

National Human
Development Report

INTERNATIONAL TRADE AND HUMAN DEVELOPMENT LAO PDR 2006



INTERNATIONAL TRADE AND HUMAN DEVELOPMENT

LAO PDR 2006

The Third Lao PDR National Human Development Report

Committee for Planning and Investment
National Statistics Centre
United Nations Development Programme



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Foreword

The Lao People's Democratic Republic (PDR) is preparing to become an active participant in regional integration and globalization. Since it joined the Association of South-east Asian Nations (ASEAN) in 1997, its pace of involvement in regional activities has steadily accelerated. In the past few years, we have seen its growing roles in ASEAN affairs, hosting various conferences including the 10th ASEAN Summit in 2004, and the ASEAN Ministerial Meeting, ASEAN Regional Forum (ARF) and the ASEAN Inter-Parliamentary Organization (AIPO) General Assembly in 2005. Trade agreements with various partners and Normal Trade Relations (NTR) with the United States of America (USA) have expanded Lao products' horizons for increased exports.

The mining sector has already experienced spectacular growth of export earnings in 2005. By 2009, hydroelectricity generated from the Nam Theun 2 dam will be exported to Thailand, at the same time new hydroelectric dams are under construction or planned. The East-West and North-South corridors will transform the Lao PDR from a 'land-locked' country to a 'land-linked' country. The Government is now gearing up for its accession to the World Trade Organization (WTO) and has recently validated a Diagnostic Trade and Integration Study (DTIS) under the Integrated Framework (IF) process. In many ways, the Lao PDR is standing at a fork in its development path; it is time to consider which is the best path to take for sustainable growth, poverty reduction and human development.

In this context, I am most pleased to present to you the third National Human Development Report (NHDR) for the Lao PDR, which examines the relationship between human development and international trade. Since the first global Human Development Report (HDR) was launched in 1990, these flagship reports of UNDP continue to widen the intellectual frontiers of human development from both global and local perspectives. The HDRs share the single goal of putting people back at the center of the development process in terms of economic debate, policy and advocacy and help to shape a clearer path towards the achievement of the Millennium Development Goals (MDGs).

The Report shows that under the right conditions, increasing international integration and trade in the Lao PDR could play a vital role in the realization of the MDGs and in the country's graduation out of Least Developed Country status by 2020. However, as the report also elucidates, ensuring that trade leads to meaningful and sustainable improvements in people's lives is neither automatic nor guaranteed. Greater openness to trade offers significant opportunities for human development. However, it also has the potential to widen existing inequalities between urban and rural areas; between border and non-border districts; between villages with access to transport infrastructure and those without; between the rich and the poor and between men and women. We need to be mindful that as we embrace trade, trade will not embrace everyone equally, unless there is a concerted and strategic effort led by the Government and non-government institutions. In short, we cannot leave it solely to the market to ensure that the

benefits from international trade accrue to all and are equitably distributed. At the global level, the challenge also remains to build a trading regime that is not just more balanced and equitable but one that also actively combats poverty and promotes human development.

The Report also points out the lessons to be learned from the resource-based development path that other countries have taken. The share of mining and energy exports has risen from one-third of total exports in the early 2000s to one-half in 2005. This proportion is expected to rise in the years to come. Currently, the Lao PDR relies heavily on natural resource-based revenues. The export earnings from mining and hydroelectricity will raise national income and fiscal revenues, allowing the country to increase investment in education and health. However, excessive reliance on natural resources could confront the country with substantial risks and challenges, including adverse consequences for economic growth, employment generation, and environmental preservation. These challenges must be tackled before the so-called 'Dutch disease' effects set in, eroding the competitiveness of the Lao economy.

It is necessary for the Lao PDR to persevere with initiating and implementing the strategic measures and changes that will promote economic diversification in sectors, such as agriculture, manufacturing, tourism and garments. In this respect, the Report underscores the necessity of, amongst other things, increasing investments in education and vocational training institutions, strengthening the sectors that will generate employment opportunities for the rural poor, women, and young people, and development of efficient and transparent mechanisms to manage export revenues and public expenditure. Indeed, much progress is being made in laying the foundations for the Lao PDR to take full advantage of the new regional and global trade arrangements that it is entering into. However, still more needs to be done to ensure that development occurs equitably.

Finally, allow me to congratulate the project team at the National Statistics Centre (NSC) and the Committee for Planning and Investment (CPI) for taking the lead in preparing this NHDR and also for their commitment and expertise. My colleagues at United Nations Development Programme (UNDP) also deserve special thanks for their concerted efforts in working closely with the project team on all aspects of the NHDR project. The outcome, as you will see, is a very comprehensive account of how international trade currently affects the Lao people, how this may change in the future, and what the country needs to consider in order to ensure that trade benefits the poor, respects cultural diversity and enhances sustainable development.



Setsuko Yamazaki,
UNDP Resident Representative a.i.

Preface

In recent years, the Lao PDR has been gradually opening itself up to the outside world both economically - with increased foreign investment and private sector development - and socially. The flow of new investment, new technology and new ideas, has become an important engine of growth and social change. Standards of living have risen. There have been increases in life expectancy, decreases in maternal and infant mortality, and other improvements in the lives of ordinary Lao people. This Report on the impacts of international trade comes at an important time for the country and the region.

The country will soon complete most of the tariff reductions required by its membership in the ASEAN Free Trade Area (AFTA). Tariff on agricultural products are being reduced under the ASEAN-China Free Trade Agreement. Negotiations for membership in the WTO are underway. Lao exports are now increasing faster than imports. There may soon be a balance for the first time between imports and exports. The composition of Lao exports is also beginning to change. A much larger share of exports in the future will consist of minerals and electricity. All of these changes are affecting Lao people and the Lao economy.

East Asia has become a major growth engine of the world economy, in part because of international trade. But patterns of trade in the region are also changing. There is now more trade among the countries of East Asia than between East Asia and other regions of the world. Regional trade agreements are growing in number and overlapping. Negotiations are underway for regional trade agreements between ASEAN and India, the Republic of Korea and Japan. Many of these regional trade agreements will also affect Lao people and the Lao economy.

Discussions and opinions about the impacts of international trade and globalization seem too often to centre on two very different and singular points of view. One point of view is that almost all trade is good; it increases economic growth and economic growth is good for the poor. All countries should liberalize and open to trade immediately. The other point of view is that almost all trade can be harmful, particularly for the poor, if countries open up too quickly. Agriculture, important industries and the financial sector need protection. Domestic economic growth needs to come first. Liberalization should be careful and slow.

This Report on the impacts of international trade on Lao people and the Lao economy avoids these singular points of view. Instead it looks in detail at the impacts of each of the major exports and imports. The analysis is based mainly on new information gathered in field research and analysed by a team of researchers, most of them Lao.

The report also goes beyond the usual focus of trade impacts studies that mainly analyse impacts on economic growth. The report looks, in addition, at the impacts of international trade on poverty, employment, gender, culture and the environment. This

broader focus is fully consistent with the priorities of the government as reflected in the Sixth Five Year Plan (2006 - 2010), and also fully consistent with the broader view of development pioneered and advocated by the UNDP - the view that development should expand the capabilities, choices and quality of life of all people.

The Report finds that some exports and imports are beneficial. Others are less so. The big challenge is to assure, to the maximum extent possible, that international trade benefits the Lao people and helps to solve real life problems without creating new ones. Success will depend on good policy and on the commitment of government and other stakeholders to meeting the MDGs and goals of National Growth and Poverty Eradication Strategy (NGPES). With these objectives in mind, the Report ends with policy recommendations to reduce the negative impacts of international trade and increase the positive impacts.

This Report is the result of the cooperation between Lao and international researchers and contributing authors and we hope that this Report - published in both Lao and English - will help policy makers and other stakeholders improve the contributions of international trade to the quality of life of Lao people.

Finally we wish to thank the UNDP Lao PDR and the NSC for their valuable support and for providing necessary facilities during the entire process of producing this third NHDR.

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Samaychanh Boupha
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List of Abbreviations and Acronyms

ACMECS	Ayeyawady-Chao Phraya-Mekong Economic Cooperation Strategy Organization
ADB	Asian Development Bank
AFTA	ASEAN Free Trade Area
AISP	ASEAN Integrated System of Preference
ALGI	Association of Lao Garment Industry
ASEAN	Association of South East Asian Nations
ATC	Agreement on Textiles and Clothing
BOL	Bank of the Lao PDR
CBT	Community Based Tourism
CEPT	Common Effective Preferential Tariffs
c.i.f.	Cost, insurance and freight
CLMV	Cambodia, Lao PDR, Myanmar, Vietnam
COMTRADE	Commodity Trade Statistics Database
CPI	Committee for Planning and Investment
DGP	Department of General Planning
DOF	Department of Forestry
DOTS	Direction of Trade Statistics
EdL	Electricité du Laos
EHP	Early Harvest Program
EU	European Union
EUROSTAT	European Statistics Bureau
FDI	Foreign Direct Investment
f.o.b.	Free on board
FTA	Free Trade Agreement
FY	Fiscal Year
GDP	Gross Domestic Product
GL	General Exclusion List
GMP	Good Manufacturing Practice
GMS	Greater Mekong Sub-Region
GRID	Gender Resource Information and Development
GSP	Generalized System of Preference
HACCP	Hazard Analysis and Critical Control Path
HDI	Human Development Index
HDR	Human Development Report
HS	Harmonized System
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
ICT	Information and Communications Technology
ICP	International Comparison Program

IL	Inclusion List
ILO	International Labour Organization
IMF	International Monetary Fund
IP(R)	Intellectual Property (Rights)
JV	Joint Venture
LAICO	Lao Agro Industry Co. Ltd.
LDC	Least Developed Country
LECS	Lao Expenditure and Consumption Survey
LME	London Metal Exchange
LNCCI	Lao National Chamber of Commerce and Industry
LNLS	Lao National Literacy Survey
LNTA	Lao National Tourism Administration
LWU	Lao Women's Union
MAF	Ministry of Agriculture and Forestry
MCH	Mother and Child Health
MDGs	Millennium Development Goals
MEM	Ministry of Energy and Mining
MFA	Multi-Fibre Arrangement
MFN	Most-Favoured Nation
MIC	Ministry of Information and Culture
MICS	Multiple Indicator Cluster Survey
MOE	Ministry of Education
MOF	Ministry of Finance
MOIC	Ministry of Industry and Commerce
MOU	Memorandum of Understanding
MRC	Mekong River Commission
MTCP	Ministry of Transport, Construction, Post and Communications
NAB	National Advisory Board
NEM	New Economic Mechanism
NER	Net Enrolment Ratio
NERI	National Economic Research Institute
NGO	Non-Governmental Organization
NGPES	National Growth and Poverty Eradication Strategy
NSC	National Statistics Centre
NT2	Nam Theun 2 Hydro-Power Project
NTB	Non-Tariff Barrier
NTFP	Non-Timber Forest Product
NTM	Non-Tariff Measure
NTR	Normal Trade Relations

ODA	Official Development Assistance
PATA	Pacific Asia Tourism Association
PPP	Purchasing Power Parity
QRs	Quantitative Restrictions
R&D	Research and Development
RO	Rules of Origin
ROK	Republic of Korea
S&D	Special and Differential
SES	Socio-Economic Status
SL	Sensitive List
SMEs	Small and Medium-Sized Enterprises
SOEs	State-Owned Enterprises
SPS	Sanitary and Phyto-Sanitary Measures
STD	Sexually Transmitted Disease
TBT	Technical Barriers to Trade
TFR	Total Fertility Rate
TL	Temporary Exclusion List
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNESCO	The United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
US	United States
VAT	Value Added Tax
WHO	World Health Organization
WTO	World Trade Organization

Executive Summary

Since the decision in 1996 to join the ASEAN Free Trade Area (AFTA), the Lao PDR is committed to increasing international trade. There is no going back.

The increasing international trade is affecting the Lao economy, the employment of Lao workers, the role of Lao women, the education requirements of Lao children, the consumption patterns of Lao families, even Lao culture. The impacts will increase in the future.

This National Human Development Report looks at the multiple impacts of international trade on 'human development' in the Lao PDR. Human development puts the emphasis on people - on the quality of their lives, their education, skills and health, their environment, their choices, the prospects for their children.

The overall finding is that - on balance - the increasing international trade has benefited Lao people and Lao development. Recent economic growth has been equitable and pro-poor. The income distribution has improved. In addition to economic growth, international trade benefits human development via five 'pathways': cross-border trade, labour migration and remittances, employment, rural electrification, and improved information.

There are, of course, positive and negative impacts, both ways. Low levels of development and human development hurt trade. Low levels of education, persistent health problems, lack of an integrated national economy, weak infrastructure, a weak banking system, and problems of information and missing markets have impeded international trade and the competitiveness of Lao exports.

Some exports (manufactured exports, handicrafts, tourism, agricultural exports and labour exports) are labour-intensive, favourable to employment, to backward linkages, and to reduction of poverty and other improvements in human development. Agriculture is the most important sector, employing more people in the export trade and having the highest potential to enhance human development.

Many of these Lao exports benefit from regional trade agreements and from trade preferences from the Peoples' Republic of China (China), the European Union (EU), Japan and the Kingdom of Thailand (Thailand). World Trade Organization (WTO) membership would not improve market access for Lao exports and WTO accession under unfavourable terms could hurt human development.

Other Lao exports (minerals, timber, electricity, transit trade and over-flights) use much less labour and some pose threats to the environment. But these exports will also greatly increase the government budget, which can be used to enhance human development and reduce other impediments to trade.

Some imports (capital and intermediate goods) are vital for sustaining and increasing exports. Some create employment in cross-border trade and retail sales, while some improve the quality of life and access to information. Some imports - particularly Thai television - may threaten Lao language and culture. And some imports, as AFTA tariff reductions are completed, may pose serious competitive challenges to certain Lao manufacturing sectors, for example of cement, roof panels and motorcycles.

The composition of Lao exports is changing rapidly. Exports of minerals and electricity will increase from 20 percent of Lao exports in 2004 to more than half and perhaps even two thirds of all Lao exports in 2010. The more labour-intensive exports will lose relative shares but could still grow rapidly with the right policy and support.

Good policy is important for increasing the positive benefits of international trade and reducing the negative impacts. Some suggested changes will cost the government nothing and may save money. These suggestions include: fewer restrictions on exports and imports, leaving informal patterns of cross-border trade alone, normalizing Lao labour exports to Thailand, and taking it slow on WTO entry. Suggestions that require government expenditures from its trade increased revenues include: education and human resource development - the top priority - support for solving information problems and supply constraints in agriculture and for obtaining organic certification in major export markets, support for improving the productivity and competitiveness of other labour-intensive exports, and improving the quality of Lao television.



Chapter 1

INTRODUCTION

International Trade and Human Development

Increasing trade, openness and integration of the Lao PDR with the regional and global economies is now inevitable. Exports and imports will increase rapidly.

The country is a member of the ASEAN¹ Free Trade Area (AFTA). It has trade preferences from Australia, the Peoples' Republic of China (China), Europe, Japan, the Federation of Malaysia (Malaysia) and the Kingdom of Thailand (Thailand). It has bilateral trade agreements and Normal Trade Relations (NTR) with the United States of America (US). Agricultural trade with China and ASEAN under the Early Harvest Program (EHP) of the ASEAN China Free Trade Agreement (FTA) has begun. And the Sixth Five Year Development Plan (2006-2010) of the Lao Government places special emphasis on increasing international trade - particularly exports.

Improved roads and bridges to facilitate trade and transit trade will be completed in 2006 and 2007. The country will complete most of its AFTA tariff reductions by 2008. It is expected to join the WTO by 2010 or earlier. The ASEAN China FTA will be fully effective in 2015.

The increasing international trade is affecting the Lao economy, the employment of Lao workers, the role of Lao women, the education requirements of Lao children, the consumption patterns of Lao families, even Lao culture. These impacts will increase in the future.

This National Human Development Report (NHDR) looks at the multiple impacts of international trade on 'human development' in the Lao PDR. Human development puts the emphasis on people - on the quality of their lives, their education, their skills and health, their environment, their choices, and the prospects for their children. People are seen as actors and agents of development, not as subjects or obstacles. Enhancement of all people's capabilities, choices and quality of life is the goal of human development. To the maximum extent possible, international trade should contribute to that goal.

Under the right circumstances, a small open economy can benefit from international trade. But the benefits depend on how well people and firms are able to respond to new opportunities and new competition. The benefits depend also on the composition and terms of trade, the quality, consistency and implementation of government policy and the policies of trading partners. And a small open economy is particularly vulnerable to shocks and contagions that threaten development, such as the Asian financial crises of 1997-1999.

1 - The Association of South East Asian Nations comprising the Federation of Malaysia (Malaysia), the Republic of Singapore (Singapore), the Kingdom of Thailand (Thailand), the Republic of Indonesia (Indonesia), the Republic of the Philippines (the Philippines), Negara Brunei Darussalam (the Sultanate of Brunei), the Socialist Republic of Vietnam (Vietnam), the Union of Myanmar (Myanmar), the Kingdom of Cambodia (Cambodia) and the Lao People's Democratic Republic (the Lao PDR).

The national objectives are to sustain and increase broad-based economic growth, to eliminate mass poverty, to meet the Millennium Development Goals (MDGs) and to graduate from least developed country (LDC) status by 2020. The National Growth and Poverty Eradication Strategy (NG-PES) and expanded exports are central features of the 2006-2010 Five Year Development Plan.

To reach these goals, the nation faces special challenges because of its geography and levels of development. But the challenges can, of course, create opportunities as well.

The Special Circumstances of the Lao PDR

Geography, Neighbours, and the Greater Mekong Sub-Region (GMS)

The Lao PDR is a landlocked country with a population of 5.6 million (Population and Housing Census, 2005) and an area the size of the United Kingdom. The population is 23 percent urban, 77 percent rural and ethnically diverse. The overall population density is 24 people per square kilometre. In all of East Asia, only Mongolia has a lower density.

The Lao PDR is classified by the United Nations (UN) as a 'least developed country' (LDC), one of four in South East Asia. The others are Cambodia, Myanmar, and Timor Leste. An LDC is defined by low levels of per capita income, low levels of human resource development and lack of economic diversification.

Per capita income in the Lao PDR in 2005 was US\$ 491 (CPI, 2005). Only 27 percent of the population of 15 and over has completed more than a primary education and for women the proportion is only 22 percent. Seventy seven percent of the labour force is in agriculture (CPI, 2005) and 60 percent of farms still produce mainly for subsistence, not for the market (MAF, 2005).

In addition, although roads are being improved, the national economy is highly fragmented, with food in surplus areas unable to be moved to deficit areas. In certain instances, it is cheaper to buy imported goods than to buy from distant Lao suppliers. Some Lao suppliers sell successfully in local markets because transport costs of lower priced products from other provinces and imports are too high. And provinces still impose charges on movement goods across their borders.



Workers discharging freight from China in Hoauy Xay, Bokeo Province

All international trade in the Lao PDR - except air freight - is cross-border trade and 50 percent of the Lao population now lives in border districts, four percent more than ten years ago. There has been internal migration to the border districts. In these districts there are a total of 13 international check points, 12 domestic checkpoints and 22 traditional checkpoints where cross-border trade takes place. Trading opportunities increase income, with average household incomes in the border districts higher than the national average. The population apparently wants access to those opportunities.

The Lao PDR is still the most forested country in South-East Asia, with 41.5 percent coverage; however forested areas have been declining (MAF, 2005). The terrain ranges from low land plains along the Mekong River and alluvial plains along tributary rivers, to hills, upland plateaus, and mountains ranging to 3,000 metres in altitude. Seventy percent of the country is mountainous. Only six percent of the total land area is permanently used for agriculture - half for crops and half for pasture. Shifting cultivation still occurs on about 30,000 additional hectares with fallow periods of varying duration.

The Lao PDR is at the centre of the GMS, consisting of the Kingdom of Cambodia (Cambodia), the Lao PDR, the Union of Myanmar (Myanmar), Thailand, the Socialist Republic of Vietnam (Vietnam), and the Yunan and Guangxi provinces of China. The Lao PDR is the only country bordering all the other countries in the sub-region. Its longest borders are a 2,000 kilometre eastern border with Vietnam, and a 1,800 kilometre western border with Thailand. It has shorter western and northern borders with Myanmar and China, and a southern border with Cambodia.

Except for Cambodia, its neighbours have large populations and high densities. Except for Myanmar, they are all growing very fast economically - at rates of six to nine percent per year, among the highest rates in the world economy.

