump source of drinking water as a percentage of total number of households.

Household with sewerage or septic tanks: Refers to the number of households living in houses with sewerage or septic tanks as a percentage of total number of households.

Household with toilet facilities: Refers to the number of households living in houses with toilet facilities as a percentage of total number of households.

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 on how the index is calculated see 'Technical Note'.

Human poverty index (HPI-1) for developing countries: A composite index measuring deprivations in the three basic dimensions captured in the human development index – longevity, knowledge and standard of living. For details on how the index is calculated see '*Technical Note*'.

Immunized, under 5 child (age 0-4), total: Refers to the number of population aged 0-4 who had received any immunization, as a percentage of total population aged 0-4.

Income poverty line, population below: Refers to the percentage of population living below the predetermined poverty line:

Infant mortality rate: The probability of dying between birth and exactly one year of age expressed per 1,000 live births.

Labour force participation rate, total: Refers to the percentage of total labour force aged 15 years and above who are currently working/employed and looking for work/ unemployed during a week before the survey to total working-age population 15 years and above.

Labour force, children aged 10-14 years: Refers to the incidence of child labour, defined as the number of children aged 10-14 who are currently in labour force (working and looking for work), as a percentage of total number of population aged 10-14 years.

Labour force: All those employed in (including people above a specified age (this report uses 15 years and above) who, during the reference period (this report uses a week before the survey), were in paid employment, at work, with a job but not at work, or self-employed) and unemployed (including people above a specified age who, during the reference period, were without work, currently available for work and seeking work).

Life expectancy at birth: The number of years a newborn infant would live if prevailing patterns of age-specific mortality rates at the time of birth remain unchanged throughout the child's life.

Life expectancy index: One of the three indices on which the human development index is built. See 'Notes on Statistics'.

Maternal mortality ratio reported: Reported annual number of deaths of women from pregnancy-related causes per 100,000 live births, not adjusted for the well-documented problems of under-reporting and misclassification.

Morbidity rate, total, monthly: Refers to the number of population experiencing illness that disrupted daily activities of working/schooling in the month before the survey, as a percentage of total population.

Population below national poverty line (%) – National poverty lines are as follows: for the year 1996 - 32,742 rupiah per capita per month (SUSENAS data); 1999 - 78,396 rupiah per capita per month (SUSENAS data); 2001 - 154,374 rupiah per capita per month (East Timor household survey 2001).

Population growth rate, annual: Refers to the annual exponential growth rate of population for the period indicated.

Population, total: Refers to the de facto population, which include all people actually present in a given area at a given time.

PPP (purchasing power parity): A rate of exchange that accounts for price differences across countries, allowing international comparisons of real output and incomes. PPP $ rate has the same purchasing power in the domestic economy as $1 has in the United States.

Probability at birth of not surviving to age 40 (% of cohort) - Probability at birth of not surviving to age 40 is calculated based on the extrapolation (best-fitted curve) model of several estimates from the raw data of various sources, including the results of East Timor household survey 2001, using Coale-Demeny Models (Trussel equations) for West.

Probability at birth of not surviving to a specified age: The probability of a newborn infant not surviving to a specified age, if subject to prevailing patterns of age-specific mortality rates.

Real GDP per capita (PPP$) – Real GDP in PPP $ utilizes 1996 as the base year to assume purchasing power parity. See '*Notes on Statistics*'.

Schooling, mean years of: Refers to average years of completed schooling among population aged 20-54 years old.

Sex ratio: Refers to the ratio between the number of male population as compared to the number of female population.

Total fertility rate: The average number of children a woman would bear if age-specific fertility rates remained unchanged during her lifetime.

Under-five mortality rate: The probability of dying between birth and exactly five years of age expressed per 1,000 live births.

Underweight for age, children under age five: Includes moderate and severe underweight, which is defined as below two standard deviations from the median weight for age of the reference population.

Unemployment rate: Refers to the percentage of population aged 15 years and above who are currently looking for work (open unemployment), plus disguised unemployed (did not seek work due to unavailable jobs)

during a week before the survey to total labour force aged 15 years and above.

Unemployment, youth: Refers to unemployment between the ages of 15 and 24.

Urban population: The midyear population of areas defined as urban.

Visit rate to modern health facilities/personnel, total: Refers to the number of population visiting modern medical facilities (hospital, health center, clinic) or personnel (doctor or other trained personnel) during the month before the survey, as a percentage of total population.

Water sources, population not using improved: Calculated as 100 minus the percentage of the population using improved water sources. See water sources, population using improved.