The GMS has been the focus of large investments from the Asian Development Bank (ADB) and other donors to improve roads, transport and other infrastructure. These road projects have gradually evolved into 'development corridors' or 'eco-

economic corridors' with complementary activities to promote trade and other development. The GMS 'corridors' passing through the Lao PDR are:

- An east-west corridor that begins at Mawla-myine, Myanmar on the Andaman Sea, crosses Thailand, the Lao PDR, Vietnam, and ends at Da Nang on the South China Sea in central Vietnam. The east-west corridor will also have connections to the Cambodian port of Sihanoukville on the Gulf of Siam.
- A north-south corridor connecting Kunming in Yunan Province, with the Lao PDR and Thailand. This corridor will have a connection to the Cambodian port of Sihanoukville on the Gulf of Siam. The north-south corridor will also have access to a second east-west corridor connecting Thailand and Cambodia, with Ho Chi Minh City and the other southern Provinces of Vietnam.

These corridors - which bypass the capital Vientiane - are shown on the following map (next page).

The other major infrastructure projects in the GMS have been in energy production and promotion of Information and Communications Technology (ICT).

The ADB, the World Bank (WB) and private companies have financed the building of hydro-power projects in the Lao PDR. Initial successes have led to many other projects now under construction with multilateral support in some cases and with bilateral official development assistance (ODA) and foreign direct investment (FDI) in others. Electricity exports from the Lao PDR to Thailand have increased to become one of the country's largest exports. These will eventually also go to Vietnam and perhaps to Cambodia and China. Integration of electricity grids in the sub-region is now underway. This will improve the stability and reliability of power, and facilitate further power exports and power sharing throughout the sub-region.

Finally, a fibre optic 'backbone' to improve ICT services throughout the sub-region is also underway. This has already been supplemented by FDI in the Lao PDR to improve ICT services including cable and satellite television, land-line connections and mobile phone coverage.



Most of the economic corridors are well on the way to completion, with final completion dates in 2006 and 2007. As construction has proceeded, many complementary activities have been supported by the ADB and bilateral donors to enhance development along the corridors and to increase their positive impacts and the impacts of the other projects. These activities include:

- Promotion of tourism in the GMS, which has grown rapidly even with setbacks from Severe Acute Respiratory Syndrome (SARS). Visa waivers for all ASEAN tourists in the sub-region are now provided. Tourists from Asia and the Pacific are among the largest number of visitors, and in some countries the largest to the GMS countries (PATA, 2004). Single visa acceptance to all GMS countries for tourists outside ASEAN is under consideration.
- Trade facilitation activities include training, capacity building and other human resource development projects, pilot projects to simplify customs clearance procedures along the road corridors and trade concessions offered under the ASEAN Integrated System of Preferences (AISP) to some of the GMS countries.
- Cross-border environmental monitoring and information systems and a four-party agreement on navigation on the upper Mekong River.
- Support from the ADB and other donors for constructing rural and feeder roads to connect previously remote communities to the road corridors.
- Support for prevention of HIV/AIDS and other communicable disease control, and for control of trafficking and drug smuggling to minimize some of the potential negative impacts of enhanced roads, transport and trade.

For the first time in its history, the Lao PDR will soon be land-linked not land-locked. The Republic of Singapore (Singapore) and Malaysia will be better connected to the Lao PDR via the existing infrastructure in Thailand. Exports from the Lao PDR will have greatly improved access routes to markets and ports in South East Asia for exports destined for South and North East Asia, South Asia and beyond, and for imports from ASEAN and elsewhere needed for more rapid and comprehensive economic growth. Costs for access to the sea may also drop, as there may be competition between Cambodia, Myanmar, Thailand and Vietnam to service Lao exports.

Recent research also shows that the GMS road and other projects have important direct effects on reducing poverty, enhancing human development and attaining the Millennium Development Goals (MDGs).² The GMS road projects will greatly increase transit trade through the Lao PDR to other countries in the region and increase revenues from transit fees. Of course, the roads may also increase illegal exports (such as timber) and negative imports such as drugs and contagious diseases.

Population and Employment

Currently, Lao women have, on average, 4.8 children. Compared to Thailand and Vietnam (Total Fertility Rate (TFR) of 1.9 and 2.3 children, respectively), the total fertility rate in the Lao PDR is one of the highest in South East Asia. Table 1.1 shows TFR rates in other ASEAN countries and in China.

The most important comparisons are with the countries that border the Lao PDR. The biggest differences are between the Lao PDR where the labour force is growing rapidly, and Thailand and China where labour force growth is now slowing and the TFRs have dropped below the replacement level.

2 - Improved roads reduce income poverty directly by providing the poor with access to improved and lower cost agricultural inputs, better access to markets and better access to alternate employment (ADB, 2004). The effect is particularly strong when rural and feeder roads are built, as they have been in the GMS, to connect previously isolated communities and peoples to the road corridors, to employment and trade opportunities. Rates of return of 50 percent and more have been estimated for rural and feeder roads in studies in Asia and the Pacific (van de Walle, 2000, Jacoby, 1998). Perhaps more important for the MDGs that are lagging in the Lao PDR, the ADB research also found that these road improvements increase access to information, and access to and use of health services and enrolments in education. In particular, information about the availability and importance of Mother and Child Health (MCH) services and lower time and travel costs to attain MCH services can reduce maternal and infant mortality, and - together with higher incomes - improve child nutrition (ADB, 2004). The research also found that improved roads and transport were associated with "increases in school enrolment especially of girls" and with improvements in poor people's "safety, social interaction and security, even marriage prospects" (ibid.).

Table 1.1: Total Fertility Rates, 2000-2005

Country	Total Fertility Rate
Lao PDR	4.8
Cambodia	4.8
Philippines	3.2
Malaysia	2.9
Myanmar	2.9
Vietnam	2.3
Thailand	1.9
China	1.8

Source: UNDP-HDR, 2005

Almost 80 percent of the Lao population still lives in rural areas. The rural TFR rate has been close to five and has recently begun to decrease. The urban TFR rate is now below three. Urban households are increasingly having fewer children in line with ASEAN trends. Thus, most of the population growth in the Lao PDR is occurring and will occur in the rural areas.

Table 1.2 shows the projected growth of the labour force and the school age population, up to

the year 2020. The labour force is projected to increase by 1,325,000 workers or nearly 45 percent in the next 15 years. The school age population is projected to grow by 753,950 potential students, also by 45 percent.

The fact that most of labour force growth will occur in the rural areas presents a number of challenges. Additional employment opportunities in agriculture are limited. Education in rural areas is less available and of lower quality than in urban areas. Over 40 percent of children in rural areas are malnourished and where severe this can impair cognitive abilities. Rural health services are sub-standard to those in urban areas.

The children who will enter the labour force between 2005 and 2020 have already been born, so while the rural TFR has begun to come down, that will not change the number of new entrants to the labour force until after 2020. Finding productive work for all in the Lao PDR will be a big challenge. In fact, it is even bigger than it looks. There are currently 200,000 to 300,000 Lao workers in Thailand - mostly from rural areas. If jobs are eventually to be found back in the Lao PDR for these migrants, then 1.5 to 1.6 million jobs will need to be created by 2020.

Education and Human Resource Development

The population growth and the limited employment options in subsistence agriculture pose a special challenge for education.

Table 1.2: Projection of the Labour Force and School Age Children, 2005 - 2020

	2005	2010	2015	2020	% Increase 2005-2020
Labour Force	2,955,633	3,344,028	3,783,461	4,280,638	44.8
*School Age Children	1,681,811	1,902,816	2,252,860	2,435,765	44.8

Source: National Statistics Centre *Age group 6 to 15



Students after school walking home

There is solid international evidence that investment in people pays off. In China, for example, it is estimated that investment in people accounted for more than a third of the economic growth between 1978 and 1995. In addition, research shows that it is preferable for investment in human resources to lead, and not lag, other investments and development initiatives. Indeed, this was the pattern in the 1960s and 1970s in Hong Kong SAR, the Republic of Korea (ROK), Singapore, Taiwan Province of China, and in the eastern provinces and cities of China (ADB, 1997, Birdsall et al., 1995, World Bank, 1993, McGinn et al., 1980). In contrast, investment in human resource development in the Lao PDR is lagging, not leading, the development process. It would need substantial improvements in enrolment and quality, even if population growth was slow. Table 1.3 shows that only four percent of the population aged six and over have completed primary and secondary school, and that there are wide inequalities between the education attainment levels of men and women.

There has been some recent progress. In 2005, the net enrolment ratio in primary schools reached 86

percent. Yet only 62 percent of students entering grade one completed full primary schooling. Most seriously, the current attainment levels of the labour force are below critical thresholds found in international research.

- **Agricultural Productivity:** In international research, four to six years of education is the minimum threshold found necessary for increases in agricultural productivity. Education of rural women to the threshold increases the productivity of all agricultural inputs.³ In some countries, the agricultural productivity effects of education occur at up to eight years of attainment, because of low education quality. The research suggests that the key is the average number of years of schooling it takes for solid attainment of literacy and numeracy skills. Literacy and numeracy enable farm households to adopt innovations more easily, to better cope with risk and respond to market signals and other information. These households may also have better access to credit and a better chance of obtaining more secure land titles. As shown in the table 1.3, only 40 percent of the Lao

3 - The author used research by Foster et al., 1994, Phillips, 1994, King et al., 1993, Jamison and Lau, 1982.

Table 1.3: Highest Level of Education Completed - Population Aged 6 and Over, (percent) 2002-2003

Population Group	None	Some Primary	Completed Primary School (6 years)	Some Lower Secondary	Completed Lower Secondary (total 9 years)	Some Upper Secondary	Completed Upper Secondary (total 12 years)
Total ≥ 6	23.3	33.9	15.4	8.6	7.4	2.8	3.6
Females ≥ 6	31.0	32.4	14.4	7.2	6.1	2.3	2.7
Males ≥ 6	15.4	35.3	16.5	10.0	8.8	3.3	4.4

Source: LECS 3 (Table 4.14)

population has completed more than four to six years of education and this average is likely to be lower in rural areas. Lower educational attainment levels mean lower overall agricultural productivity. And agricultural productivity is indeed very low at just US\$ 0.13 per hour worked (LECS 3).

• **Women's Status, Fertility Decline, Child Health and Education:** In international research, six to eight years of education of women is the minimum threshold found necessary for changes in women's status, fertility decline, improvements in infant and child health and future educational attainment of children (King and Hill, 1993). In some countries the threshold is higher. The key is the threshold at which labour market opportunities for women are disproportionately enhanced, significantly increasing the income earning capacity of women. The related effects include higher status and enhanced sense of efficacy, later age of marriage, greater success and bargaining power in the 'marriage market', greater bargaining power in the household after marriage, lower fertility, and high educational and career expectations of children, both girls and boys. Only 33 percent of Lao women have completed six or more years of education and this share is likely to be

significantly lower in rural areas. In part for this reason, the rural TFR remains very high.

• **Increased Trainability and Productivity in Industry:** There is less consensus, less research, and more controversy about an industrial and services productivity threshold, analogous to the agricultural productivity threshold. However, the available research suggests that completion of nine to twelve years of education (lower to upper secondary) is associated with increases in industrial productivity. The skills associated with this threshold appear to be good cognitive and innovative thinking skills, and flexibility to adapt to changing technology and to acquire new skills and knowledge (trainability). Attainment of these levels is clearly associated with increased probability of employment in dynamic sectors of an economy.⁴ As indicated in Table 1.3, very few workers (14 percent) in the Lao PDR have completed even lower secondary school.

Lao educational attainment lags behind the thresholds identified in international research. This poses a serious challenge to the competitiveness of Lao exports and of domestic goods and services, which need to compete against imports, as the various trade agreements are

4 - The authors used research by Blomstrom et al., 1994, Rodrik, 1994, Myers, 2001, Myers and Sussangkarn, 1992, Knight and Sabot, 1990, McGinn et al., 1980.

implemented. Thus there will need to be careful design of human resource development programmes across all sectors. These will need to include worker upgrading programs in industry and service sectors and extension programs in agriculture to make up for the low educational attainment of men and women in agriculture.

Human resource development is the most serious challenge the country faces. There will need to be both up-grading of the skills of the existing labour force, and improvements in the enrolment, retention and quality of education of Lao children. Otherwise, the critical shift from a natural resource-based economy to a human resource-based economy could be delayed for a generation or longer. The mineral export royalties and electricity export taxes will significantly increase the government's revenue and will provide an important opportunity to increase investments in education and training of Lao people.

Health

There are many interactions between health status and education, and between health and poverty. Persistent illness of adults reduces labour productivity, household standards of living, and household capacity to make social investments such as keeping children in school. Malnutrition and ill health of children reduce school attendance, performance and increase repetition, desertion, and failure. Increased education and training, particularly of poor women, improves adult and child health, increases demand for education and enhances children's success in school. Overall, educated people tend to be healthier, and healthier people tend to be better educated. Broad-based education programmes increase demand for health services, and receptiveness to and understanding of prevention.

The quality and availability of the health care system in the Lao PDR are still relatively limited, particularly in rural areas. The maternal mortality rate - an important indicator of the availability and quality of health services - is 350 per 100,000 live births (CPI, 2005). Malaria and dengue fever are endemic. In the 2002-2003 household survey, 56 percent of the population reported health

problems that disrupted work. In the most remote rural areas, 63 percent reported such problems (LECS 3).

Immunization coverage is now close to 100 percent, but access to other preventive and curative services is still limited particularly in rural areas. Twenty percent of the rural population is more than 30 kilometres from a hospital, and 29 percent is more than ten kilometres from the nearest health centre (LECS 3). And one fifth of the rural population that reported an illness disrupting work and needing treatment did not seek care because of distance and/or because the care was "too expensive".

Most seriously is that in 2000, 40 percent of children were still malnourished. Malnutrition of children not only reduces school enrolment and performance but it can also permanently reduce cognitive ability thus compromising the future human development of the next generation.

The Environment

While the Lao PDR is still the most forested country in South East Asia, with 41.5 percent coverage (MAF, 2005), the coverage is down from 47 percent in 1992. The remaining forests are threatened by continued logging, agricultural expansion, and large hydro-electricity projects. The loss of forests can lead to loss in biodiversity, erosion and damage to watersheds, reduced fisheries and loss of livelihoods, particularly the collection of non-timber forest products (NTFPs) that are an important source of income for the poor, especially for women and children who do most of the collecting. NTFPs are also an important export.

Other potential threats to the environment come from increased mining and mineral exports, from unplanned urban growth, and from increasing solid waste and other effluents from cities and industry.

Financial Situation and the Business Environment

Macro-economic stability and fiscal discipline are important for attracting investments from other countries and for sustained economic growth with equity. Inflation is often a heavy 'tax' on the poor.



Fishermen making a new boat in front of a hydropower dam near Ban Kengbit, Bolikhamsay Province

The national income accounts show a large balance of payments deficit and a large fiscal deficit, made up by FDI and ODA. Indeed, the Government currently depends on ODA for more than 60 percent of its investment budget.

The state banking system is still weak and burdened by non-performing loans to state-owned enterprises (SOEs). The state banks need to be put on a much more commercial footing. They need to improve their ability to assess risk, attract capital by paying market rates for deposits, and redirect capital to the sectors and businesses where productivity and returns are highest. Many Lao private firms without any FDI have limited or no access to credit. As a result some of these firms are unable to invest enough and remain too small, unable to take advantage of economies of scale, less able to compete with imports, and less able to make investments to protect the environment.

Finally, although the private sector in the Lao PDR is steadily growing, the required procedures are complex and still open to the discretion of responsible officials (Mallon, 2005). In particular, the time required to start up a new business is still very long - an average of more than 190 days - and also expensive. These impediments discourage private sector development.

Poverty and Income Distribution Levels

While there are serious challenges, there are also real signs of progress. Recent economic growth has been steady at six percent and above. Income poverty by three measures fell between 1997-98 and 2002-03 in both rural and urban areas. Most importantly, severe poverty dropped by 28 percent, the income distribution improved and the Gini coefficient⁵ decreased. The recent growth has been equitable and pro-poor (see table 1.4).

5 - The Gini coefficient measures the distribution of income. Zero represents perfect equality (everyone has the same income) and 1 represents total inequality (one person has all the income).

Table 1.4: Poverty and Income Distribution 1997-2003

	Headcount Poverty Rate %	Poverty Gap %	Severity of Poverty %	Gini Coefficient
Lao PDR				
1997-98	39.1	10.3	3.9	34.9
2002-03	33.5	8.0	2.8	32.6
Rural				
1997-98	42.5	11.4	4.4	32.1
2002-03	37.6	9.2	3.2	30.3
Urban				
1997-98	22.1	4.9	1.7	39.7
2002-03	19.7	4.1	1.3	34.8

Source: Richter et al., 2005

Levels of Human Development

The positive economic trends are matched by improvements in human development.

The UNDP measures human development with the Human Development Index (HDI). The HDI is based on three equally weighted variables: life expectancy at birth, a combined measure of literacy and education enrolment, and per capita income in purchasing power parity (PPP)⁶.

Because of problems with data availability and the need for simplicity, the HDI is not a complete measure of human development. It has direct measures for health and education and uses income per capita as a measure of the standard of living and degree of choice. However, it does not

directly measure the quality of life, the extent of opportunity, choice, and creativity; the prospects for women and children; the value of community, culture, and leisure; the extent of political and cultural freedom, or the quality of the environment.

As the concept of human development has evolved and broadened, the UNDP has proposed and tested additional indices so that policy and attention will not focus only on education and health - for example the Gender Empowerment Index, the Gender Development Index, and the Human Poverty Index. However, only the HDI can be calculated with the available Lao statistical information.

Based on that information, the national HDI value for the Lao PDR in 2002 was 0.557, whereas the HDI calculated with international data of the same year was 0.534 (cf. Table 1.6)⁷. With the

6 - Some critics have argued that limiting the HDI to only these three dimensions, and giving equal weights, biases the index too much towards GDP per capita in PPP.

7 - For an explanation on discrepancies between HDIs calculated with national and international data, please refer to the Technical Note to the Lao PDR National HDI in the Annex section of this report.

Table 1.5: Provincial HDI Calculations, 2002

Indicator / Provinces	Life Expectancy at Birth (Years)	Adult Literacy Rate, Age 15+ Years (%)	Combined Gross Enrolment Ratio for Primary and Secondary Education (%)	Private Consumption, Investment and Government Expenditure per Capita (PPP US\$)	Human Development Index (HDI)	
					Value	Rank
Source	CPI-DGP 2002	LNLS 2001	MOE 2001-02	NSC 2003		
Vientiane Capital	63	90.2	55.3	2,516	0.652	1
Champasak	59	83.0	47.1	1,469	0.575	2
Vientiane Province	59	74.5	58.9	1,606	0.574	3
Bolikhambxay	55	76.3	57.9	1,356	0.546	4
Khammouane	59	66.7	50.8	1,448	0.542	5
Xayaboury	54	74.3	49.7	1,513	0.533	6
Xieng Khouang	57	70.3	58.4	1,100	0.532	7
Attapeu	57	73.2	40.8	1,290	0.528	8
Savannakhet	59	64.1	43.8	1,148	0.516	9
Saysomboun Special Region	56	65.8	41.9	1,338	0.509	10
Sekong	57	66.6	41.9	1,143	0.508	11
Bokeo	57	59.6	48.2	1,198	0.502	12
Luang Prabang	56	57.7	44.4	1,377	0.496	13
Luang Namtha	58	48.2	44.8	1,462	0.489	14
Oudomxay	60	55.3	39.4	931	0.485	15
Houaphanh	56	57.4	46.6	1,077	0.484	16
Phongsaly	61	46.5	34.3	942	0.466	17
Saravanh	59	47.1	38.9	889	0.458	18

Note: These HDI calculations and rankings are first estimates. They are not complete, nor completely accurate. They are subject to the following reservations. Life expectancy is estimated from 1995 data. The tertiary enrolment ratio is set at zero because of a lack of information on enrolments at that level. Private consumption, investment and government expenditures per capita are used to estimate provincial GDP per capita (in US Dollar PPP). Thus the estimated HDI values for the provinces should be viewed and interpreted with caution. For a full description of the limitations and sources, please see the Technical Note for this chapter at the end of the Report.

continuing growth of GDP and improvements in school enrolment and health since 2002, the HDI value has increased rapidly from the 2002 level to 0.545 in 2003 (international data). But even the 2002 national calculation places the Lao PDR in the 'Middle Human Development' category - 132nd rather than 135th out of 177 countries - ahead of the Kingdom of Bhutan (Bhutan), Papua

New Guinea and Myanmar - in the UNDP 2004 Human Development Report.

The 2002 national data were also used - for the first time - to calculate the HDI by provinces.

The provincial HDI calculations are subject to a number of reservations and limitations. In particu-

lar, information on enrolment in higher education by provinces is not available. To calculate the HDI, enrolment in higher education was set at zero in all provinces. The resulting HDI values are lower for provinces with higher education institutions than they otherwise would be if the information was available⁸.

But even with this downward bias, the HDI values for Vientiane Capital, Champasak, and Vientiane province are above the Lao national average HDI in 2002. The value for Vientiane Capital at 0.652 is at the level of Egypt and South Africa in the 2004 global Human Development Report.

What is perhaps more interesting is that the differences among the provinces are not, in fact, very large. Eleven of the 18 provinces are in the Middle Human Development Category with HDI values above 0.5. The rest are in the Low Human Development Category, but not by much. All are doing well by at least one component of the index.

For example, Saravanh - the lowest ranked province by HDI value has a level of life expectancy at birth as high as Champasak and Vientiane Province, ranked 2nd and 3rd by HDI values. Phongsaly, the 17th ranked province by HDI has the 2nd highest life expectancy in the country after Vientiane Capital. Luang Namtha ranked 14th by HDI, has the 4th highest estimated per capita income in PPP. And Xieng Khouang, ranked 7th by HDI, has the highest gross enrolment ratio in education in the country, higher even than Vientiane Capital.

These findings are fully consistent with the pattern of economic growth between 1997 and 2003 and the improving distribution of income. It is clearly important for human development in the future that these trends in the pattern of growth and distribution continue.

Past trends in human development - changes over the years in the Lao HDI - are available only from the UNDP global Human Development Reports. These HDI numbers are shown in the following table.

Table 1.6: Trends and Levels of Human Development in the Lao PDR 1985 - 2003

Year	HDI Value	% Increase per Year
1985	0.423	N/A
1990	0.450	1.3
1995	0.487	1.6
2000	0.522	1.4
2002	0.534	2.3
2003	0.545	2.1

Sources: UNDP HDR 2004 and 2005; and see the Technical Note to this chapter at the end of the Report.

The HDI calculations by the UNDP need to be used with some caution⁹. But together with the pattern and distribution of economic growth, the steady increase in the HDI shows what could be called 'an early East Asian pattern'.

The rate of change per year in the HDI shows a dip during the Asian financial crises and an acceleration thereafter¹⁰. In the 2005 UNDP Global Report, the Lao PDR is ranked ahead of the People's Republic of Bangladesh (Bangladesh), Nepal, Bhutan and the Islamic Republic of Pakistan (Pakistan).

8 - Please see the Technical Note at the end of the Report for a full description of the limitations.

9 - Although common indicators are used across countries, the quality of underlying data may vary significantly.

10 - There was a change in the PPP estimate used in the 2003 UNDP calculations. This had the effect of slightly lowering the HDI value for the Lao PDR that year and thus the rate of improvement between 2002 and 2003.

Box 1.1: The 'East Asian Pattern' of Development

The best examples of equitable growth anywhere in the world are the East Asian newly industrialized countries (NICs) and middle-income countries. Poverty was reduced in one generation by more than two thirds and extreme poverty in several of the countries was eliminated entirely. Most of the NICs started growth with relatively equitable distributions of income and assets, more equitable in the ROK and Taiwan Province of China, less so in Malaysia and Thailand. The Lao PDR has a relatively equitable distribution of income - a Gini coefficient of 0.33. All of the NICs benefited from trade, particularly export-led growth. The Lao PDR, in the Sixth Five Year Plan, has already made that choice. There are seven major elements of the East Asian pattern.

- Macro-economic stability and financial system development; broader availability of savings deposits and credit; positive real interest rates.
- Improved agricultural productivity including: applied research, extension services, market information, improved infrastructure and reduced taxation of agriculture particularly export taxes.
- Early and high investment in health and education. This was supplemented as incomes increased by very strong private household investments in education of their children.
- An initial period of labour exports and remittances, until fertility decline reduced the growth of the labour force and economic growth increased domestic employment opportunities.
- Processing of primary products and other industry to meet domestic and export demand, in small to medium sized enterprises (SMEs) and larger firms. Tourism was an important source of export growth in some of the countries, particularly Thailand and Malaysia.
- Relatively free labour markets and limited barriers to entry favoured appropriate factor proportions, fostered competition and quality improvements in industry and services, and drew upon and nurtured a pool of entrepreneurial talent.
- Promotion of FDI for new technology and skills and to supplement for limited educational attainment in some countries.

This pattern led to sustained growth rates of more than seven percent per year with equitable distribution of benefits. Real GDP doubled every ten years. Poverty decreased rapidly, although pockets of structural and severe poverty remain in some of the NICs. Exports were diversified and increased rapidly. The economies were transformed from natural-resource based to human-resource based, from primary products to labour-intensive processing and manufactured exports, and eventually from labour-intensive to skill-intensive production and exports.

The overall trend is explained by improvements in all components of the HDI since 1975.

- The infant mortality rate dropped from an estimated 145 per 1000 live births in 1970-75 to 82 in 2000-2005. The under five mortality rate dropped from 202 to 87 per 1000 live births, and thus life expectancy at birth increased from 40.2 years to 54.5.
- Literacy increased from 56.5 percent in 1990 to 68.7 percent in 2003, mainly due to greater school enrolment but trend data on school enrolment is missing in the UNDP global reports.
- Growth in GDP per capita outpaced the other improvements. Indeed the Lao PDR's ranking in GDP per capita in PPP is ahead of its overall HDI ranking - again part of the typical East Asian pattern. The estimated annual rate of

growth in GDP per capita in PPP increased by an average of 3.3 percent from 1975 to 2003, and by 3.7 percent from 1990 to 2003.

The more recent (and more rapid) improvements in the HDI since 2000 cannot be explained by changes in life expectancy or improvements in literacy. These measures change too slowly year to year. Thus the recent and rapid improvements in the HDI are explained by increases in school enrolment and by increases in per capita income in PPP.

The increase in school enrolment is due to a mix of supply and demand. Supply has improved, although education expenditures as a percent of total government expenditures accounted for a comparatively low 11 percent in 2002. Road access also improved, but much of the increased enrolment may have been due to private demand - changed perceptions by parents of the importance of education for their children.

How international trade may have contributed to the increased GDP, school enrolment and other changes affecting human development is a central question addressed in this Report.

Relationships between Human Development and Trade

In the aggregate and in most provinces, including those with the poorest districts, improvements in human development and poverty reduction coincided with increases in trade. Between 1990 and 2004 exports increased from 11 percent of GDP to 25 percent. This is not proof of causality - either way - but at least the increase in trade has not coincided with lack of progress or worsening of conditions for the poor.

The relationships between trade and human development are complex. Trade can increase economic growth in different ways such as expanding markets, disseminating information and knowledge, creating job opportunities and increasing incomes. Economic growth is necessary for human development but the linkages are not automatic (See for example UNDP, 2003b and Rodrick, 1994).

Some argue that early liberalization of trade leads to rapid growth; others argue that rapid growth comes first and that liberalization should then follow but be done with care (Warner and Sachs, 1997, UNDP, 2003b, and Rodrick, 2002). Most important for the analysis in this Report is the

two-way relationship between international trade and human development. Human development has the potential to increase trade; and trade has impacts (positive and negative) on human development.

Higher levels of human development - educated, well-nourished, healthy, empowered people - can help expand trade. Better educated and healthy people not only perform their jobs better, but are also able to make use of information and innovate in ways that can enhance trade and economic growth, particularly trade in goods that are produced by poorer households or that benefit poorer households. For example, differences in education attainment, especially women, in 2002-2003 strongly affected differences in poverty that year (Anderson et al., 2005). On the other hand, trade may also affect poverty levels and human development by improving access to roads, markets, food and social services - including education.

To assess these relationships, the Report analyses trade of goods, trade of commodities, trade of services and transit trade. There is analysis of likely future changes in the composition of exports and the consequences of those changes. There is analysis of the likely impacts of imports. The Report covers formal trade - trade that goes through official channels, contributes to government revenue and appears in government statistics. The Report also examines informal trade - all other international trade - including some estimates of how large it is, and analysis of why it happens and who appears to benefit from it.

Table 1.7: Coverage of International Trade in the Report

Types of Trade	Formal Trade	Informal Trade 'Legal'	Informal Trade 'Illegal'
Trade in Goods	Full coverage, focus on manufacturing, handi-crafts, and agriculture	Best possible estimates and coverage, particularly on agricultural trade	Limited estimates and coverage with existing studies, focus on timber exports and imports of yaa baa
Export of Commodities	Full coverage	(not covered)	(not covered)
Trade in Services	Full coverage, with focus on tourism, and Thai TV	(Not applicable; All informal trade in services is 'illegal')	Best possible estimates and coverage of labour trade
Transit Trade	Full coverage	Limited estimates of what enters and leaves informally, and what is informal on only one side of the transit	Very limited estimates and coverage with existing studies, focus on yaa baa

Analysis of the trade in goods gives special attention to manufacturing, handicrafts and agriculture. Analysis of commodities gives special attention to minerals. And the analysis of services gives special attention to international tourism, electricity exports, Thai TV, mobile phone services, and to 'labour trade' - Lao PDR 'exports' of labour.

At least some of this international trade can be - and perhaps has been - an important contributor to economic growth with equity and to human development in the Lao PDR. If so, will that continue in the future? This Report analyses the im-

pacts of international trade on economic growth and on human development including employment, poverty, consumption and the environment. It also analyses - as much as possible - the impacts on gender, ethnic minorities and culture.

The potential relationships between Lao exports and imports and human development are shown in the following table (Table 1.8).

The Report also analyses the relationships between trade agreements and human development. The potential relationships are shown in the Table 1.9.

Table 1.8: Potential Relationships between Trade and Human Development

International Trade	Potential HD Benefits	Potential HD Threats	Potential Constraints
Manufactured exports, garments, wood products, processed foods, and handicrafts	Employment, particularly of women, remittances sent back to rural areas	Exploitation of workers, loss of market and of employment to other countries' exports	Low education and productivity, lack of credit for Lao firms to upgrade, limits on inputs and linkages, high costs to ports
International tourism	Employment, backward linkages and multiplier effects, increased sales of handicrafts	Possible negative impacts on the environment, on Lao culture and spread of HIV/AIDS	Limited marketing and promotion, visa requirements, internal transport, shortage of skilled workers
Agricultural exports	Higher rural incomes, opportunities and choices	Specialization may hurt food security	Limited marketed production, low productivity
Labour exports to Thailand	Income and remittances, new skills and self-confidence	Trafficking and exploitation of migrants, particularly young women	Migration for work in Thailand without a passport and exit visa is illegal and subject to fines
Informal cross-border trade	Employment and income opportunities for many people in border districts, access to inexpensive consumer goods	Loss of government revenue, informal channels used for drugs and other trafficking	Inconsistent customs enforcement and waivers, prevalence of informal payments to border officials, companies favoured over individual traders
Minerals exports	Increased government revenue, improved balance of payments, employment in small-scale mining, resettled households and adjacent communities better off	Environmental damage, promises to resettled households and adjacent communities not kept, commodity price cycles	Transport costs and other infrastructure, limited bargaining power
Timber exports	Some employment	Loss of habitat and NTFPs, erosion, Lao timber helping export industry in neighbouring countries	Transport costs
Electricity exports	Rural electrification (ten percent set aside policy) resettled households and adjacent communities better off, increased government revenue	Downstream and other environmental effects, promises to resettled households and adjacent communities not kept	Limiting bargaining power, competition from hydro-power and other energy exports from Myanmar
Transit trade	Increased government revenue	Little value-added, risk of HIV/AIDS and increased trafficking	Limited pricing power on some routes
Imports of consumers and intermediate goods, ICT, mobile phones, and Thai TV programs	Lower prices for households, lower burdens on women, employment in trading and retail sales, better access to information	Reduced employment if Lao producers cannot compete, threats to Lao language and culture	Some tariff and NTBs, but decreasing rapidly with implementation of AFTA agreements

Table 1.9: Potential Relationships between Trade Agreements and Human Development

Trade Agreements	Potential HD Benefits	Potential Threats to HD	Potential Constraints
AFTA, AISP, and the EHP with China	Market access for exports that enhance HD including agricultural exports, lower cost consumer goods	Imports may hurt some Lao producers with loss of employment, income and opportunity	Implementation capacity limited, removal of NTBs, and reform of customs lagging
ATC	Market openings for garments, employment of women in garment production	Loss of market to other LDC and developing country exporters and loss of employment of women and of remittances to rural areas	High transport costs and lack of backward linkages, lack of aggressive marketing and of innovative design
EU and other GSP	Market preference for most Lao exports	Few if any	High transport costs, lack of aggressive marketing
NTR with the USA	Zero or low duties on Lao exports that enhance HD including handicrafts and processed foods	Rapid and extensive opening of the services sectors and protection of IPR	Heavy implementation requirements including many changes in laws
WTO entry	Could reinforce reforms, improve the investment and business climate and give the country a “seat at the table,” but would not increase market access for Lao exports	Rapid and extensive opening of the service sectors and protection of IPR, (other bilateral deals will be based on the US NTR agreement), threats to Lao agriculture	Heavy implementation requirements including many changes in laws

Organization of the Report

The Report next analyses trade patterns, trade agreements, trade policy and the impacts of exports and imports on human development. The final chapter summarizes the findings, presents scenarios for future patterns of trade and makes suggestions for policies to minimize the negative impacts of international trade and to increase its benefits.



Chapter 2

PATTERNS OF INTERNATIONAL TRADE, TRADE POLICY AND TRADE AGREEMENTS

2

PATTERNS OF INTERNATIONAL TRADE, TRADE POLICY, AND TRADE AGREEMENTS

Some patterns of international trade are recent and new. Others go back many years. Even in the colonial period, there were exports of timber, minerals, gems and coffee. There were imports of equipment, vehicles, fuel and consumer goods. But this early trade barely touched the lives of most Lao people and had only a limited impact on a fragmented economy.

The patterns and amount of international trade began to change with the New Economic Mechanism (NEM) in 1986, which increased the economy's exposure to market forces. The adoption of a 'one market, one price' principle led to the abolition of price controls and paved the way for subsequent reforms in the trading system, including rationalization of SOEs, and dismantling of their monopoly of foreign trade.

Trade has been influenced more recently by membership in ASEAN and AFTA, by the policies of trading partners, by growing complementarities between the Lao economy and neighbouring countries, by FDI,

by trade concessions from the EU, and by growing patterns of informal cross-border trade.

Patterns of International Trade

An Overview

The most complete information on Lao trade is obtained from 'mirror data.' Information on Lao exports is gathered from the import information of trading partners. Information on Lao imports is gathered from the export information of trading partners. There are several reasons why the mirror data are more complete. One reason is that some trade is 'informal' - not fully counted - on the Lao side of the border but is counted on the other side, and thus appears in the mirror data but not in the Lao data. The value of imports and exports since 2000 is shown in Table 2.1 and indicates a number of important trends:

Table 2.1: Merchandise Imports and Exports 2000-2004 (Millions of Current US\$)

Item/Years	2000	2001	2002	2003	2004	Average Annual Growth Rate
Imports	736.0	677.1	668.7	799.9	1,022.5	8.6%
Exports	387.9	401.7	402.6	500.2	586.6	10.2%
Total Exports (Exports Plus Tourism and Over-Flight Revenues)	513.1	520.4	538	605.4	727.4	9.1%
Total (Imports + Exports)	1249.1	1197.5	1206.7	1405.3	1745.9	8.9%

Source: IMF, 2005, LNTA, and the Bank of the Lao PDR (BOL). Import and export data were estimated based on partner country data and official trade data from the BOL of the Lao PDR. Trade data are f.o.b. for exports and c.i.f. for imports. Tourism data are from the LNTA. Over-flight revenues are from BOL.

- International trade is increasing. Imports plus exports in 2003 were equal to 61 percent of Lao GDP - a measure of the 'openness' of the Lao economy¹¹. Despite this, the level of openness is still relatively low for a small economy (small economies need to import more intermediate and capital goods than larger economies and may also have more transit trade and re-exports than larger economies). There is room for big increases in the future.

- Exports have been growing more rapidly than imports. Imports grew by 39 percent between 2000 and 2004. Exports grew by 51 percent. Nevertheless, imports still exceeded exports.

- If revenues from international tourism and from over-flights are added to exports (both are considered as 'exports' of services), then total exports between 2000 and 2004 grew by 'only' 42 percent between 2000 and 2004, but the gap between imports and exports was smaller.

- The gap between imports and exports creates a balance of payments deficit. That deficit is funded by FDI and ODA. (There are also remittances from Lao workers in Thailand and from Lao communities in the US, France, and Australia to family members in the Lao PDR. But these are 'informal' and do not enter the banking system or the balance of payments information.)

The gap between imports and exports is not new. Historically, imports have been higher than exports. For example, in 1990 exports were equal to less than half the value of imports. Exports are catching up. In 2004, the value of exports (including services) was equal to 70 percent of imports. But there is clearly a need for more rapid growth of exports in the future.

Major Trading Partners and Patterns

The Lao PDR's major trading partners - and what is traded - are shown in the Table 2.2.

Table 2.2: The Lao PDR Trading Partners and Trading Patterns 2004

Trading Partner	% Lao Exports	Majors Exports	% Lao Imports	Major Imports
Thailand	36.3	Electricity, timber, cattle, agricultural goods, NTFP, tourism*	60.3	Capital goods, vehicles, fuel, fabric, other intermediate goods, consumer goods
EU	28.0	Garments, coffee	7.6	Capital goods, consumer goods
Vietnam	16.7	Wood, wood products, minerals (gypsum), forest products, animal feed	11.2	Consumer goods, plastic products, processed foods, construction materials, garments
China (including Hong Kong)	2.2	Timber, minerals, agricultural goods, NTFP	10.1	Capital goods, intermediate goods, consumer goods
Totals	83.2		89.2	

Sources: Calculated from IMF, 2005. The IMF estimates are already corrected to f.o.b. for exports and to c.i.f. for imports. Vietnam's imports and exports: General Department of Vietnam Customs. *Tourism is not included in the calculation of the Thai share of Lao exports.

11- Official data by the BOL shows the 'openness' of the economy was only 42.5 percent in 2003.

The trade pattern is unusually concentrated. Eighty one percent of exports go to just three trading partners: Thailand, the EU and Vietnam. Eighty two percent of imports come from just three trading partners: Thailand, Vietnam and China. Seventy four percent of Lao exports consist of garments, wood, tourism and electricity.

This concentration increases vulnerability to changes in exchange rates and thus in relative prices, and to economic downturns among trading partners that may reduce demand. Future garment exports to the EU depend on the Generalized System of Preferences (GSP), and the continuing willingness of EU buyers to buy from Lao suppliers instead of larger and more integrated suppliers in Bangladesh, China or India.

The pattern of exports is changing. Mineral exports - particularly gold and copper - and electricity will

have higher shares in the future. Tourism, agricultural exports and wood product exports could have higher shares in the future as well, but that will depend on changes in policy. These issues are taken up in detail later in the Report.

It is not unusual that the Lao PDR trades with its neighbours. Proximity, shared borders, relative size and degree of complementarity of neighbouring economies affect international trade everywhere¹². The Lao economy is small. The economies of most of its neighbours are large. The Lao PDR has low population density, high fertility and ample land. Most of the neighbours have high population densities, low fertility and multiple pressures on land. The Lao PDR has surplus energy (hydroelectric power). Most of the neighbours import energy and some have energy deficits during periods of peak demand.

Table 2.3: A Comparison of the Neighbouring Economies 2003

	Lao PDR	Thailand	China	Vietnam
GDP (US\$ Billion)	2.1	143.0	1,417.0	39.2
GDP per Capita (US\$)	375	2,305	1,100	482
Population (Millions)	5.6	62.2	1,300	82.0
Projected Population Growth Rate per Year (2003-2015) (%)	2.1	0.7	0.6	1.2
% of the Labour Force in Agriculture¹³	77	45	66	56
% of GDP from Agriculture¹⁴	49	10	15	22
Three Main Merchandise Exports	1. Garments 2. Timber 3. Electricity	1. Machinery 2. Integrated circuits 3. Computer parts	1. Machinery 2. Electronic products 3. Textiles, clothing and footwear	1. Crude oil 2. Textiles, clothing and footwear 3. Seafood
High Technology Exports as a % of Manufactured Exports	N.A.	30	27	2
Openness Index (Exports + Imports as a % of GDP)	61	125	66	128

Sources: UNDP HDR 2005, World Bank - World Development Indicators 2005, UNESCAP - Asia-Pacific in Figures 2004, some Lao data from CPI.

12 - The largest trading partner of the US is Canada. The EU trades mainly with itself. Simple 'Gravity Models' of trade based on relative GDP, length of common borders and distance between capital cities, typically 'explain' most trade patterns, even without regional trade agreements. The impact of regional trade agreements is also estimated in some of the models. Their impact is often statistically significant, but always less than the other variables.

13 - UNESCAP, "Asia-Pacific in Figures 2004", online at : <http://www.unescap.org/stat/data/apif/>

14 - World Bank, World Development Indicators.