Water sources, population using improved: The percentage of the population with reasonable access to an adequate amount of drinking water from improved sources. Reasonable access is defined as the availability of at least 20 litres per person per day from a source within one kilometre of the user's dwelling. Improved sources include household connections, public standpipes, boreholes with handpumps, protected dug wells, protected springs and rainwater collection (not included are vendors, tanker trucks and unprotected wells and springs).

Human development indicators

1. To lead a long and healthy life ...

Demographic trends

	1993	1996	1999	2001	2004	% change 2001-04	% change 1995-04
Total population	810,680	843,560	815,600	790,000	923,198	16.9	13.2
Sex ratio	..	1.03	1.03	1.02	1.04	2.0	1.0
Population structure							
age 0-4 (as % of total population)		18.0 [4]	16.2	16.8	16.4	-2.4	1.2
under age 15 (as % of total population)		43.5 [4]	41.1	45.3	43.2	-4.6	5.1
ages 15-64 (as % of total population)		54.8 [4]	57	51.9	51.1	-1.5	-10.4
ages 65 and above (as % of total population)		1.7 [4]	1.9	2.8	5.7	103.7	200.2
Dependency ratio		82 [4]	75	93	96	3.3	26.9
Total fertility rate (live births per women)		5.1 [4]	3.8	7.6 [1]	7.0	-7.9	84.2
Children ever born to women aged 15-49		4.8 [4]	4.5	4.2	4.9	-6.7	16.7
Child-woman ratio		69.3 [4]	66.0	77.7	69.6	17.7	-10.4
Average household size (number of persons)		4.9 [4]	4.7	5.1	4.7	-7.8	0.0

Longevity and health status

	1996	1999	2001	2004	% change 1999-01	% change 2001-04
Life expectancy at birth (years)[2]	53.9	56.0	57.4	55.5	6.5	-3.3
Probability at birth of not surviving to:						
age 40 (% of total population)[2]	41.1	35.6	32.2	27.3	-21.7	-15.2
age 60 (% of total population)[2]	93.8	83.2	76.6	67.6	-18.3	-11.7
Infant mortality rate (per 1,000 live births)[2]	100	86	80	90	-19.8	12.5
Child mortality rate (per 1,000 live births)[2]	67	57	50	46	-25.4	-8.0
Under 5 mortality rate (per 1,000 live births)[2]	184	159	144	136	-21.5	-23.6
Morbidity rate, monthly (%)	21	18	13	15 [3]	-38.1	15.4
Visit rate modern health facilities/personnel (%)	13	14	24	30 [3]	84.6	25.0

Notes: 1. Referring to 2002;

       2. Life expectancy at birth, probability at birth of not surviving to age 40 and 60, and mortality indicators are based on the linear extrapolation of several estimates from various data sources that are calculated using Coale-Demeny Model. See 'Notes on Statistics' for further explanation;

       3. Based on the rough estimation from the Office of Health Ministry Timor-Leste.

       4. Referring to 1995

       .. Refers to data not available.

Source :   UNDP (2002) Human Development Report Timor-Leste 2002; The 2004 Census of Population and Housing Timor-Leste.

2. ...to acquire knowledge ...

Education status

	1999	2001	2004	Average annual rate of change (%) 2001-2004	Average % point change 1999-2004
Adult literacy rate, total (as % of age 15 and over)	40.6	43.0	50.1	5.2	1.6
Female	33.9	42.8	43.9	0.8	1.7
Male	49.9	43.1	56.3	9.3	1.1
Urban areas	80.4	62.5	.. [1]	..	..
Rural areas	36.6	34.1	.. [1]	..	..
Gross enrolment ratio, total (%)	59.1	56.1	66.0	5.6	1.2
Female	57.9	60.3	63.6	1.8	1.0
Male	62.1	50.1	68.3	10.9	1.0
Urban areas	63.2	58.4	.. [1]	..	..
Rural areas	54.3	55.1	.. [1]	..	..
Net enrolment ratio, total (%)	45.6	41.2	46.3	4.0	0.1
Female	42.7	38.4	44.0	4.6	0.2
Male	48.5	44.9	48.6	2.7	0.0
Urban areas	49.1	47.5	.. [1]	..	..
Rural areas	40.2	38.1	.. [1]	..	..
Primary enrolment ratio (%)					
Gross	94.4	111.6 [2]	115.6	1.2	3.5
Net	74.2	76.2	78.3	0.9	0.7
Lower secondary enrolment ratio (%)					
Gross	63.9	62.4	59.4	-1.6	-0.8
Net	36.3	33.1	37.6	4.3	0.2
Upper secondary enrolment ratio (%)					
Gross	37.2	27.0	46.5	19.9	1.6
Net	20.4	17.6	19.9	4.2	-0.1
Tertiary enrolment ratio (%)					
Gross	5.1	3.9	6.6	19.2	0.3
Net	3.8	2.8	2.9	1.2	-0.2
Mean years of schooling [3]	3.8	3.5	4.1	5.4	0.1
Female	2.9	3.2	3.4	2.0	0.1
Male	4.5	4.5	4.9	2.9	0.1

Notes: 1. Information on urban or rural areas was not asked in household questionnaire used in the 2004 Census of Population and Housing Timor-Leste;
          2. Data exceed 100% as there were people beyond primary age enrolled in primary school;
          3. Data refer to the prime working age population of 20-54 years. .. Refers to data not available.
Source :   UNDP (2002) Human Development Report Timor-Leste 2002; The 2004 Census of Population and Housing Timor-Leste.

3. ...to have access to the resources for a decent standard of living...

Economic indicators

	1999	2000	2001	2002	2003	2004
GDP at current market prices, total (million $)	270	316	368	343	336	339
GDP at constant 2000 market prices, total (million $)	278	316	369	344	323	329
Real GDP growth (% change)	-35	13.7	16.5	-6.7	-6.2	1.8
GDP per capita (current $) [1]	331	406	466	413	383	366
GDP per capita (PPP $)	1054	885	967	871	775	732
Inflation rate	140	3	0	10	4	2.5
GDP by industrial origin at current market prices (million $)						
Agriculture, forestry and fishery	116.6	81.5	84.7	91.2	97.4	107.1
Mining and quarrying	2.7	3.7	4.0	3.3	2.7	2.8
Manufacturing	7.5	8.7	11.3	11.4	12.1	12.5
Electricity, gas and water	2.1	2.6	1.4	2.7	3.3	3.3
Construction	33.0	43.3	45.6	37.9	31.0	31.9
Trade, hotels and restaurants	15.1	24.7	26.3	24.5	25.1	25.4
Transport and communications	14.6	22.9	26.3	28.3	31.2	31.8
Finance, banking and business services	10.8	20.5	25.0	25.6	26.7	29.4
Public administration and defence	66.2	106.3	141.4	116.3	104.1	92.7
Personal and community services	1.6	1.9	1.9	2.0	2.1	2.1
GDP share by industry at current prices (% to total GDP)						
Agriculture, forestry and fishery	43.2	25.8	23.0	26.6	29.0	31.6
Mining and quarrying	1.0	1.2	1.1	1.0	0.8	0.8
Manufacturing	2.8	2.8	3.1	3.3	3.6	3.7
Electricity, gas and water	0.8	0.8	0.4	0.8	1.0	1.0
Construction	12.2	13.7	12.4	11.0	9.2	9.4
Trade, hotels and restaurants	5.6	7.8	7.1	7.1	7.5	7.5
Transport and communications	5.4	7.2	7.1	8.2	9.3	9.4
Finance, banking and business services	4.0	6.5	6.8	7.5	8.0	8.7
Public administration and defence	24.5	33.6	38.4	33.9	31.0	27.3
Personal and community services	0.6	0.6	0.5	0.6	0.6	0.6

Economic activity

	1999	2001	2004	Average annual rate of change (%) 1999-2004	Average point percentage of change 1999-2004
Employment structure by sector (as % of total workers)					
Agriculture	72	82	70	-0.4	-0.3
Industry	7	4	2	-21.7	-0.8
Services	22	14	28	5.2	1.1
Labour force participation rate	67	60	60	-2.3	-1.2
Urban areas	63	53	..	..	..
Rural areas	70	62	..	..	..
Unemployment rate, total (%)	5.8	5.3	8.9 [2]	8.9	0.5
Youth unemployment rate (%)	15.6	15.0	23.1 [2]	8.2	1.3
Status in employment (as % of total workers) [3]					
Self-employed	51	63	87	..	..
Contributing family worker	30	25	..	..	..
Employer	1	1	..	..	..
Paid employee	18	11	13	-6.3	-0.8
Intensity of worked hours (as % of total workers)					
Less than 25 hours per week	26	17	..	-8.4	..
25 to 44 hours per week	55	46	..	-3.4	..
45 hours and over per week	19	37	..	14.2	..

Notes:　1. Calculated on the basis of dividing GDP at current market prices with the estimated number of population in the mid of respective years;

2. Unemployment rate in 2004 included those looking for work and available to start work (open unemployment), plus those disguised unemployed (did not seek work due to unavailable job; Youth unemployment refers to the age of 15-24 years.