The relative size differences and the economic differences are large. The economies are complementary, particularly Thailand's - a middle income economy that imports energy, natural resource-based products and labour intensive manufactures. The Lao PDR imports capital goods, intermediate goods and consumer goods. Thailand imports labour whereas the Lao PDR exports labour.

Informal and Cross-Border Trade

A significant amount of the Lao PDR's international trade is informal - not counted, not taxed and not generating government revenue. The differences and comparisons between formal and informal international trade are multiple and interesting.

There is often some informal trade along the borders of many countries throughout the world, but the amounts are usually small and strictly limited to personal use only. People cross borders to buy cheaper petrol or wine, to get health care or pharmaceuticals, to buy consumer goods, to escape higher Value Added Tax (VAT) or other taxes in their home countries.



Retailers in Vang Tao, Champasak Province coming back from Thailand

Table 2.4: Characteristics of Formal and Informal Trade in the Lao PDR

Characteristic	Formal Trade	Informal Trade
Records	Counted and recorded by customs and/or the MOIC, duties and other taxes paid	Not counted on the Lao side and/or the other side, informal payments may be made
Finance	Bank credit, letters of credit, bank clearance and settlement procedures	Cash including Thai Baht, US\$, Lao Kip, Chinese Yuan and Vietnamese Dong
Source of Foreign Exchange	Banks	Local markets, including markets over the border
Size	Large shipments	Many small batches, except for timber shipments of one or more large trucks at a time, and Lao labour migrants to Thailand numbering more than 200,000
Traders	Registered companies with export and import licenses	Individual traders, no licenses, often women; timber exports have an organized structure
Legal Structure	Trade agreements, laws, formal contracts	Informal trust, kinship, some (unwritten) cross-border contract farming
Sources of Information	Formal marketing, trade shows, buyer orders	Word of mouth, trader experience, gathered as part of daily trade

Sources: ADB, 2002, DAN, 2005, NERI, 2006, GRID, 2006, Chapter 3 (for Labour exports)

But Lao informal trade is much larger - some legal, but much of it not legal. Except for air freight, all Lao trade moves across land borders or the Mekong River. More than 50 percent of the Lao population now lives in border districts. People have migrated to those districts from interior districts. The border districts with Thailand grew early on and have long been prosperous. The districts that grew most between 1995 and 2005 were Vientiane Capital (bordering Thailand) and districts that border China, Myanmar, Vietnam and Cambodia.

Informal cross-border trade, by its nature, is impossible to count, but there are estimates, some from surveys, some based on comparing Lao data with mirror data - and others based on studies of particular products or locations. The amounts in some categories are large, in excess of 80 percent of some important Lao exports.

A key question for human development is who benefits from informal cross-border trade. It is likely, for example, that the poor do not benefit from large informal exports of timber. Instead they are more likely hurt because of loss of habitat, NTFPs, and erosion of streams and watersheds. But who benefits from the rest of it?

In many respects, it is the poor and the near-poor who benefit from informal trade. Except for labour migrants, most of the poor do not trade directly, although some do, most making only one or two trips a year for personal purchases. Rather it is because the poor and near-poor produce goods that are exported through informal trade channels. They also benefit from cheaper imports of basic consumer goods many of which are not produced in the Lao PDR and are otherwise too expensive or not available to them at all.

Table 2.5: Estimates of the Extent of Informal Cross-Border Trade

National: Overall and By Products (Source)	Informal on the Lao Side of the Border	Informal on the Other Side (Country)
Exports (CPI/NSC 2002)	20%	N/A
Imports (CPI/NSC 2002)	31%	N/A
Exports (Mirror Data Compared to Lao Data)	16%	N/A
Imports (Mirror Data Compared to Lao Data)	31%	N/A
Agricultural Exports (MAF, Div. of Planning)	>50%	N/A
Timber (Mirror Data Compared to Lao Data)	84%	(Mainly to Vietnam)
Cattle (ADB 2002)	>80%	>80% (Thailand)
Labour Exports (Chapter 3)	>98%	>30% (Thailand)
Site Specific Studies		
Agricultural Exports (Bokeo, DAN 2005)	80%	80% (Thailand)
Garlic Imports from Vietnam for Re-Export (Savannakhet, DAN 2005)	N/A	>80% (Thailand)
Clothing Imports from Vietnam for Re-Export (Savannakhet, DAN 2005)	N/A	>80% (Thailand)
Sugar Cane Exports (Luang Namtha, NERI 2006)	N/A	100% (China)
Consumer Goods Imports from China (ibid.)	>30%	N/A

Sources: As noted. The comparison between Lao data and mirror data are for the year 2003. Thailand has recently encouraged illegal workers in Thailand to register for work permits; 180,000 Lao workers have registered and are no longer informal on the Thai side of the border (see Chapter 3).

Table 2.6: Estimates of Who Benefits from Informal Cross-Border Trade

Location and/or Group	Nature of Benefit(s)	Source
Poor Families in Districts Bordering China and Myanmar	Reduced poverty and higher standards of living	Anderson et al., 2005
Families in Border Districts in Bokeo and Savannakhet	Reduced poverty and higher standards of living	DAN, 2005, ADB, 2006
Families in a Border District in Luang Namtha	Reduced poverty and higher standards of living	NERI, 2006
Women Border Traders (Some Previously Poor) in Vientiane Capital and Savannakhet	Monthly earnings averaging US\$1,600 - four times GDP/capita	GRID, 2006
Women and Girls Peeling and Sorting Garlic in Savannakhet for Informal Re-Export to Thailand	Average annual earnings of US\$730 per year	Bank of Thailand, 2002, DAN, 2005
Migrant Labourers to Thailand (Many Poor Before 1st Migration) and Their Families at Home	<200,000 jobs and at least US\$100 million in remittances	Chapter 3
Households Producing Cattle Mainly for Informal Export	Estimated farm gate prices of US\$20 to US\$25 million/year	ADB, 2002
Households Living in Border Districts and Some in Interior Districts Next to Districts Bordering Thailand	Access to cheaper and/or previously unavailable basic consumer goods, imported informally	Anderson et al., 2005, DAN, 2005, NERI, 2006, GRID, 2006, ADB, 2006

Sources: As noted

Box 2.1: A Woman Trader

Ms. Viengson is married with four children. Her family moved from Luang Prabang province to Vientiane Capital to seek work in 1989. Her husband was a construction worker with a low salary. In 1990 she became a cross-border trader, "a smuggler", when she first bought Chinese clothes and transported them across the Mekong River to sell in local markets in Thailand. "I have to trade illegally, because there is no other way to earn income for my family," she said. "Every day, I get up at 4 o'clock in the morning to buy goods at Nong Douang Market and transport them by boat across the Mekong River to sell at the Thai border. Since I have been involved in this trade, all household work is done by my husband with the help of the children. I think cross-border trade is good because it provides us with a much higher family income. I have more access to market information and technology. Transportation of goods to avoid the inspections of police and custom officers is the most difficult task. Usually, we have to deliver the goods during the night or very early in the morning. It is challenging for me to work at night. I would be happy to register my business and make it legal if the Government would reduce the import and export taxes."*

Source: GRID, 2006. *The name has been changed.

Given that more than half of Lao people now live in border districts, the opportunity to trade and to benefit directly from trade is widely and 'democratically' available - perhaps more so than in any other country in East Asia. This means more income, more opportunity and choices for women and men, and better future prospects for children - all important components of human development.

The importance and the impacts of informal trade are covered in more detail later in the Report. The reasons why so much trade is informal can be found in part in trade policy and problems of implementation.

Governance and the Policy Environment: Trade Policy and Implementation

Tariff Measures

Tariffs are charges (taxes) that are placed on imports and sometimes also on exports. Tariffs may be imposed to generate government revenue or to protect local producers from competition from imports or both.

Lao import tariffs can be categorised in two groupings. The first are the tariffs applied to imports from China and AFTA countries that have special trade agreements with the Lao PDR. Imports from all other countries are subject to normal tariffs - 'Most Favoured Nation' (MFN) rates, also called 'Normal Tariff Rates' (NTR).

The current MFN tariff schedule has six rates: 5, 10, 15, 20, 30 and 40 percent. These rates have remained unchanged for several years. The unweighted average tariff is slightly above ten percent (World Bank, 2004). The trade weighted average tariff was 11.3 percent in 2004, and the trade weighted average tariff rate was higher in manufacturing than in agriculture (Fane and Khamlusa, 2005).

Most product groups now have applied MFN rates below 20 percent. But rates of 30 to 40 percent are still applied to protect domestic pro-

duction in agriculture, including imports of raw products such as meat, vegetables, fruits, nuts, coffee, tea and spices, and on manufactures of straw, some furniture, and other wood and wood products. The same high MFN rates are also applied to 'luxury' items including motor vehicles, imported beverages and tobacco products. Cosmetics and most electrical machinery and equipment have MFN applied tariff rates of 20 percent.

Export duties on most products have been eliminated. But export duties are levied on electricity (at an average of ten percent), and there are natural resource royalty taxes applied to exports of timber and lumber, minerals and some NTFPs. In addition, some provinces impose export taxes on agricultural exports. For example Xieng Khouang imposes a five percent tax on live animal exports, and Luang Namtha imposes a two to five percent export tax on many agricultural exports - presumably in an effort to increase provincial self-sufficiency in agricultural production.

Tariff Reductions and Exemptions

Exemptions of import tariffs are given to different products for a variety of reasons. Imports of raw materials and intermediate products for export production or for re-export (after further processing) are exempted from duty. Firms with FDI are permitted to import capital goods and spare parts for their plants at an applied rate of only one percent. In practice, except for intermediate products for some firms in the garment industry, it is difficult for firms to receive the tariff waivers or reductions to which they are entitled. Waiting time is long, and the outcomes uncertain. When a critical spare part is needed, the full MFN duty may be paid for a non-ASEAN import, particularly when the cost of the down-time would be higher.

Tariff reductions or exceptions are also made on a case by case basis for imports of equipment, machinery and vehicles used for development or investment projects if they are of a large scale and expected to have significant favourable socio-economic benefits for the country. In addition, other exceptions can be made by various ministries, and many are made at the provincial level as well.

The Law on Promotion of Foreign Investment (No. 11/NA, dated 22/10/2004) allows imports for FDI projects of machinery, equipment and even vehicles, at one percent duty, provided that the imports are directly used for export production. But local shipping companies and companies providing transport services to international tourists are not given the right to purchase vehicles at a one percent duty. This holds back the capacity of Lao transport providers to offer reliable and competitive services (Khammalavong, 2005¹⁵). The less favoured position of the transport sector has negative impacts on merchandise exports as a whole, increases the domination (and pricing power) of Thai operators in providing transport services to Thai seaports, and reduces the quality and capacity of services for international tourists visiting the Lao PDR - particularly services that might take tourists to out-of-the-way places where their spending would help improve living standards of local families.

Data reported by the Customs Department of the Ministry of Finance (MOF) show that 29 percent of the total import duty payable in the fiscal year 2003-2004 was foregone because of exemptions and reductions. Other estimates are that more than 50 percent of imports are exempt from tariffs. Even with the lower estimate, the ratio between duty paid and the customs value of the total imports is only five percent. Thus, the effective MFN tariff barrier to imports is really quite low.

There are also exceptions with export taxes and royalties because exports are undercounted and/or informal - for example gold and gems mined by artisanal miners that are sold informally to Thai buyers. Customs Department information shows that as much as 90 percent of export taxes and royalties were not collected in 2003-2004.

Non-Tariff Measures

There are licensing requirements for firms engaged in the import and export of goods and services. The regulations distinguish two types of importers: general importers and specific purpose importers.

General import businesses are enterprises registered to operate in the import trade. When applying for an import business license they are required to submit a list of goods to be specified in the license¹⁶. Specific purpose importers are registered businesses (other than import businesses) which have the right to import some equipment, machinery and raw materials to be used directly in their production or business¹⁷.

For goods not subject to import authorization or technical approval, import volumes are not restricted. However, for the purpose of planning, importers must submit an import plan for each product category to the provincial trade unit and the One Stop Service¹⁸ six months or one year in advance. As the companies import, the amounts are deducted from the total plan. In practice, these forecasts are hard to make and may act as a constraint on imports if demand conditions change during the forecast period. Some trading companies report cumbersome procedures or impediments to business if - because of changes in demand - they are unable to keep to their plans. Approvals for changes in the plan are often required by provincial authorities and a company's import plan for the next year may be affected.

Some goods require special import permission from the Ministry of Industry and Commerce (MOIC) or the trade department of a province. These goods include petroleum and gas; vehicles and spare parts; cement; and construction steel. Other ministries

15 - The article is an interview with Mr. Prachit Sayavong, Managing Director of Société Mixte de Transport Co. Ltd.

16 - An importer is defined in the PM Decree on Import and Export Management No. 205/PMO of 11 October 2001: "Importers includes individual or juristic entity who has registered as a business according to this decree. Imported goods of these business entities are for sale within the Lao PDR." (Unofficial translation version)

17 - Article 19 of PM Decree on Import and Export Management No. 205/PMO of 11 October 2001: "A specific purpose importer has the right to import equipment, machinery and raw materials to be used directly in production or a business based on the plan adopted by the related sectors".

18 - According to PM Notification on Procedures of Import-Export and Circulation of Goods in the Country No. 1691/PMO of 7 October, 2004.

require technical licensing of imports of prepared foodstuff; seeds and breeding animals; meat of animals or fish; raw or semi-manufactured products used in manufacturing; fertilizers and pesticides; mobile phones and entertainment products like video cassettes, CDs, computer games; sculptures and paintings; chemicals; mineral products; primary products of precious minerals. The technical approval usually requires authorization from more than one agency, and even up to three or four¹⁹ government agencies. These requirements, too, can limit business activities. The time to obtain approvals is long, and depends on coordination between, and agreement among, ministries and other agencies.

Allocation of import quotas on these goods is made to import-export companies at the provincial level. The indicative plan given to the province by the MOIC will be allocated to the import-export companies of that province, perhaps based on the annual plans and/or the volume of imports of the import-export companies in the past year. However, because the quotas are set at the discretion of line ministries, there is some ambiguity about their purpose, whether they are to encourage import-substituting industries or for the protection of some state enterprises. Although the allocation of the import quotas is made only to import-export companies, these companies later redistribute (sell) some of the quotas to their customers. The rule that quotas are given to import-export companies often gives these companies monopolistic or oligopolistic power in trade. This can obviously lead to higher and perhaps uncompetitive prices of imported goods in the domestic market.

For exports, individuals and corporations must also obtain a business license. Exporters are allowed to export (without forecasts) all goods, except those goods controlled by the state that require export licenses or entail other restrictions. The export goods subject to MOIC licensing or technical approval from line ministries include

minerals, diamonds and other gems, seeds and breeding animals, animal products, sawn wood and wood products, and other forestry products. Many of these exports, including NTFPs are controlled by quotas.

Export procedures at the provincial level are particularly cumbersome. For example, in Champasak, wood product exports require two inspections and 24 approval stamps, in Khammouane furniture exports require 19 stamps. In Oudomxay agricultural exports require two inspections and at least 19 stamps. In Vientiane Capital, parquet and furniture exports require 27 stamps from several departments before export.

The management of import and export licensing is regulated by the Prime Minister's Decree on Import and Export Management No. 205/PMO of 11 October 2001. The lists of goods to which particular provisions in Decree No. 205 apply are updated annually by notification from MOIC. Some can be deleted and some can be added without much warning.

There are a number of non-tariff barriers (NTBs) that are in place that have to be reviewed in the AFTA the WTO context, such as licensing requirements for certain goods (e.g. pharmaceuticals and fertilizers), enterprise-specific restrictions (e.g. motorcycles), differentiated turnover tax rates discriminating against imports (broad categories of products), excessive pre-shipment inspection charges of 1-6 percent of free on board value for most goods (CUTS/NERI, 2005).

Despite the clear policies on licenses and licensing procedures, quantitative restrictions (QRs) are still utilized extensively, partly to protect domestic industries. QRs are currently applied on products that account for 45 percent of imports including fuel and lubricants, construction steel, cement, rice, motor vehicles, electricity, minerals, tobacco and timber products (ibid.). Many export goods

19 - For example: Fluorine (HS 28.01) as specified in the NTMs list published on the ASEAN Secretariat website. Import of fluorine requires technical approval from four agencies concerned: (1) Department of Intellectual Property, Standards, and Measures, STEA (for those chemicals which have negative impacts on the environment); (2) Department of Food and Drugs, Ministry of Health; (3) Department of Industry, Ministry of Industry and Handicrafts; (4) Trade Department of Provinces, Vientiane Capital, and the Special Zone.

are also controlled by quotas. The existence of nationally negotiated quotas based on provincial policies affects the size of trade between provinces, and consequently to some extent constrains international trade as well. In some cases, the number of traders is restricted by the province even when there are no official restrictions on the volume of products traded²⁰.

Finally, there is a list of goods that are prohibited for both import and export. These include weapons, explosives, hazardous waste, endangered species, log and lumber exports, exports of Lao antiques, and imports of pornography or other items dangerous to peace, safety, and the cultural traditions of the country.

Customs

There has been significant progress in reform and improvement of customs in recent years. There is now a 'single administrative document' instead of the 16 that were used in the past and there is now a simplified and much shorter declaration form for petty traders. The customs service has now adopted the ASEAN 8 digit classification system, and has produced a book for border use with duties, with turn-over and excise taxes specified. But implementation lags, and even the book is not kept up-to-date with changes in policy.

There is now a 'Post Clearance Audit' system that is effective in identifying traders that pay import duties less than those required by the MOIC's 'minimum import price' list. There is now a 'Monitoring and Control Program' under which the Customs Department headquarters has been given authority by Government to monitor more closely the operations of a number of international checkpoints. This is seen as a first step in the transition to a National Customs Administration.

Some serious problems remain. There is still misclassification and under-invoicing of imports. Customs officers are paid by the Provincial

Governors and are more responsive to them than to the national office. The customs inspectors receive modest salaries. This may increase incentives to supplement income during inspections and other clearance procedures. Inspections of goods against declarations may not occur as informal payments are made. Export licenses for goods subject to quotas may not be checked. Duties may not be collected, or if collected may remain - unreported to the MOF - in the province.

'Behind-the-Border' Policies

Trade can also be affected by policies that are not trade policies but that impact trade nonetheless. These include domestic taxes, policies on FDI and visa policies.

The effect of domestic tax policies is protectionist, favouring import-substitution. The final prices of imports are high because domestic taxes are calculated on a cumulative basis. The duty payable is included in the tax calculations. A turnover tax is levied on the value of imports, inclusive of duty payable. An excise tax is imposed on products considered luxury consumption goods and on some products under import control such as fuel. The excise tax is levied on the value of imports inclusive of both customs duty and turnover tax. Thus, the overall rate of tax on imports can be very high. The bias against imported goods was further aggravated by amendments in October 2002 to the 1994 Tax Law that introduced differentiated turnover tax rates for imported goods and locally produced goods respectively (up to ten percentage points higher turnover tax rates for imported goods).

FDI policy creates a bias against domestic producers. Foreign invested enterprises producing for export receive tax incentives, including: a concessionary duty (when it can be obtained) of one percent on imports of capital goods, exemptions of imports of raw materials and intermediate goods used for export production, a reduction of import duties for import-substituting production, tax

20 - An example is Nonghet district of Xieng Khouang province. In 2001 the district began to control the trade of livestock to Vietnam by giving permits to certain local traders.

holidays, and a reduction of the profit tax. These concessions leave domestic producers at a disadvantage in producing for export. In an effort to reduce the bias, a new Law on Foreign Investment (approved by the National Assembly on 22 October 2004) deleted a provision that entitled all foreign invested firms a profit tax rate of 20 percent compared to 35 percent applied to domestic investors. Instead, the new law now identifies certain sectors and geographic zones in which foreign invested firms and domestic firms are completely exempted from the profit tax but only for a limited period²¹. Otherwise, a profit tax of 35 percent is applied to all companies.

Other biases include favoured treatment of SOEs in the wood products industry. SOEs have privileged allocations of logging quotas, logging sites and kinds of wood from natural forests (CUTS/NERI, 2005). New FDI investment is limited to existing firms. There are strong barriers to new Lao entrants. Firms with FDI can only (legally) use plantation-grown wood.

Finally, visa policies affect both tourism and labour migration - two large service exports. Non-

ASEAN tourists must obtain a Lao visa either on arrival or from a Lao Embassy before arrival. Current policy only waives the visa requirement if the waiver is reciprocal as it is for most ASEAN countries. But Thailand, for example, waives visas on a non-reciprocal basis for nationals of countries that are high-spenders when they visit Thailand. Lao policies make it less likely that these high spenders will visit the Lao PDR while they are in the region.