3. Industrial sector refers to three major categories: sector A (agriculture, forestry, fishing and hunting), sector M (mining and quarrying, manufacturing industry, electricity, gas and water, and construction), and sector S (including trade, restaurant and hotel, transportation, storage and communication, financing and business services, and public, personal and other services).

4. This figure includes self-employed and subsistent farming/fishing workers available in the 2004 Census.

.. Refers to data not available.

Sources:　UNDP (2002) Human Development Report Timor-Leste 2002; The 2004 Census of Population and Housing Timor-Leste; IMF Country Report No. 05/250, June 2005.

4. ... while preserving it for future generations...

Demographic pressures

	1993	1996	1999	2001	2004
Total population	810,680	843,560	815,600	790,000	923,198
Population density (persons/square kilometre)	55	57	55	54	62
Rural population (as % of total)	92	93	93	77	74
Household size (average number of persons)	..	4.9	4.7	5.1	4.7
Urban [1]	..	6.0	4.7	5.4	..
Rural [1]	..	4.8	4.7	4.7	..
Rural labour force working in agriculture (%)	..	79	..	89	..
Rural population with agriculture as major of income (%)	..	76	..	78	..

Land use

	1996	1998	2001	2004
Suitable land area for				
Agriculture (hectares)	..	..	600,000	600,000
Cultivation (hectares)	..	..	260,000	287,000
Cultivated area as % of total land area	..	..	43.3	47.8
Crop production				
Maize (metric tonnes)	106,616	58,931	69,000	70,175
Rice, Paddy (metric tonnes)	52,607	36,848	53,845	65,433
Roots and Tubers (metric tonnes)	44,000	38,000	40,000	43,000
Cassava (metric tonnes)	53,781	32,092	55,845	41,525
Sweet potatoes (metric tonnes)	15,681	11,989	24,705	26,000
Peanuts (metric tonnes)	3,335	4,669	1,468	4,000
Soybean (metric tonnes)	1,244	690	819	640
Total paddy production:				
Wetland areas (tonnes)	48,835	33,968	49,637	58,930
Dryland areas (tonnes)	3,772	2,880	4,208	6,503
Ratio of wetland to dryland production of paddy	13	12	12	9
Average yield of paddy				
Wetland areas (quintales per hectare)	28.04	28.18	..	29.23
Dryland areas (quintales per hectare)	16.65	16.25	..	16.03
Ratio of wetland yield to dryland yield of paddy	2	2	..	2
Total harvested area of paddy:				
Wetland areas (hectares)	17,418	12,054	..	19,800
Dryland (hectares)	2,266	1,772	..	4,321
Ratio of wetland to dryland harvested areas	8	7	..	5

Housing and living conditions

	1996	1999	2001	2004
Percentage of total households with				
Main floor of earth and or bamboo	70	65	73	67[2]
Urban	25.0	20.4	42.5	..
Rural	73.7	69.8	80.5	..
Main wall of bamboo	42	41	37	33[2]
Urban	21.4	21.8	13.5	..
Rural	43.7	43.0	43.7	..
Main roof of wood, grass and/or leaves	49	43	34	31[2]
Urban	12	8	16	..
Rural	53	48	38	..
Main lighting of electricity	23	30	23	27[2]
Urban	73	83	69	..
Rural	18	24	10	..
Own drinking water facilities	14	20	34	34[2]
Urban	47	41	43	..
Rural	11	18	32	..
Pipe and/ or pump for drinking water	24	28	40	40[2]
Urban	84	78	62	..
Rural	19	22	34	..
Own sanitation facilities	46	54	39	42[2]
Urban	69	78	67	..
Rural	44	51	31	..
Toilet facilities	11	14	29	30[2]
Urban	40	54	35	..
Rural	9	10	27	..
Sewerage or septic tanks	13	13	12	17[2]
Urban	53	41	38	..
Rural	9	9	5	..

Notes: 1. Information on urban or rural areas was not asked in household questionnaire used in the 2004 Census of Population and Housing Timor-Leste;

2. Rough estimation based on information from authorities (Ministry of Health, Public Work, National Directorate of Statistics)

3. Information on urban or rural areas was not asked in household questionnaire used in the 2004 Census of Population and Housing Timor-Leste

.. Refers to data not available.

Sources : UNDP (2002) Human Development Report Timor-Leste 2002; UNICEF (2003) Multiple Indicator Cluster Survey (MICS) Timor-Leste 2002;

The 2004 Census of Population and Housing Timor-Leste; FAO website http://fao.org/es/ess/top/country.jsp and http://faostat.fao.org/faostat/.