Exit visas are required for Lao nationals who want to work outside the country for more than the three days permitted for border-pass holders. This means that almost all of the Lao workers who work in Thailand are 'illegal' on the Lao side and subject to fines when they return for having left illegally. The more illegal the migration is, the more the dangers of trafficking and exploitation.

Why and How Trade is Informal

Geography, trade policies, tax policies, customs procedures and problems of implementation go a long way in explaining why and how so much of international trade is informal.



Hawkers selling their goods on Road No. 9

21 - Promoted sectors include production for export, agriculture, handicrafts, human resource development, tourism, technology transfer, and construction of infrastructure. The most promoted geographic areas are those with the most limited existing infrastructure.

Borders are long and porous. There are 13 ‘international checkpoints’ where regular trade is conducted, 12 ‘domestic checkpoints’ where Lao travellers and nationals on the other side can cross on a daily basis, and there are 22 ‘traditional checkpoints’ where Lao travellers and others can cross during designated hours. Only casual border trade is to take place at the domestic and traditional checkpoints. There are provincial and local regulations as to what is considered the permissible value of casual trade. However, enforcement and monitoring are limited. Some regular trade passes through the domestic and traditional checkpoints and is not counted or recorded. In addition, some informal imports and exports go through the ‘front door’ - through the major international checkpoints - via ‘informal payments’ to officials.

Informal trade is large because there are too many opportunities for one-to-one contact between traders and customs officials. There is not yet a full ‘self assessment system’ with risk monitoring techniques used to detect traders under reporting, undervaluing or misclassifying their goods. In other words, current business procedures and practices themselves lead to informal trade.

Although customs revenue has been defined as ‘national revenue’, there is not yet a revenue sharing agreement between the central and provincial levels. The lack of such an agreement has encouraged informal trade so that provincial authorities retain revenues in their jurisdiction.

The lack of a National Customs Administration has also resulted in increased informal trade because there are few resources available at the central level to ‘monitor and enforce’ the application of the rule of law. This provides an opportunity for provincial authorities to circumvent national policies and rules.

In general, the more restrictions, taxes, permits and licenses required, and the longer it takes to get them all, the more likely the trade will be informal.

Government (including some provinces) should perhaps consider reducing some of the restrictions and charges and direct their attention, budget and limited implementation capacity to the most serious problems of international trade.

About 60 percent of excise taxes and most turnover taxes are collected at the border. For imports

Table 2.7: Summary of Export Restrictions Leading to Informal Trade

National Policy and Requirements	Export Affected	Policy in Some Provinces
No Production Limits	Most agricultural products, handicrafts, manufactures	Food self-sufficiency policies may limit crop specialization
Special License to Produce	Gold, gems	Enforcement not known
Production Limits/Quotas	NTFPs, timber	Enforcement not known
Illegal to Produce (& Export)	Yaa baa, opium	Enforcement not known
No Export Restrictions Other than Export Licenses	Some agricultural products, handicrafts, manufactures	Export taxes on some agricultural exports
Subject to Income or Profit Taxes and or Turnover Taxes	Livestock, other agricultural exports, manufactures	Some additional taxes
Require Special Export Permits, or Passports, Exit Visas and Labour Permits	Labour to Thailand, gold, gems, livestock, NTFPs, other agricultural exports	Additional restrictions

Table 2.8: Summary of Import Restrictions Leading to Informal Trade

National Policy and Requirements	Imports Affected	Policy in Some Provinces
No Restrictions, Low or Zero Duties	Agricultural imports in the EHP, intermediate goods for export production, capital goods for FDI and JV firms, AFTA imports of goods on the Lao Inclusion List	Some restrictions and higher duties imposed
No Restrictions but Higher Duties	Other agricultural and consumer goods	Some higher duties imposed, some duty waivers granted to favoured importers
Turn Over and Excise Taxes	Many imports, and calculated on top of duties	Some exemptions granted
Special License Required or Other NTB	Mobile phones, construction materials, breeding animals, fertilizer, other agricultural inputs, vehicles, fuel	Some exemptions granted
Illegal to Import	Chickens, eggs, firearms, culturally proscribed items, yaa baa	N/A

this creates incentives to use informal channels (and to make import declarations that are far less than real values).

For exports, a profit tax or income tax may also be collected at the border based on government standards or estimates of average costs of production, farm-gate prices and export prices. This too creates incentives for informal exports of agricultural products. Cost of production varies from year to year with weather. Export prices vary with supply and demand. Government standards and estimates may or may not bear much relationship in any given year to real production costs, farm-gate prices and export prices.

Some products are subject to export licensing or other permits from ministries - including livestock and some other agricultural exports. When permits are hard to obtain or take any length of time, the exports are likely to be informal.

Some products exported are subject to production quotas or export prohibitions. For example, har-

vesting and export of NTFPs is subject to quotas. Timber exports are not permitted. Again, these restrictions (for sensible reasons) create incentives for informal exports.

Some imports are prohibited (for example chickens and eggs for public and animal health reasons). But because Thai eggs and chickens are cheaper, they are smuggled in anyway, and perhaps also from China.

Other exports that are prohibited such as ‘yaa baa’ are smuggled in for transit trade and increasingly also for sale in the Lao PDR because of demand and high profit potential. There may even be some production in the country as well.

Some exports are done informally because of problems on the other side of the borders, for example high informal Thai customs charges for Lao agricultural imports, counter to official Thai duty levels, or strict quarantine requirements that would hold up sales and cause weight loss in livestock.

Finally, while only timber, minerals and electricity are subject to export taxes and/or royalties, there are informal charges on some exports - for example on wood products - that also create incentives for informal trade.

The fact that some international trade is informal and that some exports are informal could be seen as negative, and as a result of policies and other problems that need to be fixed. But some of informal trade is not negative. It benefits the poor and the broader economy, and points to patterns that should be normalized or left alone for the time being. This issue is covered in more detail later in the Report.

Trade Agreements

Trade patterns in the future will be affected by the shifting composition of exports and by the country's membership in AFTA and the bilateral agreement with the US. These agreements also require changes in legislation and regulations. Eventual membership in the WTO will do the same.

ASEAN Free Trade Area (AFTA)

The Lao PDR joined ASEAN and AFTA in 1997, and the ASEAN tariff reduction under the Common Effective Preferential Tariff (CEPT) scheme began in 1998.

Under this scheme, all goods and services are grouped according to four lists:

- The Inclusion List (IL) includes all products currently subject to CEPT rates.
- The Temporary Exclusion List (TL) includes products not yet subject to CEPT rates but that are to be moved to the IL according to agreed schedules.

- The Sensitive List (SL) includes products that will be protected as long as permitted by the agreed schedules but that must be moved to the IL.

- The General Exclusion List (GL) includes products that cannot be imported at all for reasons of public safety, public health and culture.

Except for items on the GL, the Lao PDR is committed to reducing 98 percent of its tariff lines on imports from ASEAN countries to zero to five percent by 2008 - including all manufactured products. The remaining two percent of tariff lines are to be reduced by 2015 or earlier. By 2015 all products on the IL will have zero tariffs.

By 2005, 85 percent of tariff lines had been put on the IL with tariffs rates of zero to five percent and a simple average tariff rate (non-weighted) of 4.05 percent²². The SL accounted for 2.5 percent of the tariff lines and the GL for 2.1 percent. In spite of some delays in 2004 and 2005, the Lao PDR is on schedule to meet its tariff reduction obligations under AFTA.

The Lao PDR is also committed to the removal of NTBs or non-tariff measures (NTMs) - licensing and other requirements - that may restrict ASEAN imports. Most licensing requirements in the country are permitted 'technical measures' to assure quality control, safety, animal quarantine and to meet sanitary and phyto-sanitary requirements. But in 2005, there were 215 provincial level NTMs that may need to be eliminated or recast - 15 percent on agricultural products, one percent on fuels, 23 percent on other minerals, 43 percent on chemicals (including fertilizers), 14 percent on iron and steel, and four percent on other manufactures. These NTMs are administered by the Trade Department of Vientiane Capital. There may be NTMs or NTBs imposed in other provinces, but information on this is not yet available.

22 - Author's calculation based on the CEPT schedule of Lao PDR updated in 2005.

Positive impacts of AFTA may include:

- Less informal trade and under-invoicing of imports because of lower legal cost for imports and maybe even some increase in revenue as a result.²³
- Increased integration of Lao producers with ASEAN supply chains - for example, integration of Lao producers with the Thai textile and garment industry and its world-wide exports, or supply of labour intensive components to Japanese-invested electronics firms in Thailand.
- More ASEAN trade-related FDI and subsequent exports. Sunset industries from Thailand could logically move to the Lao PDR
- More ASEAN tourists.
- An increase in agricultural and livestock exports.
- Lower costs for Lao consumers and producers, particularly of low cost items that improve the productivity and the quality of life of rural households - for example, fertilizer, hybrid seeds, water pumps, mobile phones, cook tops and electric fans.

Some negative impacts may include:

- Reduced revenue from import tariffs even with less informal trade.
- Some threat from imports to domestic producers of intermediate goods such as cement (CPI/JICA 2005), fertilizers and roof panels. They will need to become more competitive to thrive and to export.
- Some threat from imports to domestic producers of consumer goods such as

motorcycles, processed food, condiments, and paper goods - with consequent drops in market share and employment. They will need to become more competitive to keep and expand market share.

- Some threats from imports (from Vietnam for example) to domestic garment makers selling in the Lao market. They will need to become more competitive to keep and gain market share.
- Some harm from imports may particularly affect women (in garment employment for example).

Normal Trade Relations with the US

A bi-lateral trade agreement with the US was ratified by both parties at the end of 2004. Under the agreement Lao exports to the US are now granted MFN or NTR status.

The agreement has lowered average tariffs on Lao exports to the US from 45 to 2.4 percent. Some specific examples of the change include silk textiles (from 90 to 0.8 percent), handicrafts and wood products (from 42.5 to zero percent), and coffee (from ten to zero percent). NTR is not a trade preference. It means only that Lao exports compete on an equal footing in the US market with exports from all other countries that are members of the WTO.

In return, the Agreement commits the Lao PDR to adapt and comply with international trading norms and standards including those of the WTO to eliminate NTBs to trade, the almost complete liberalization (for US and other foreign investors) of tourism, banking, insurance, communications and other service sectors. The Agreement also commits the Lao PDR to strict protection of intellectual property rights (IPR), with very strict enforcement and penalty provisions.

23 - There were revenue increases in some of the ASEAN 6 when they liberalized.

Positive impacts of NTR may include:

- Increased US and other FDI in the liberalized sectors.
- More US tourists.
- Increased Lao exports of silk textiles, wood products, other handicrafts, (organic) coffee and other 'niche products'.
- An increase in Lao garment exports, given the recent US restrictions on the rapid increase of garment exports to the US from China.²⁴

Increases in Lao exports to the US are not automatic or guaranteed. It will take effort on the part of Lao exporters to understand and exploit the demand, to find niches and markets for their products in the US. They will need help from the Government and from some of the more than one million Lao Americans in the US.²⁵ Representatives of six ministries visited the US in April and May 2005, and met with Lao-American communities. The mission found strong interest among Lao-Americans to help facilitate trade between the Lao PDR and the US, and also strong interest in investment opportunities in the Lao PDR.

The negative impacts of the NTR agreement include:

- Faster liberalization of the service sectors than in most LDCs.
- Much stricter protection of IPR than in most LDCs.

World Trade Organization (WTO)

The Lao PDR is negotiating for WTO membership. Accession is expected in 2007 or 2008.

The process involves 'Working Party' meetings at which the Lao PDR responds to questions posed by WTO members. The questions relate to procedures and timetables for economic reforms, and restructuring and simplification of laws and regulations related to trade. The first Working Party was held in 2004 and covered 263 questions on the Lao trade regime and related issues. The second Working Party will be at the end of 2006 and will cover an additional 93 questions. Once that process is complete, there will then be negotiations of bilateral trade agreements with major trading nations or blocs not already covered by existing trade agreements.

As an LDC, the Lao PDR is entitled to 'special and differential' treatment (S&D) in its negotiations for accession and as a WTO member. These S&D provisions permit higher and longer protection of agriculture, and much more gradual liberalization of other sectors than is required, or was required, of other developing countries when they joined. The rationale for the S&D provisions for LDCs is that they need more time to prepare for competition from worldwide exports particularly of agricultural products. Without that time, local agriculture, local industries and services might suffer unduly to the detriment of employment, income, and even social stability. Unfortunately, recent accession agreements have required LDCs and other developing countries to take on obligations to open service sectors to FDI and to protect IPR that far exceed the requirements placed on existing members of WTO. This is not only unbalanced and unfair - it could hurt human development as well (UNDP, 2005).

The additional problem the Lao PDR faces is that in WTO negotiations, other trading partners typically want - at a minimum - the same trade concessions made in other bilateral agreements. Because 'maximum' concessions were already made in the US agreement, the Lao PDR will have to stand fast

24 - Under the China WTO accession agreement, trading partners can invoke "safeguards" provisions that impose temporary restrictions in case of Chinese export "surges". The EU has reached agreement with China on "voluntary" limits. The US is negotiating for voluntary limits also, but will likely impose safeguards limits on Chinese exports if the negotiations are unsuccessful. Limits on Chinese exports could help the Lao PDR for a few years. The safeguards provisions of the China agreement expire in 2008.

25 - Vietnam offers incentives and special FDI opportunities to Vietnamese Americans. This has helped Vietnam's exports to the US. China does the same for Chinese Americans.

against any further concessions that could detract from the remaining S&D provisions that it is entitled to receive. There will be little or no gain in market access from WTO accession (World Bank, 2006). WTO membership may help strengthen reforms, and improve the investment and business climate, but these benefits are not enough to justify haste and a bad deal for entry.

It may thus be good policy to take it slow on WTO membership, and even to try to re-negotiate some of the provisions of the 2004 US bilateral agreement at the end of its first three years.

Policies of Trading Partners: Trade Preferences and Trade Problems

Thailand

Thailand is the Lao PDR's largest trading partner for both exports and imports. Thus Thai trade policy and problems of Thai trade policy implementation are important for the Lao economy. When the Lao PDR joined ASEAN, the tariff structure under AFTA agreements was applied to Lao exports and imports on the IL. A comparison of Thailand's MFN and AFTA rates - calculated for products under chapter 01 to 97 (Harmonized System (HS) 2 digits) - is shown in Table 2.9. The AFTA tariffs for the eligible exports from the Lao PDR are remarkably low. The more Lao products on the IL, the more these concessions can be accessed by Lao exporters and importers.

Accessing these preferential rates requires completion of ASEAN Form D to confirm compliance with ASEAN origin requirements. Use of Form D is reported to the MOIC. In calendar year 2003, only US\$1.7 million of Lao exports made use of Form D. And according to the Customs Department, even fewer imports made use of the CEPT rate concessions. Use of the concessions is expected to increase more rapidly in the future as information and access to Form D improve, and as demonstration effects increase - as Lao exporters and importers increasingly see others accessing these concessions.

Under the AISP, original ASEAN member countries agreed to provide trade preferences to the new members: Cambodia, the Lao PDR, Myanmar and Vietnam. In 2004, Thailand provided AISP preferences, with tariff rates of zero to five percent on more than 300 exports from the Lao PDR to Thailand that are not on the Lao IL. The following categories of products are given preference:

- fruits and vegetables
- coffee, tea and spices
- tobacco and manufactured tobacco substitutes
- salt, ores, slag and ash
- leather and leather products
- wood and articles of wood
- furniture
- manufactures of straw
- articles of apparel and clothing accessories.

Table 2.9: Thailand's Estimated Applied Tariff Rates 2001-2003

	Simple Average Tariff Rate		
	Applied Rate	Agricultural Products (HS 01-24)	Industrial Products (HS 25-97)
Applied MFN Tariff	17.19%	26.26%	14.17%
AFTA	4.53%	5.42%	4.23%

Source: Wisarn, 2004, based on information from the Thai Ministry of Finance.

In addition, the Lao PDR is a member of the ACMECS²⁶ - a trade and cooperation agreement initially among four countries: Cambodia, the Lao PDR, Myanmar and Thailand, but now also including Vietnam. Under this agreement, Thailand agreed in 2004 to a 'One Way Free Trade' concession that applies a zero tariff rate on nine agricultural exports from the Lao PDR to Thailand. These exports are feed corn, sweet corn, eucalyptus logs, cashew nuts, castor oil beans, soy beans, ground nuts, potatoes and pearl barley.

Utilization of the CEPT and AISP concessions has been growing rapidly, even though the AISP concessions are quite recent.

The increase in the utilization of AISP, mostly to Thailand, is particularly impressive and will have demonstrative effects. Utilization rates typically depend on:

- How well known the preferences are - farm exporters and other exporters may not yet be aware of what is offered by Thailand.
- How much trade is done informally - where a 'zero tariff' is already 'in effect' with no need for paperwork.
- How easy it is for producers to expand production for export - supply constraints, particularly in agriculture are still a problem.
- How hard it is for exporters to comply with certificate of origin requirements. Thai authorities acknowledge that because of their worries about transit trade exports to Thailand from China and Vietnam through the Lao PDR, the AISP Form and Lao certificate of origin compliance requirements are relatively strict.
- How big the differences are between the regular AFTA applied tariff rates and the trade preferences. In other words, is the work required worth the incentives offered? For example, if an agricultural export from the Lao PDR to Thailand is already eligible for a five percent AFTA tariff, the extra work required to obtain a zero tariff under ACMECS may not be worth the effort.
- Whether the rates applied at the Thai border are, in fact, consistent with the preferences being offered. There is some evidence from cross-border trade studies that Thai implementation at the border has lagged and that the tariffs actually applied at the border may be much higher than the official Thai policy requires.

Use of the AISP and 'One Way Free Trade Agreement' preferences is expected to increase even more in the future. Unlike the CEPT preferences, these concessions apply to products that are not on the Lao IL. Many of these are agricultural products. But full access to the concessions for Lao

Table 2.10: Usage of Form D (2001-2005)

Year	Numbers of Form D Issued by the Lao PDR	Total Export Value Declared under Form D (US\$)
2001	1	17,100.00
2002	26	277,410.00
2003	312	1,700,002.80
2004	279	2,636,138.96
From Jan-June 2005	451	4,221,571.75

Source: Statistics provided by the Foreign Trade Department, MOIC, 2005.

Table 2.11: Usage of Form AISP (2003-2005)

Year	Numbers of Form AISP Issued by the Lao PDR	Total Export Value Declared under Form AISP (US\$)
2003	6	26,558.90
2004	526	8,002,713.26
From Jan-June 2005	128	2,093,142.46

Source: Statistics provided by the Foreign Trade Department, MOIC, 2005.

26 - ACMECS is an abbreviation for the Ayeyawady-Chao Phraya-Mekong Economic Cooperation Strategy Organization.

agricultural exports to Thailand will require easing some serious supply constraints in Lao agriculture. These constraints are taken up in more detail later in the Report.

The Early Harvest Program (EHP) - ASEAN/China Free Trade Area (FTA)

Plans and negotiations are underway for the China - ASEAN FTA that will take effect in 2010 for most ASEAN countries and in 2015 for the Lao PDR. In July 2005, China and the ASEAN countries began reducing tariffs. Tariffs on 7,000 products will gradually be reduced or eliminated.

When implemented, this FTA will create an economic region with 1.7 billion consumers, a regional GDP of about US\$2 trillion and total trade estimated at US\$1.23 trillion. It will be the largest FTA in the world made up of developing countries. Free trade in most goods will be fully implemented for the original six ASEAN countries by 2010 and by 2015 for the newer ASEAN members with less developed economies including the Lao PDR.²⁷

As part of the agreement, an EHP was initiated in January 2004 to accelerate tariff reductions on selected products - mainly agricultural and food items. The EHP covers unprocessed agriculture products under Chapter 1 - 8 of the Customs HS and other specific products that may be agreed between individual ASEAN countries and China. China and Thailand signed a zero tariff agreement on fruits and other raw agricultural products that began in 2003. Products covered in the EHP between China and the Lao PDR are listed in Appendix Table 1. The applied tariffs range from zero to five percent.

Cross-border trade studies in the north show that there is high demand in China for raw agricultural products from the Lao PDR - particularly for land extensive crops such as corn, sugar cane

certificate of origin and watermelons. But these products are excluded from the agreement, along with other agricultural products in which the Lao PDR may have a comparative advantage including: dried onions, dried mushrooms, tomatoes, watermelons, mangoes and pineapples. Still, the EHP does offer the promise of increased agricultural exports - exports that are most likely to have broad benefits for many rural Lao families including the poor.