5. ...protecting personal security...

Personal security

	1996	1999	2001	2004
Probability at birth of not surviving to age 40 (% of cohort) [1]				
Female	39	33	30	26
Male	44	38	35	29
Adult illiteracy rate (as % of age 15 and above)	59.6	59.4	57.0	49.9
Poverty incidence				
Total number of poor people (thousands)	267.6	270.3	328.6	..
Head-count ratio (poor people as a % of total population)	32	30	40	..
Food share in consumption (as % of total consumption)	71	73	66	..
Gini coefficient	0.34	0.31	0.35	
Unemployment rate (as a % of total labour force) [2]				
Female	8.2	8.3	6.8	5.4
Male	3.6	3.9	4.6	8.3
Urban areas	14.6	13.8	12.4	..
Rural areas	4.6	4.7	3.3	..
Youth unemployment rate (as a % of total labour force) [2]				
Female	..	13.4	13.0	19.4
Male	..	17.7	17.2	26.4

Child security

	1996	1999	2001	2004
Under 5 child (age 0-4) immunized, total (%)	74	75	..	..
Underweight children under age five (%)	51	45	45	43[3]
Children in labour force (as a % of total labour force)	20	21	10	6
Female	18	19	10	7
Male	21	23	9	5
Urban areas	6	6	6	..
Rural areas	22	23	11	..

Notes : 1. Based on the linear extrapolation of several estimates from various data sources that are calculated using Coale-Demeny Model. See 'Notes on Statistics' for further explanation.

2. Unemployment rate in 2004 included those looking for work and available to start work (open unemployment), plus those disguised unemployed (did not seek work due to unavailable job; Youth unemployment refers to the age of 15-24 years.

3. Refers to year of 2002.

.. Refers to data not available.

Sources : UNDP (2002) Human Development Report Timor-Leste 2002; The 2004 Census of Population and Housing Timor-Leste.

UNICEF (2003) Multiple Indicator Cluster Survey (MICS) Timor-Leste 2002;

6. …and achieving equality for all.

Health equity

	1996	1999	2001	2004
Total population	839,719	779,567	790,000	923,198
Female population (as % of total population)	49.3	49.3	49.1	49.1
Female life expectancy at birth (years)[1]	55.5	57.7	59.2	60.1
Female longevity advantage[2]	3.2	3.5	3.6	3.5
Probability of females not surviving to 40 (% of total population)[1]	38.7	33.1	29.8	26.1
Maternal mortality rate (per 100,000 live births)	..	420	..	..
Births attended by trained health personnel (%)	23	30	..	37[4]
Urban areas	54	62	..	..
Rural areas	20	25	..	..
Females under age 5 mortality rate (per 1,000 live births)	172	147	132	102
Contraceptive prevalence for modern methods	19	20	8	6.7
Urban areas	30	27	9	..
Rural areas	17	19	8	..
Female-headed households (as a % of total households)	8.9	8.9	9.9	18.9

Education equity and economic equity

	1996	1999	2001	2004
Female adult literacy rate (as % of age 15 and above)	32	34	34	41
Female-Male gap [3]	66	68	70	77
Female gross enrolment ratio, total (%)	54	58	55	64
Female-Male gap [3]	93	93	97	94
Female net enrolment ratio, total (%)	38	43	38	44
Female-Male gap [3]	87	88	86	91
Female mean years of schooling (years)	2.9	3.2	3.0	3.4
Female-Male gap [3]	64	71	64	69
Economic equity				
Female labour force participation rate	53.4	52.4	39.6	51.5
Female-Male gap [3]	60	60	49	75
Females unemployment rate (as a % of total labour force)	8.2	8.3	6.8	5.4
Female-Male gap [3]	228	213	148	65

Notes: 1. Life expectancy at birth, probability at birth of not surviving to age 40 and 60, and mortality indicators are based on the linear extrapolation of estimates from various data sources calculated using Coale-Demeny Model. See 'Notes on Statistics'.
2. Female longevity advantage indicates the difference in life expectancy years between females and males. 3. Female-male gap is calculated by dividing female's figure with male's figure, 100 shows gender equality; [4] Referring to 2002.
.. Refers to data not available.

Sources : UNDP (2002) Human Development Report Timor-Leste 2002; The 2004 Census of Population and Housing Timor-Leste; UNICEF (2003) Multiple Indicator Cluster Survey (MICS) Timor-Leste 2002;