For now, those benefits are limited by the fact that more than half of all farms still produce for subsistence consumption only. In addition, dissemination of information on the EHP is lagging. In mid-2005, customs officers had not been informed of the tariff reduction schedule. There was even less information among traders and producers. The lack of information means that Lao farmers who could increase production for export may lose markets in Southern China to competitors in Myanmar, Thailand and Vietnam.

Vietnam

The main basis for expanded trade between the Lao PDR and Vietnam is the 'Cua Lo Agreement' signed in 1999, which covers bilateral preferential tax policies, and provides for gradual tariff reductions with the coverage and pace of the reductions agreed at annual meetings. An MOU signed in July 2005 expanded the products eligible for zero percent tariff and for a 50 percent reduction of the normal tariffs (either AFTA or MFN). Vietnam also reduced the local content requirement for Lao exports. To be eligible for concessions, only a 30 percent Lao content is required instead of the 40 percent local content requirement under AFTA's Rules of Origin (RO). In particular Vietnam granted zero tariffs to Lao exports of glutinous rice, wood, wood products, some tobacco products and motorbike accessories. Export of these products to Vietnam is expected to increase in subsequent years.

27 - China has recorded trade deficits with the ASEAN countries in the past few years. According to ASEAN Secretary-General Ong Keng Yong, trade between China and ASEAN reached US\$84.6 billion in the first ten months of 2004, up 35 percent year-on-year. He predicts bilateral trade may reach US\$100 billion in 2005.

Vietnam and the Lao PDR are also leading the implementation of GMS agreements to facilitate trade. In 1999, Vietnam, the Lao PDR and Thailand signed the 'Agreement on Facilitation of Cross-Border Transport of Goods and People', which was then joined by other GMS countries. The first Single-Stop Customs Inspection in the Lao PDR was established at the Dansavan-Lao Bao checkpoint with Vietnam in Savannakhet province on Road No 9. And Lao trucks have more permitted access to enter and rights to move about in Vietnam than they do to enter and move about in Thailand.

To promote border trade with the Lao PDR, Vietnam has also built a number of economic zones and upgraded markets along its border with the Lao PDR, notably in Lao Bao on Road No 9. The Master Plan for the establishment of the Cambodia-Lao PDR-Vietnam Development Triangle adopted at a 28 November 2004 Summit meeting of the three countries, promotes sub-regional economic integration by improving the business environment for cross-border economic activities, and allowing market forces to determine the pace and nature of cross-border among the three countries.

Finally, Vietnam also offers transit routes to the sea. The revised agreements on transit trade (2000) and on road transport (2001) between Vietnam and the Lao PDR expanded access for Lao goods to seaports in Vietnam. There are now no restrictions on the number of ports that Lao goods may use. Vietnam upgraded the Vung Ang port in Ha Tinh province in 2001 particularly for Lao transit cargos (this is the nearest port to Vientiane, about 550 kilometre via Road No. 8). But Cua Lo and Da Nang (in central Viet Nam) were also upgraded recently to serve as ports for Lao exports to, and imports from, North East Asia and beyond.

European Union's Generalized System of Preference (EU-GSP)

The Lao PDR has received trade preferences under the EU-GSP since the early 1990s. These prefer-

ences led to the rapid expansion of garment production and exports.

There were some early problems related to RO. But since 1997, the EU has relaxed the RO requirements and extended GSP coverage to Lao exports produced from imported intermediate inputs originating from any ASEAN country; as well as the GSP regional cumulation provisions (extended to South Asian Association for Regional Cooperation (SAARC) and African, Caribbean and Pacific (ACP) countries since the late 1990s).²⁸

Since 2002, almost all products from the Lao PDR are eligible for duty free export to all EU countries under the 'Everything But Arms' initiative for exports from the LDCs. The only products excluded in this trade preference are sugar, rice and bananas.

Policy Choices for the Future

Tariffs levels with leading trading partners in the region are changing rapidly in response to trade agreements. Trade preferences have increased and are important for exports including agriculture, manufactured exports and handicrafts that may be particularly beneficial for human development. On the other hand, NTBs that constrain exports produced by the poor, that favour companies over individual traders, and that protect favoured firms from imports may be detrimental for human development.

Some important and growing Lao exports are not governed or constrained by any of the regional trade agreements or by the WTO. These exports include timber, lumber, electricity, minerals and tourism. These exports - like many others - depend on good policy and careful negotiation of bilateral and FDI agreements by government.

The Lao PDR faces important decisions about how quickly to liberalize and open its economy

28 - The Lao PDR received two derogations in terms of the EU-GSP RO for certain textile products: Commission Regulation (EC) No. 1613/2000 of 24 July 2000 and No. 2186/2004 of 20 December 2004.

to trade beyond ASEAN and China. Some recommend immediate opening because “the best strategy for the Lao PDR is to welcome and take advantage of the pressures to extend its regional trade liberalising commitments to all countries on an MFN basis” (Fane and Khamlusa, 2005). Others caution that rapid trade liberalization would harm domestic producers that need more time to prepare for such competition and to overcome supply constraints to export opportunities (CPI/JICA, 2005).

Rapid liberalising on an MFN basis would not provide any solutions to problems of complying with RO requirements procedures or to the current under-utilization of preference under CEPT, AISP and EU-GSP. These problems could be more effectively solved by better harmonization of customs by ASEAN members and speeding up of administrative reform - for example, less cumbersome requirements for business registration, approval

of investment licenses, and of import and export licenses and permits.

Liberalization would also not provide any solutions to continuing problems of inadequate information about trade opportunities, trade agreements and trade preferences. These problems could be more effectively solved by a much more active role of the Lao National Chamber of Commerce and Industry (LNCCI) in information dissemination, by a ‘culture change’ in Lao private businesses - less passive waiting for customers and more aggressive pursuit of new export markets, new niches, new customers - and by expanded information flows to farmers on market opportunities and market prices.

How, and how fast, to liberalize will depend also on the impacts of international trade on human development - positive and negative - and likely changes in the composition of exports and imports in the future. These issues are taken up in the following chapters.



Chapter 3

LAO PDR EXPORTS WITH HIGH POTENTIAL FOR HUMAN DEVELOPMENT

Some exports contribute more directly to human development in the Lao PDR than others. Exports that contribute most directly include labour-intensive exports of garments, wood products, processed foods and handicrafts and international tourism, agricultural exports and labour 'exports' to Thailand.

These exports contribute more directly to human development - with less reliance on government policy or government transfers - because they create lots of employment particularly of women, they expand opportunity and choice, they increase incomes of rural families and rural women, and are more likely to reduce poverty directly, and to benefit rural and other communities via remittances sent or carried home and other multiplier effects.

Some of these exports are threatened by changes in world and regional trade agreements. Others bene-

fit. Some are informal or not yet legal. Some of the informal exports should be left alone for now. And normalization or legalization -when they occur - should preserve the benefits of the informal patterns for human development.

Manufactured Exports: Garments

Overview

Garment exports are particularly important because of the employment they create. At the end of 2004, there were 55 large to medium-size garment factories producing for export and two for the domestic market. There were 43 smaller firms doing piecework for exporters or producing for the domestic market. Overall employment in 2004 was 26,000 workers.



Garment factory workers in Vientiane Capital

Table 3.1: Garment Factories, Subcontractors, Employees, Product Quantity and Export Values from 1998-2005

Year	Number of Large and Medium- Size Companies	Sub Contractors and Others	Number of Workers	Relative Change in the Workforce (%)	Quantity (Pieces)	Export Value (Thousand US\$)	Growth Rate (%)
1998	58	10	17,200	N/A	27,064	76,146	N/A
1999	55	18	18,000	4.65	25,934	100,026	31.36
2000	53	26	19,000	5.56	25,560	108,087	8.06
2001	52	26	20,000	5.26	26,955	103,486	(4.26)
2002	53	27	21,462	7.31	23,114	103,380	(0.10)
2003	55	31	23,846	11.11	28,120	115,134	11.37
2004	57	43	26,000	9.03	31,909	131,728	14.41
2005	55	43	N/A	N/A	N/A	N/A	N/A

Source: Association of Lao Garment Industry (ALGI).

Most of the workers are rural women mainly from the northern provinces. Many come from the same districts as news filters back and migration and support networks are created. They migrate because agricultural work on family farms is hard and there are few other employment opportunities in rural areas.

In the factories some workers cut, some sew, some fold, some pack, and some inspect. Most firms provide meals and a dormitory. The 'garment girls' are well known in local markets for arriving in groups and for their fierce bargaining skills. Many are able to save and send money home. Some study English in their time off and hope for better opportunities in the future. Some move to service jobs in restaurants and hotels catering to international tourists. But many are worried about the future - worried that their skills are only suitable for the garment industry and that there will be no other options with the same pay if they lose their jobs.

Exports in 2004 totalled US\$131.7 million, accounting for 16 percent of total exports (refer Table 6.5). A significant 95 percent went to

the EU under the special GSP offered to LDC exports and the remainder were exported to Australia, Canada, Norway and other countries offering similar trade preferences to Lao garment exports. Garments accounted for 33.6 percent of merchandise exports in 2002-2003 (MOIC). But net foreign exchange earnings were much lower - only US\$31.5 million - because all fabric, thread, zips, buttons and most packaging materials are imported.

Structure of the Industry: Ownership, Marketing, Production and Design

The industry produces trousers, shorts, shirts, jackets, dresses, swimwear, uniforms, sportswear, and other knitted and woven garments.

Seventy-nine percent of production and 79 percent of employment are in FDI or JV firms. The 30 largest FDI and JV firms do their own marketing, employ sales agents and participate in trade shows. A few do their own design work, but most do not. This type of production is both more profitable and perhaps most likely to survive increased competition in world markets.

Table 3.2: Lao Garment Industry - Ownership and Production

		Foreign Direct Investment	Joint Venture	Domestic	Total
Garment Factories	No.	26	11	20	57
	%	46	19	35	100
Production Capacity	pieces/year	25,215,908	9,073,700	9,413,796	43,703,404
	%	58	21	21	100
Workers	No.	11,813	5,420	4,631	21,864
	%	54	25	21	100

Source: ALGI - excludes firms that do only sub-contract work.

Other FDI firms are subsidiaries and produce to order from the parent companies in Thailand, Taiwan Province of China, Vietnam or China. This type of production may be less sustainable in the future.

Sixteen of the Lao firms and some of the JV firms have limited working capital and do no marketing. They produce on order from customers who provide all fabric and other inputs, or they do some sub-contract work for the larger firms. This type of production is less profitable. Margins are increasingly squeezed.

A few FDI and JV garment firms are efficient and produce high quality products at competitive prices. But the majority are not as efficient as they need to be, not turning out the high quality products that they need to compete successfully in the future. Although Lao labour costs are among the lowest in the world, productivity and quality in these firms are not yet sufficient to compete against suppliers in China, India or Vietnam. Some firms produce for the domestic market, but that market will be fully open in 2008 to competition from other ASEAN producers, particularly Vietnam.

Constraints

The problems of low productivity and quality are the result of a number of continuing constraints that hinder the industry, which include:

- Lack of working capital: Domestic firms and even some JV firms have insufficient working capital to undertake marketing activities, design work, or even to finance exports, inputs and spare parts. The banking system is under-capitalized, slow, and borrower requirements are multiple. Letters of credit, payment clearances and foreign exchange are hard to obtain. For some, the system is simply not at all accessible.
- Lack of skilled labour: There is an ample supply of labour, but a limited number of highly skilled workers. Turn-over is high. Many firms find it hard to keep highly skilled workers, and thus are less productive and produce lower quality goods. (The idea of ‘efficiency wage’ pay - paying above market wages to retain the best workers, increase productivity and reduce training costs is not yet widely understood or implemented in the industry).
- Lack of supporting industries: While there are two firms that produce cotton denim textiles, they have been unable to meet demand. One produces only for its own garment production. There are a few firms producing packaging materials - plastic bags and cardboard cartons - but they cannot meet either the quality standards or the quantities needed by the industry. Everything else has

to be imported, mostly from Thailand. As a result the backward linkages of garment production in the domestic economy are less than they could be.

- **Customs clearance problems:** The industry depends on the timely arrival of imported intermediate goods and spare parts for repair of equipment - all with the tariff waivers or duties of one percent as specified by Lao policy. Clearance procedures and waivers for some of the larger firms are well-established. For the rest, the speed and the charges are unpredictable. Informal payments are often made.

- **High transport costs and inefficiencies:** The fees charged by Thai trucking companies for shipment of containers to ports in Thailand have recently been reduced. But shipments from Lao factories still go by truck across the border to Thailand where they are repacked into shipping containers and trucked to the ports in Bangkok or on the eastern seaboard. As a result, it not only takes extra and unnecessary time, but the transport costs (per kilometre) are much higher from the factory to the port than shipping from Thailand to markets in Europe.²⁹ This is a severe disadvantage in a competitive world market.

- **Inequitable and unpredictable taxation:** Until 2004, all the FDI firms paid a 20 percent profit tax, while Lao companies paid 35 percent. In addition, for smaller firms the tax payments are often negotiated with individual tax officers. This adds unpredictability to the problem of inadequate working capital.

- **Lack of market information:** Many of the garment factory managers interviewed in mid-2005 were not well informed about world market trends in the industry, or

about the likely impacts of AFTA of 2008 or the impacts of the ASEAN China FTA in 2015.

Worker Background, Pay, Remittances, Work Environment, and Turnover

Most garment workers are between 18 and 25 years old. Eighty percent are women and 80 percent are migrants from rural areas - 59 percent from the north, 26 percent from the south and 16 percent from the central region.

Less than three percent of garment workers are illiterate. About 40 percent of workers have completed primary school and attended lower secondary school; 16 percent have completed lower secondary school and attended upper secondary school. The educational attainment levels of garment workers are higher than the average rural attainments, particularly of females. These levels are consistent with worldwide findings that most factory workers have some secondary schooling. Workers with that level of attainment are more trainable, and more used to order and discipline.

Most of the workers are single and live in factory dormitories, some cramped and without much privacy. Very few receive much formal training in the factory, and the few workers that are trained hold supervisory positions. Most learn on-the-job, doing the simplest work first - such as first cutting thread, then simple sewing and later more skilled work for which they get more pay. Safety and crowding in the work places range from good in large plants with FDI, to cramped and potentially dangerous in other firms.

The workers are mainly paid piece-rates. They work six days a week, eight hours a day plus overtime, and the overtime is not voluntary. Most of those interviewed said that they did receive extra pay for the overtime work - in a few plants at a higher rate per piece but in most at the same rate. Pay ranges

29 - The transport cost from Vientiane to Bangkok port was around US\$ 950 per 20-foot container in 2005 (for a distance of 760 kilometres), while shipping from Bangkok to the main European ports cost US\$1,800 per 20-foot container (for a distance of about 18,500 kilometres) (Bui and Ngonvorarath, 2006).

from US\$25 to \$30 per month for starting workers to US\$100 per month for supervisors. While the pay for most workers is modest, it is steady and a new experience for young rural women. Many are able to buy items that they could not previously afford - mobile phones, motorbikes, fashionable clothing, jewellery and small appliances. They also buy food, drinks and apparel from local vendors that ply the garment factories. Thus the garment workers' wages multiply in the local economy, and they pay income taxes to government.

Many are also able to save and send, or carry money home at New Year. Seventy four percent of garment workers interviewed in 2005 sent money home - from US\$10 to \$70 - with frequencies ranging from small monthly amounts to large once a year amounts. Parents receiving the money make most of the decisions on how the money is used. Reported spending includes daily expenses, purchase of televisions and refrigerators, housing improvements, purchase of livestock, payment of school fees and health care, hiring of labour during peak demand periods. Some money is saved for emergencies.

For rural women, garment work is different from the more varied farm and domestic work that they have done before. Garment work is done in an urban setting. The work is long, unremitting, repetitious, and often done in crowded and hot conditions, with few breaks and no choice about overtime. It is likely that success in such a hard and demanding job may - for rural women - change their outlook, their view of what that they can do and their belief in themselves. At a most basic level, this may contribute more to future human development than the higher incomes and new patterns of consumption that garment employment provides.

Of course, the difficult working conditions contribute to high staff turnover. The work is hard. Not everyone can tolerate it. Some factories and supervisors are better than others. Turnover is three to five percent of workers per month, or up to more than 60 percent a year. Workers leave because of poor working conditions, low pay, or because their friends are leaving. Some move to other garment factories. Some go into services work - in hotels, restaurants and night spots. A few start businesses

in the city, some selling goods to garment workers. And some return home after working for a period of months or years.

Workers interviewed in 2005, said that they would remain in garment work for a while. About 50 percent said they would eventually return home to open a business, to go back to farming, and/or produce handicrafts and sewn items for sale, and to get married. The other half wanted to remain in the city and hoped also to start businesses including tailoring, grocery and beauty shops. They were concerned about how to secure financing for a new business. A few workers wanted to continue their studies. Most thought they were "too old" for further study.

While in the city, the workers are at risk from Sexually Transmitted Diseases (STDs) and HIV/AIDS. They are away from home and the constraints of family. Some work part time in the evening in service jobs. Female garment workers are viewed by some in society as promiscuous whether they are or not. These factors - and income opportunities - can lead some workers to risky behaviour. A few firms offer counselling to workers on STD and HIV/AIDS prevention. Most do not. Non-governmental Organizations (NGOs), UN agencies and the Ministry of Public Health are helping - trying to reach the workers with peer-to-peer counselling before they take such risks.

Outlook for the Future: Impact of Trade Agreements and Competition

Up until the end of 2004, Lao garment exports benefited not only from zero tariff GSP, but also from import quotas under the Multi-Fibre Arrangement (MFA) that provided Lao garment exports a protected market share - protected from other LDC exporters such as Bangladesh and Cambodia, and from other developing country exporters such as China, India and Vietnam.

At the beginning of 2005, a new international Agreement on Textiles and Clothing (ATC) replaced the MFA. The quotas and the protected market shares disappeared. Lao exports must now compete with other LDC exporters in GSP markets and with all other exporters elsewhere, including the US.

During 2005 garment exports were still holding up, but the future is uncertain. Some smaller firms have closed. Factory managers interviewed in April and May 2005 said that they had strong relationships of trust with EU buyers and expected those buyers would continue to place orders in the future. A few solid and committed EU buyers would be enough to keep the industry alive, but perhaps not at the current size. The safeguard agreements with China concluded by the EU and the US in 2005 may also protect and help the Lao industry in the short run - until the beginning of 2008 in the EU and the end of 2008 in the US.

There needs to be continuing improvement in both productivity and quality in the industry. Competitors are not, and will not be, standing still. Lao firms will need to do more extensive training and upgrading of workers, to pay effi-

ciency wages, to undertake more marketing and business development activities, and to undertake much more research into new and profitable niche products and markets.

There is a real danger that the industry may contract to the firms that are most efficient, most aggressive in marketing, most established with buyers, and most likely to produce high quality goods. If so, at least 10,000 young women might lose their jobs. Where would they go?

Work in tourism is a possibility, and some former garment workers are working in hotels and restaurants that serve international tourists. But total direct employment in tourism is still relatively low - about 18,000 jobs in 2004. It is more likely that most garment workers who lose their jobs would either return to uncertain prospects at home in agriculture, or join the more than 130,000 Lao women already working in Thailand.

Manufactured Exports: Wood Products

Overview

The forestry sector³⁰ has traditionally been one of the most important sources of exports - accounting for 40 percent of Lao merchandise exports in the early 1990s (Hierold, 2002). Prior to the imposition of a ban on log exports in August 2001, almost half of the official export value consisted of logs alone. Despite the ban, loopholes still exist. Large wood slabs - called 'sawn wood' - have been exported mainly to Thailand, Vietnam and China. And informal log exports have continued, and have, in fact, been increasing (see Chapter 4).

The export of logs and lumber for use by producers of wood products in Thailand, Vietnam or China deals a double blow to the Lao industry. Lao firms have less natural forest wood to use, while Lao



A wood sculptor in Luang Prabang Province

30 - Forests in the Lao PDR are classified in 5 categories: production forests, conservation forests, protection forests, regeneration forests and degraded forests.

timber goes to support exports from competitor countries. For example, Vietnam's exports of furniture and other manufactured wood products have increased very rapidly from US\$410 million in 2002 to US\$1.2 billion in 2004 and an estimated US\$1.6 billion in 2005 - more than 11 times the total value of all Lao timber and wood products to all countries combined in 2003. The industry in Vietnam depends on imports for up to 85 percent of its supply of wood and some of that comes from the Lao PDR (Financial Times, 2005).

The Lao wood industry employed 22,000 workers in 2001 and exports plywood - mainly to Thailand, China and Vietnam - and hardwood flooring, picture frames, furniture, kitchen implements and household containers to the EU and also to Thailand. Most products are made with natural forest wood. Some are made with plantation-grown wood. The industry uses imported supplies and imported machinery for cutting and rough finishing. But production processes are still very labour-intensive. The raw materials are Lao, and the firms are spread throughout many provinces. The domestic multiplier is comparatively large.

The industry has potential for increased exports and employment. However, it currently faces a number of obstacles that need addressing and these are identified in the following sections.

Structure of the Industry: Production, Design and Marketing

Manufactured wood product exports totalled US\$6.0 million in 2004 (refer Table 6.5), thereby accounting for 0.7 percent of total exports. The wood product industry comprises two main groups: primary processing and secondary processing. Eighty-nine percent of firms in the industry do 'secondary processing' - making flooring, furniture and other finished products for export and for the domestic market. The main (official and legal) export of primary processing firms is plywood.

There are only three remaining SOEs in the industry. Most SOEs were privatized. Some have been rented-out to foreign investors, and some have become JVs between the state and foreign investors under long-term contracts. For instance, Lao Challenge is the first type. The production plants were formerly state owned but in 1991 the firm was rented out to Taiwanese investors. Khounta Timber Processing Company Limited is the second type - a JV between the government and a Thai investor.

SOEs and former SOEs retain special and privileged access to quotas for natural forest wood. The rest of the firms are private and have less privileged access to quotas. New private foreign-owned wood processing firms are not permitted.

The industry - particularly the primary processing firms - may be 'overbuilt' for the available supply of raw materials, mainly because so much Lao timber is still exported. Many of the integrated saw mills do not have enough logs to operate anywhere near full capacity. Firms without privileged access to quotas are being downsized or forced out of business. For instance, 20 factories in Khammouane province were closed in 2003-2004.

Most quotas are now supplied from production forests³¹. The amounts supplied for some firms under the quotas have been decreasing, not increasing. The potential for growth and increased exports has been hurt even as competitors' exports - using Lao timber - have increased rapidly. Some firms have begun to use wood from plantations. One uses only plantation wood.

The Government has progressively encouraged the wood processing companies to use plantation wood and reduce the use of natural wood. Under the Five Year National Socio-Economic Development Plan (2001-2005), commercial tree plantations are intensively promoted. Because of high demand in Thailand, Vietnam and the south

31 - Production forests are defined as those forests and forestlands used for regular provision of timber and other forest products on a sustainable basis for national economic and social development requirements and for people's livelihoods without significant negative environmental impacts.

Table 3.3: Wood Processing Factories by Province in 2001

Province	Primary Industry			Secondary Industry	Capacity Input** (1,000 m ³)	Employees
	Sawmills	Miniature Sawmills	Plywood Factories	Furniture*		
Vientiane Capital	29	N/A	1	227	165	4,079
Khammouane	22	N/A	1	96	335	3,778
Savannakhet	21	2	N/A	211	182	3,734
Vientiane Province	20	6	N/A	198	83	2,234
Champasak	20	4	N/A	161	152	2,173
Bolikhamsay	6	N/A	N/A	76	100	1,412
Xayaboury	11	N/A	N/A	49	63	942
Luang Prabang	4	1	N/A	74	16	756
Saravanh	3	N/A	N/A	19	9	482
Bokeo	3	2	N/A	29	18	366
Xieng Khouang	2	4	N/A	32	8	352
Sekong	4	N/A	N/A	19	12	350
Luang Namtha	2	N/A	N/A	30	10	340
Oudomxay	3	N/A	N/A	10	15	320
Attapeu	5	N/A	N/A	10	20	280
Saysomboun	2	1	N/A	8	12	160
Phongsaly	1	N/A	N/A	11	5	138
Houaphanh	1	1	N/A	9	7	128
Total	159	21	2	1,269	1,212	22,024

* Furniture including rattan, bamboo, perfumed eagle wood factories

** Primary industry only

Source: DOF, Provincial Forestry Sections and Divisions of Industry and Handicrafts

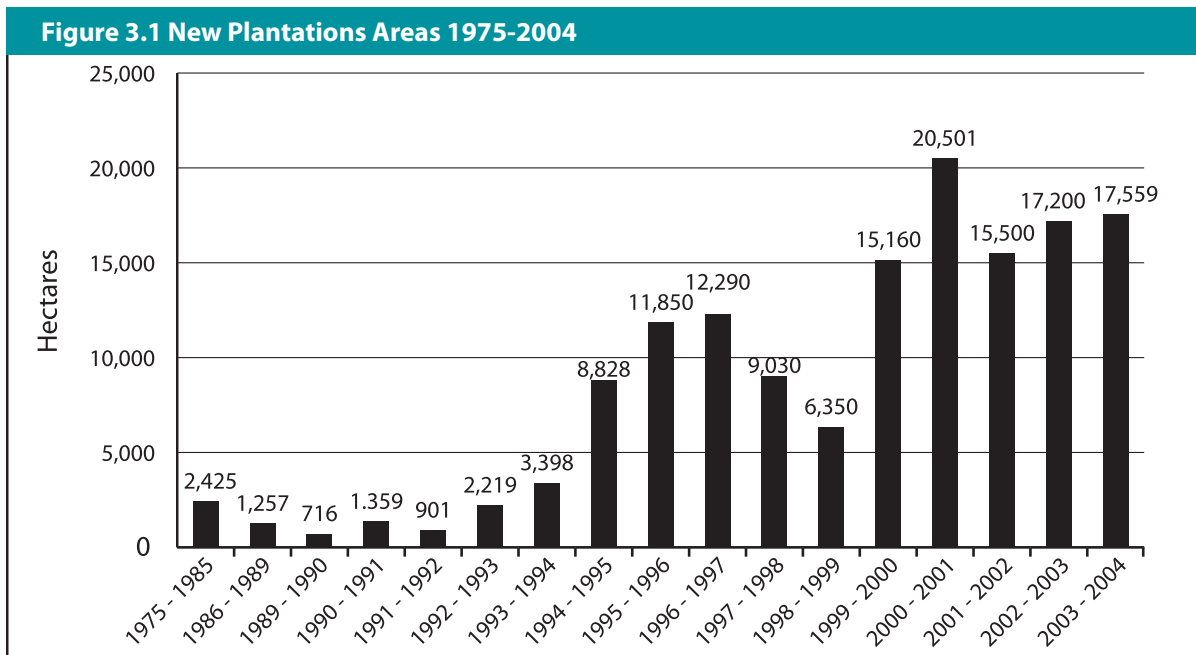
of China, and the reduction of natural wood supply in the region, there is a potential comparative advantage for forest plantations in the Lao PDR (MAF, 2005). Since 1975 approximately 146,600 hectares of plantations have been established, primarily in the central region.³² During 2003-2004 approximately 17,600 hectares of plantations were established.

Despite all the efforts, the productivity of plantations is below anticipated levels with seedling survival rates of 70 percent and overall survival rates of 66 percent partly due to weak management and inadequate monitoring.

A survey of Eucalyptus plantations conducted in Vientiane and Savannakhet provinces showed that the level of productivity varies with the size of the plantations. A few large commercial firms and self-financed planters achieved survival and growth rates in excess of targets as a result of high investment in fertilizers, mechanical site preparation, management and monitoring. Most of the smaller plantations were way below on all these measures.



Acacia plantation: wood is used for producing furniture for the international market



Source: DOF, MAF, 2005

32 - Apart from the efforts made by the Government, international agencies with cooperation from the Government have also implemented plantation promotion projects. Those international agencies include ADB, who supported the Industrial Tree Plantation Project (ITPP), JICA, DANIDA, Switzerland, GTZ and other donor agencies. The NAFRI/DANIDA Tree Seed Project aiming at developing technically improved nurseries and identifying and protecting mother trees which produce higher quality seeds; the Strengthening of the Extension System project (NAFES/Swiss); and the Promotion of Forestry Education Project (GTZ/National University of Laos) (MAF 2005, p. 27). However the effectiveness of those projects varies.

One firm with FDI that uses only plantation wood –(mainly Eucalyptus) to make furniture for exports is very successful - exporting to Thailand and the EU. The reasons for its success includes good management, good design and good marketing - with a focus on hotels and other commercial buyers. The designs are in response to the tastes of the clients. The firm attends and displays at trade shows. Very professional colour brochures are handed out, mailed and sent to potential buyers and agents as soft copies.

Good design and good marketing can thus substitute in part for high quality inputs from natural forests. For example, the SMP Enterprise makes tables and other furniture from hardwood stumps and scraps that other furniture makers do not want. The pieces have innovative and highly attractive designs, and are exported successfully at high prices to the EU.



Workers in a wood-processing factory near Vientiane Capital

Nevertheless, most firms - even those with good access to natural forest wood - are less competitive

in export markets. Few have design divisions. Local training in design is not available. Most designs are based on tastes in the domestic market, or are specified by export clients. In 2005, following the US-Lao bilateral trade agreement, US buyers have begun to specify designs for Lao producers. So far, little pro-active marketing is done.

Constraints: Inputs, Costs and FDI Barriers to Entry

The most serious constraints on wood product exports are the uncertain and decreasing supplies of natural forest wood. Many of the factories visited in 2005 were experiencing a shortage of wood.

The wood quota allocation mechanism is not transparent. Some firms are favoured over others, even if in management, design and export performance they are less successful than firms with lower quotas or confined to plantation wood alone. Quotas could, in principle, be assigned on the basis of export performance, or on the basis of competitive bidding. But before these options can be considered, other constraints have to be addressed. These include some of the same problems that affect garment exports:

- **Lack of skilled labour:** There is an ample supply of labour, but a limited number of highly skilled workers. Firms are poaching skilled workers from each other. Vietnamese workers tend to be more skilled than Lao workers and are preferred by some employers. Improved vocational training and apprenticeship programs would help address this problem. A new training program to be established by the Wood Products Association, with support from Germany, is a good start.
- **Customs clearance problems:** The industry depends on the import of intermediate goods and spare parts for repair of equipment. Managers report that the clearance procedures for required imports and for wood product exports are tedious, unpredictable and slow. Informal payments and under-reported imports and exports may be the norm.

- High transport costs: Wood product exports face the same or higher transport costs and inefficiencies as do garment exports. This is a severe disadvantage in competition with wood product exporters in Vietnam, Thailand, Indonesia or coastal China. The GMS road corridor projects will help, but the road improvements may also increase logging and log exports (see Chapter 4).

- Lack of market information: Information about potential high-value market opportunities is lacking and limited market research is undertaken. The Industry Associations³³ and the LNCCI need to be more active in this area. For example, flooring exporters produce only hardwood strip-flooring. Geometric parquet patterns, using hardwoods of different colours would be a much higher value export - particularly to the EU and the US. For now, if clients were to come with these designs, or Lao producers were to see them at trade fairs, then such exports could begin. If not, the opportunity will be missed.

- Barriers to entry: FDI in the industry - which could help address problems of information, design, marketing and market access - is currently limited by policy to investment in existing firms only, and to the use of plantation wood only. This policy urgently needs review if the potential of wood product exports is to be realized.

Worker Background, Pay and Work Patterns

Most workers in the industry are men and most come from communities surrounding the factories. They walk or come to work on bicycles or motor-bikes. Most have attended or completed only primary school and have learned their skills gradually on-the-job. Some have worked for the same firms for many years, through changes in ownership and in the products produced.

Some women - some wives of the male workers and some single - also work in the industry. Men usually do heavy lifting and operate cutting, planning and fastening machines. Women do weaving, sanding, finishing, and polishing work, and also do inspection, quality control and packaging of smaller items.



Women sanding and polishing spatulas, ladles, tissue cases and pots at a SMP Enterprise, Vientiane Capital.

33 - The Industry Associations include the Lao Wood and Products Export Group and Furniture, Design and Interior Decoration Group.

Average wage rates for wood processing workers in Vientiane Capital:

Unskilled labour	US\$25 - \$35 per month
Semi Skilled labour	US\$35 - \$40 per month
Skilled	US\$50 - \$70 per month
Skilled machine operators	US\$100 plus per month

Apart from the long-term workers, there are temporary workers - students on holiday, farm workers during the dry season, and perhaps some casual Vietnamese workers - who are paid a lump sum of US\$1.10 to \$1.30 per day.

A few workers have graduated from the one vocational training program for the wood products industry (Pakpasack), but skilled workers are scarce and this limits productivity and quality.³⁴ Managers interviewed in 2005 said that Lao workers were as productive as Thai workers but not as productive as Vietnamese or Chinese workers. Wage rates in the Lao industry are less than half those in Thailand, but may be higher than those paid in some Chinese and Vietnamese firms. One Lao manager said, "If I could take Vietnamese workers, I would do it. Vietnamese work harder". The labour productivity gap is about 20 percent (ITC, 2005).

Safety on the job varies from one plant to another. Some plants seem careful and concerned, others seem less concerned and even careless. Eye protection is under-utilized in many firms. Most firms pay for medical care directly when there is an injury.

Workers' wages are used for a variety of purposes ranging from consumption and entertainment expenses by single male workers, to family investment and savings by couples who both work in the firm. Some wages are used to support children's

education. One female worker in a factory laminating section said that she is the main person taking care of her family. She supports her younger brothers who are still in school and is responsible for covering most household expenses. A young student working as a daily wage worker during her semester break is earning money for school fees and other school costs. Thus the wages and the benefits spread in families, and into investments for the future.

All workers reported that they were better off with regular work in the industry than they had been before. They are more confident as a result of having stable employment and income, and proud that they are able support their families.

The fact that most workers live in the community means they can also grow rice and other crops. Some - the better paid workers particularly - also run small businesses on the side or do off-hours work related to skills learned on-the-job. One is an electrician in the plant. He does electrical work on the side for household customers. Others run saunas and rent out badminton courts.

Most of the workers said that they hoped some day to own their own business in furniture-making or retail trade. Most planned to stay in the industry at least until they had saved enough to finance a business of their own.

The wood products industry also affects plantation owners and workers. (The impacts of the cutting of the natural forests are taken up in Chapter 4.) To illustrate, the Burapha furniture factory uses only plantation wood, mainly Eucalyptus, Acacia, and Teak and has contracts with 13 farm families in Huasieng village in Vientiane Capital to plant, grow and cut the wood. The company provides the seeds (1,600-1,900 seeds per hectare), fencing wire, fertilizers and technical assistance. In turn, the farmers have to deliver 33.3 tons of wood per hectare at harvest - about five years after planting for Eucalyptus. Any excess of wood harvested can

34 - Training and projects for training are increasingly planned and carried out. A two-year project to promote wood-processing companies has been carried out by cooperation between the LNCCI and the EU. Training will be provided by EU experts to companies in Vientiane, Luang Prabang and Pakse, as well as to local trainers and consultants.

be sold by the families at market prices which in 2005 were 130,000 Lao Kip per ton for wood pulp, 260,000 Lao Kip per ton for Acacia and 300,000 Lao Kip per ton for Eucalyptus.

So far the experience of the villagers has been mixed. Seeds have been provided to them, but supplies of fencing, fertilizer and technical assistance have been inadequate. In some areas the harvest threshold was not reached and there was no extra wood to sell. Some villagers were cheated by people who said they were from the company and took some of the logs. The villagers also reported that the Eucalyptus trees reduced soil moisture and lowered the water level in wells.

Cutting trees from production forests and plantations also provides employment to local people. For example, the BGA Company, which is responsible for a plantation project assisted by the ADB, employs villagers on a daily basis as labourers for less than US\$1 a day. The company says that this work provides enough income for the employees and “they no longer have to travel to Thailand to find work” (Lang, 2003). But this employment is not steady - it occurs at the early stages of plantations (for clearing land, planting, etc) and at harvest about five years later (Lang, 2003).

Outlook for the Future

The Lao wood industry has potential for increased exports and employment, particularly in the higher value secondary processing exports. But its future development depends to a large extent on a proper enforcement of existing wood export

quotas, a more equal access to natural forest wood quotas for all Lao factories, more FDI and innovation leading to an improvement in product design and marketing. There is also a need to significantly improve the skills of the labour force through more vocational training programmes in woodwork design and quality.

It might be worthwhile for Lao wood manufacturers to consider the growing market of certified natural wood products, harvested and produced in line with the principles of sustainable forestry.

Manufactured Exports: Processed Food

Overview

Processing of Lao agricultural produce for export has high potential for increasing employment, mainly of women in labour-intensive preparation and packing, and for increasing rural farm incomes by providing a guaranteed market for the produce to be processed. Currently, less than one percent of Lao agricultural production is processed. In Thailand the proportion is 50 percent (ADB 2004).

In early 2006, there were only two plants producing for export, but the opportunities for additional firms and for more exports are large. Lao processed food exports receive duty free access to the EU, low tariff access to the US, and tariff preferences to Thailand, Malaysia and Vietnam under the AISP and other agreements.

Table 3.4 Tariff Rates for Processed-Food Exports to Selected ASEAN Countries under AISP and Other Agreements

Export Destination	Preserved Fruit Products	Fruit Juice	Fruit Jam
Malaysia	0-5%	5%	0%
Thailand*	0%	5%**	0%
Vietnam	5%	5%	N/A

* AISP Sources: <http://www.aseansec.org> (2005) and Royal Thai Embassy (2005). **CEPT rate in 2005, there is no Thai AISP for fruit juice.

In addition, there is growing demand in the EU, Japan and the US for organic products. Some Lao processed food exports - including coffee and processed fruit - are labelled as organic and accepted as such by consumers in the EU. But larger scale organic exports will need to meet formal certification requirements.

The potential of processed food exports is increasingly recognized by foreign investors. In early 2006 there were approved plans for foreign investments in the production and export of coconut milk, canned tomatoes, cassava and sugar.

Structure of the Industry

The two existing firms were founded in the mid 1990s. But exports from both have grown rapidly since 2001-2002.

The first firm is based at two cooperatives - 'Lao Farmers' Products' and 'Batieng Products' with the same owner. The cooperatives were initially created with support from a French NGO. The firm manufactures and exports fruit jams, fruit juices, dried fruit and other products to the EU, particularly to France. In 2004-2005, 34 tons of pineapple were processed and exported. Recently

the firm has begun exporting Lao rice to the EU. All products are labelled as 'organic' and are sold in the EU through 'fair trade' networks. The firm is now working to obtain formal organic certification from the EU for its products.

Lao Agro Industry Co. Ltd. (LAICO) is a larger firm with 50/50 Thai/Lao share holding. It has recently upgraded its production systems to meet international standards, including certificates of systems of Good Manufacturing Practice (GMP) and of Hazard Analysis and Critical Control Point (HACCP).

The plant produces canned pickled garlic, sugar palm seed, pickled mango, baby corn, rambutan, pickled cabbage and bamboo shoots. Ninety percent of production (120-130 shipping containers a year) was exported in 2003-2004 to the EU (particularly to the UK) and to Thailand and Vietnam. Lao consumers prefer fresh produce or processed foods imported from Thailand. Only 10 percent of LAICO's production is sold locally.

Both plants are labour-intensive although the patterns of production vary somewhat. LAICO uses more machinery than Lao Farmers' Products



Lao Farmer Products

because Lao Farmers' Products is a 'fair trade' firm with an NGO origin that wants, as a matter of policy, to maximize employment. Both are competitive and export successfully.

Both firms buy almost all of their inputs from Lao farmers, either directly (in the case of the agricultural cooperatives) or through middlemen. Some mangos are still imported for processing from Thailand. These imports are expected to be replaced by domestic production by 2010.

Both firms experimented with various patterns of contract farming but have given it up for now. The main problem was that the prices offered to farmers by the firms were not high enough in comparison to export prices or even domestic market prices at harvest time. Farmers sold for the highest available price rather than honour the contracts. Lao Farmers' Products still offers about a 10 percent price premium over domestic market prices to farmers in the cooperatives. Otherwise, both firms depend mainly on purchases at harvest time from middlemen who buy directly from the farmers.

Constraints

The food processing firms face many of the same constraints as the manufacturing exporters. Customs clearances are slow and difficult for required imports including packaging materials, labels and spare parts. Export permits are multiple and slow. For example, labels printed in Thailand have to be approved by the Ministry of Information and Culture (MIC) before they can be used. Transport costs to ports are high, and the necessary intermediate goods, the food labels for example, are still not produced in the Lao PDR.

The firms and the farmers that supply them have limited or no access to formal credit. One of the food processing firms relies on advance payments from buyers in Europe to fund its purchases from farmers. Micro-credit experiments in rural areas have been successful, but so far the schemes are not widely available.

The most serious constraint - one shared by wood product exporters - is a 'shortage' of raw materials, namely agricultural produce for processing.

The problem is so severe that the existing firms operate way below capacity - in some cases, and at some times of the year, below 50 percent of what they could produce. As a result, there is less employment, and fewer exports than there could and should be.

Part of the explanation is that only 40 percent of Lao farmers produce for the market. Some crops are seasonal and all are subject to problems of weather and pests. If the harvest is beneath expectations, processed food production will drop unless labour and machinery can be shifted to other products available in greater quantity, at later harvest times, or year-round. Another explanation is that there are high post-harvest losses due to inadequate storage and handling - of baby corn for example. But the main explanation is that the firms are not offering prices that are competitive with the other options now available to the farmers producing for the market and for export.

For example, LAICO wants to process sweet corn but cannot buy enough at the price they want to pay because farmers can earn more by exporting sweet corn to Thailand. LAICO also wants to process organic cabbage, but again has been so far unwilling to pay as much as Thai buyers. Corn and soybeans grown in Houaphanh province are exported to Vietnam because the prices offered by the food processing firms or local middlemen are not high enough (because of domestic transport costs) to compete with the closer markets across the border in Vietnam.

It is understandable that food processing firms want to obtain inputs at low cost. LAICO is planning to grow its own sweet corn instead of buying from farmers. But the firm will still need to hire farm labour so it is not clear if this will result in an increased supply at a low cost. In fact, it is much more expensive for the food processing firms to leave up to half of their plant capacity unused than to pay farmers competitive prices with a high quality premium and thus to fully utilize plant capacity and double export sales. The price premium will need to be above the ten percent premium offered by Lao Farmers' Products, which although running at a higher capacity than LAICO, is still far from operating at full capacity.

Competitive prices with a quality premium could also revive contract farming patterns. These work quite well in cross-border contract farming by Thai food processors with Lao farmers in Bokeo. There is no reason why the same patterns could not work between Lao food processors and Lao farmers without the cross-border complications. Contract farming would reduce the role (and costs) of middlemen and thus reduce the net premium that the firms would have to pay to make the contracts appealing enough so that farmers would honour them and assure the supplies needed for processing.

More widespread promotion of contract farming would have multiple benefits. It would increase domestic inputs to existing and new processing plants. It could induce more farmers to convert from subsistence to commercial production because of reduced risk, better agricultural inputs and guaranteed prices. And by increasing the supply of crops for processing it could lead to economies of scale in processing with greater competitiveness and thus more exports.

Workers, Working Conditions and Linkages

LAICO and Lao Farmers' Products employ 760 people mainly from communities near the plants. Employees are between 16 and 45 years old and the majority (79 percent) are women. Full time workers earn US\$50 per month. Part-time workers are hired during peak harvest periods and earn US\$1.30 per day.

Working conditions in the two plants are good. Both meet GMP and HACCP standards. The plants are well ventilated. Workers are provided with caps, boots and gloves.

In addition to the direct employment of 760 people, the two plants generate income for at least 12,000 farmers and for the middlemen and truck drivers who purchase and transport the crops and NTFPs - including bamboo shoots, mushrooms and malva nuts - to be processed.

The middlemen select, purchase and transport crops from farmers in Saysomboun Special Zone, Vientiane, Xieng Khouang, Luang Prabang and Bolikhamxay provinces. In the absence of large

scale contract farming, the plants need the middlemen to increase the available supply. The firms buy at fixed prices from these middlemen who earn the spread between those prices and what they pay the farmers plus their costs of transport to the plants. The system works, but the total supply is significantly below the plant's production capacity.

Overall, the Lao food processing industry is still in its infancy. There is great opportunity and market access for a much larger industry. A larger industry would contribute to human development by increasing direct employment opportunities for women, and by offering farmers an assured market for crops, thus reducing rural poverty and expanding opportunities and choices for rural families and their children.

Handicrafts

Overview

Handicraft exports have high potential to increase the income and choices of rural women and families, including minority households and workers who may have few other options for improved standards of living for themselves and their children. Handicraft exports include woven silk and cotton scarves, skirts, blouses, skirt borders, and wall hangings; cross-stitched panels; silver and gold jewellery; wood carvings and sculptures; and household items of woven rattan and bamboo.

Handicraft exports in 2004 totalled US\$13.0 million accounting for 1.6 percent of total exports. Handicraft exports are expected to exceed US\$15 million in 2005-2006 (Paseuth and Phimmahasay, 2006).

This total is conservative as it does not include sales to international tourists, sales on the internet, or unrecorded sales in border markets and other informal exports to China, Thailand and Vietnam. Even so, US\$15 million of handicraft exports exceeds the total value of Lao coffee exports in 2004-2005.

Major markets for Lao handicrafts include Australia, the EU, Japan and potentially the US -



Handicraft shop in Luang Prabang Province

initially to the more than 1 million Lao Americans. In all of these markets, and some ASEAN markets, Lao handicrafts enter either duty free under GSP, or face very low tariffs. Market access is not a problem, but increasing production to meet potential demand may be.

Many rural workers produce handicrafts - including traditional patterns and items for their own use - during the dry season and other periods of low labour demand in agriculture. At least 120,000 people produce some items for sale, but only an estimated 20,000 people work full time producing higher quality items for sale and export (Paseuth and Phimmahasay, 2006). The handicrafts sector therefore provides an important source of supplementary income for many Lao families.

The majority of handicraft businesses are small home-based businesses. Others work in or near the large garment firms in Vientiane and other centres doing piecework with inputs, patterns, even looms and work spaces supplied by the firms. Weaving of silk and cotton textiles and embroidery is done by women. Jewellery making and wood sculpting is done mostly by men. Weaving of rattan and bamboo items is done by both.

Structure

The producers of handicrafts are spread widely throughout the country and most are not organized, except at village levels. The fact that handicrafts are widely produced and in various patterns by different ethnic groups throughout the country is part of their special appeal to buyers and also a measure how widely the benefits of increased exports might spread.

There is a Lao Handicraft Association with 101 members, mainly buyers, retailers and exporters. The Association is working with Japan and other importing countries to assist Lao handicraft exports to meet international import standards. The Association is helping sellers understand and meet foreign demand for different weights, lengths and colours in different seasons (winter versus summer) and in different export markets. But this information mostly stays with shops or companies. It does not directly reach producers except in the form of new orders, new patterns or new colours.

The Government has reduced the profit taxes on producers and the Department of Handicrafts of the Ministry of Energy and Mining (MEM) is helping

village handicraft producers to organize and register producer groups, and provide them with better information. There are now 18 such groups. The private sector will still gather the detailed export market information, help with design and inputs and buy the products for export. But the producer groups may begin to have a bit more bargaining power.

Some of the production is now more concentrated at the high-end of the market and for lower priced items, particularly traditional-style skirt borders and skirts that the Lao government encourages Lao women to wear. These inexpensive skirts are sold successfully at a 50 percent mark-up by Lao women traders in border markets in Thailand and Vietnam (GRID, 2006).

The higher quality and high-end exports include natural-dye woven silk and cotton textiles - based on traditional patterns and using traditional techniques in yarn production and weaving. These products are highly valued, in great demand, and highly priced. A single silk scarf sells for US\$150 or more. These high-end items sell mainly to wealthy Lao consumers and to visiting foreigners. Some visitors from Japan make the trip just to shop. Some of the textiles are sold in trade shows in Europe, Japan and the US. The demand is so strong for the best quality items that there is a

waiting list. Buyers often place orders that cannot be filled until months later. Some items have been sold directly to US museums which display traditional textiles.

Silver jewellery is another successful export. The items produced include necklaces, bracelets, rings, earrings and anklets - mainly traditional patterns but with some adaptations to foreign tastes. Silver exports also include flatware and bowls. Some of the 'export' takes place in sales to foreign buyers at the Morning Market in Vientiane Capital, some of whom come to the country just to buy. There is rapidly increasing demand for Lao silverware in China, and, as a result, Hong Kong investors are working with the LNCCI to increase production.

Traditional and artistic Lao wood-craft exports are sold to international travellers and in international trade fairs - for example at the Expo in Japan from March to September 2005, where interest and demand were strong.

Recorded exports of bamboo and rattan products are also increasing. As with other handicrafts, the (recorded) exports often take the form of sales to foreigners visiting or living in the country. Many more sales take place informally at border markets.

Table 3.5: Markets for Rattan Products Produced in Vientiane Capital³⁵

Markets	Classifications	Percentage	Total
Foreign market	Export	20.0	53%
	Foreign Tourists	21.2	
	Foreigners in Lao PDR	10.4	
	Lao people living abroad	1.4	
Domestic Market	Lao people	47.0	47%

Source: CPI/JICA, 2005

35 - Questionnaire surveys of five rattan enterprises in Vientiane Capital

Problems and Constraints

The problems and constraints include:

- Shortages of raw materials, particularly silk: Local silk production is constrained mainly by a shortage of mulberry trees. Planting programs are underway. Meanwhile, silk yarn is being imported from China and Vietnam. Use of imported silk yarn from China could cause country of origin problems for exports to the EU, and use of other than Lao silk could result in dilution of the reputation and distinctiveness of Lao products in export markets.

- Import of silver and gold for jewellery making: This adds to the cost of these crafts and hurts their competitiveness in world markets. Both gold and silver are mined in the country by informal small-scale miners and by large mining projects including the Sepon mine. But little or none of this production is available for purchase by jewellery makers. The informal production is sold to Thai buyers. The Sepon production of gold bars (that also contain some silver) is sent to Australia where the silver is separated from the gold.

- Passing-on of skills: There is a danger and some anecdotal evidence that fewer young women and men are interested in learning, sustaining and enhancing the skills needed to continue the production of high-quality traditional handicrafts. Other options available to the young, including work in garment and food processing factories and migration to take higher paying jobs in Thailand, may be more attractive.

- Other supply-side constraints: These include inadequate access to credit for expanding and improving production, failure to meet quality standards, and a potential conflict between the need for increased schooling of young women, and household demands on their time for handicraft production.

- Importing country standards: While market access in terms of applied tariffs is not a problem, some countries impose multiple standards for high-volume imports of Lao handicrafts. For example, large-scale Lao exports of woven textiles to Japan have to meet very strict Japanese quality certification. The requirements include labelling of the materials and dyes used, washing instructions and predictions on how colourfast the textile will be. If these standards can be met, a Japanese expert predicts that demand for Lao handicrafts would be very strong.

Earnings, Equity, and Other Impacts on Human Development



Weavers at work in Luang Prabang Province

The most popular and successful handicrafts for export are woven textiles made by women, including minority women whose traditional designs are popular with tourists and other foreign buyers. The potential impact on human development of increasing these exports is large. Women would have and control more income, and could provide better health care and education for their children.

Full time handicraft workers including weavers, wood carvers and jewellery-makers typically earn an average of US\$50 per month - more than most garment workers. Some do much better than that. One weaver in Luang Namtha is earning enough to send her three children to university. A Lao carver, using 'rain tree' (sama wood, that is otherwise used for fences or firewood because it is too soft) is making and selling large carved elephants.

He recently sold four for US\$90 each to a French customer. The French buyer subsequently ordered eight more, presumably for export and resale. The carvings are 70 centimetres tall. There are many other carvers, some doing custom orders. The Morning Market in Vientiane Capital is the usual outlet and most of the sales of elephant carvings are to foreigners, some on special orders.

But many producers get only a small proportion of the eventual retail prices. For example, a woven silk skirt border sold by a weaver for US\$1.50 is

marked up to US\$3 or \$4 in the Morning Market or sold by traders in border markets in Thailand for US\$5 or \$6. A natural-dye silk textile that may earn the weaver US\$25 to \$30 will sell for US\$125 to \$150 in a shop in Vientiane to foreign customers, or may eventually sell in Bangkok as a 'Thai antique' for even more. There is clearly an opportunity here for a marketing cooperative among producers and for more direct sales of high-value textiles on the internet. The MEM initiative is a start and should help give producers more bargaining power. Some shops employing

Box 3.1: Phaeng Mai Gallery

Ms Kongthong and Ms Viengkham Nanthavongdouangsy are sisters who own Phaeng Mai Gallery, a boutique selling silk fabrics. One of the characteristics of the boutique is that the sisters use traditional Lao designs and craftsmanship to produce new products that are suited to the Japanese and western markets. The name of the sisters' mother is Phaeng and the boutique takes part of its name from her. Their mother wove silk fabrics in Samneua in keeping with the local culture. Silk weaving was a skill handed down from generation to generation in the family. The sisters centered their business on the domestic market until 1993, when they exhibited their products for the first time at an exhibition held in Tokyo. They have exhibited and learned more about the market in Japan every year since then.

The total sales of Phaeng Mai Gallery expanded 1.8-fold in the seven years from 1996 to 2003. Their overseas market sales were 30 percent in 1996, but increased to 70 percent in 2003. Exports to Japan account for 70 percent of all overseas sales. The gallery now exports to the US, Korea, Italy and Singapore. Since 1996, other galleries also run by women have entered the market, particularly for the higher-priced items. As a result, the sisters have developed and increased sales of lower-priced, casual products still based on traditional Lao patterns but designed with suggestions from their Japanese buyers. To maintain market share, the sisters focus on researching and developing new designs. One of the sisters is now learning Japanese.

Source: GRID, 2006

Box 3.2: Rattan Sales

Ms. Sot produces rattan handicrafts. She opened a rattan work shop in her village to display and sell rattan products. In addition to her own work, she buys products from other household producers in the village. She is now supplying handicraft shops in Vientiane Capital and selling directly to merchants from Thailand who come to buy rattan products (particularly rattan bag handles) almost every week. They buy an average of 100 rattan bag handles per week at 3,500 Lao Kip per handle.

Source: GRID, 2006

their own weavers are worried that their high-value designs will be copied. To reduce this risk, they are paying workers more so they won't move to other firms, and also forbidding the workers to take any work home. This may mean that producers' bargaining power is, in fact, already beginning to increase.

Some women who make handicrafts at home for export are still expected to take on the major share of household chores. But at least one study found that weaving for export provided high incomes for the weavers, contributed to their sense of self-esteem, and led to changes in the household division of labour. Husbands and sons did more of the household work including cooking, fetching water and collecting fire wood (GRID, 2006).

Women have also been active and successful as entrepreneurs, increasing sales and exports of handicrafts.

Preservation of Culture

Handicraft production is a traditional part of family life. Handicraft production for exports can thus help preserve a part of traditional Lao culture. At the lower-end of the market and in response to some foreign markets, there is some mixing of styles and production of items that are not at all traditional.

But preservation of traditional patterns and products is happening at the high-end of the export market, where traditional patterns, inputs, natural dyes and weaving techniques are used. These exports are sold for very high prices to foreign buyers. Only the wealthiest Lao buyers can afford them now. But if exports keep the skills and patterns alive, more Lao buyers will be able to afford them later on as incomes increase.

A final way to help preserve traditional handicrafts and to enhance appreciation of these among Lao people would be a program similar to one in

Japan. Each year, one craftsman or craftswoman is designated a 'living national treasure' with his or her works photographed, displayed and promoted in exhibits throughout the country and abroad.

International Tourism

Overview



Backpackers at the checkpoint in Houay Xay, Bokeo Province bordering Thailand

International tourism is the Lao PDR's largest service export - as measured by total international tourist expenditures. Tourism has linkages to the domestic economy for food products, handicrafts, transport, restaurants, entertainment and other services. Eco-tourism benefits rural communities. Tourism can also lead to the protection of the environment where an unspoiled environment is one of the main tourist attractions. This is not, of course, guaranteed. Good policy and learning from the mistakes of other countries in the region will be important as the number of tourists visiting the Lao PDR increases.

Total arrivals in 2004 were almost 900,000, of which residents from Thailand, Vietnam and China accounted for 54 percent of the total³⁶. Border pass holders (i.e. Thai, Vietnamese and Chinese residents) are lower yield tourists compared to other international tourists who tend to spend more and stay longer. International tourists

36 - The LNTA does not count as "tourists" the fraction of border-pass holder who report (in sample surveys) that the purpose of their visit is cross-border trade only.

Table 3.6: Tourist Arrivals to the Lao PDR by Category 2003-2004

Category	Border Pass		Passport		Total	
	2003	2004	2003	2004	2003	2004
Total	346,443	487,019	289,918	407,787	636,361	894,806
International Tourists	N/A	N/A	195,043	236,484	195,043	236,484
Regional Tourists	346,443	487,019	94,875	171,303	441,318	658,322
Thailand	324,657	413,975	53,091	75,702	377,748	489,677
Vietnam	12,329	58,404	29,265	72,412	41,594	130,816
China	9,457	14,640	11,775	18,379	21,232	33,019
Myanmar	N/A	N/A	744	939	744	939
Cambodia	N/A	N/A	N/A	3,871	N/A	3,871

Source: LNTA annual surveys, 2003 and 2004

Table 3.7: Revenue from Tourism by Category 2004

Category	Tourist Arrivals (Persons)	Average Length Of Stay (Days)	Average Expenditure per Person per Day (US\$)	Revenue from Tourism in 2004 (US\$)
Total	894,806	N/A	N/A	118,947,707
International Tourist	241,294	6.5	59	92,536,249
Regional Tourist	653,512	N/A	N/A	26,411,458
Thai (Passport)	75,702	3	40	9,084,240
Thai (Border pass)	413,975	1	20	8,279,500
Vietnam (Passport)	72,412	3	30	6,517,080
Vietnam (Border pass)	58,404	1	12	700,848
China (Passport)	18,379	3	30	1,654,110
China (Border pass)	14,640	1	12	175,680
Average	N/A	4.25	42	N/A

Source: LNTA annual surveys, 2003 and 2004

Table 3.8: Average Distribution of International Tourist Expenditures, 2003-2004

Accommodation	Food and Beverages	Souvenirs	Entertainment	Local Transportation	Other
24.5 %	22.5 %	13.5 %	8.5 %	23.5 %	7.5 %

Source: LNTA annual surveys, 2003 and 2004. A correction was made to the 2004 numbers which total 110%. The amount reported in 'other' was reduced to 7.5 percent from 20 percent.

(from other than the GMS countries) accounted for 26 percent of arrivals but 78 percent of total expenditures.

Total tourist expenditures in 2004 were almost US\$119 million. The average length of stay of non-GMS tourists was 6.5 nights and the average daily expenditure was US\$59. The averages for GMS regional tourists, particularly of border-pass holders were much lower - for example, only one night and US\$20 for Thai border pass holders.

The expenditure and revenue numbers are based on an annual Lao National Tourism Administration (LNTA) survey of 1,500 tourists. Tourists are interviewed in airports, bus stations and at major border crossings³⁷. The average percentage distribution of international (non-GMS) tourists' expenditures for 2003-2004 from the latest two surveys is shown in the Table 3.8.

The LNTA says that the 'Other' category is mainly the cost of visas for those who required a visa to enter the Lao PDR.

Structure of the Industry

In 2005, there were 12,000 rooms in hotels and guest houses, 62 tour companies, three international airports and 13 international border crossings, where visas on arrival are available. There is FDI in the industry, mainly concentrated in high-end hotels and restaurants. But most hotels, guest



Tourists enjoying the beautiful landscape around Vang Vieng, Vientiane Province

houses and other facilities are Lao owned. Direct employment in these facilities and in community based tourism (CBT) was almost 18,000, at least half women.

Most non-GMS international tourists still arrive from Bangkok. But there are now daily flights to Vientiane from China, Vietnam and Cambodia, and three non-stop flights a week from Taiwan Province of China.

37 - The WTO recommends that each country conduct a survey of 1 percent of tourists each year. The Lao survey covers more than 1.5 percent. Participation in the survey is voluntary, with an estimated response rate of only 3.1 percent. Thus there may be some response bias. Younger tourists (backpackers) may be more willing to respond than older and wealthier tourists. The available information may understate actual tourist expenditures on rooms and meals and perhaps also on transport.

Only 15 percent of international tourists arrive on a package tour, and most of the packages are purchased in their home countries or in Thailand. Chinese tour groups began arriving in 2005. Their numbers will increase rapidly in future years, once Lao attractions and relative prices become better known.

ASEAN and GMS agreements have helped tourism through sub-regional tourism promotion and agreements on reciprocal visa waivers for ASEAN nationals. The LNTA has set a goal of 1.5 million tourists by the year 2010, and double that by 2020. These targets should be met with modest changes in policy.

Constraints

The industry faces some constraints including:

- **Lack of information and promotion:** International tourists are asked in the LNTA annual survey how they obtained information about the Lao PDR. Only two sources were mentioned by 80 percent or more in past surveys: friends and a magazine or book, most likely the Lonely Planet guidebook to the Lao PDR. (Lao handicrafts carried home and seen by others may be part of the influence of 'friends'.) Few tourists had seen any promotion, or learned anything from travel agents or tour operators. If the Lao PDR could attract only an additional one percent of the tourists visiting Thailand each year, the number of higher spending tourists coming to the Lao PDR would increase by 100,000. To address this problem, the LNTA plans to set up a tourist marketing and promotion board, and to complete and implement a master plan for eco-tourism development.
- **Lack of skilled workers:** Fortunately, few Lao nationals working in international tourism need any training in hospitality and graciousness. The Lao culture does all the 'training' necessary, and that culture is a big part of the special attraction of the country. But skills are needed, of course, in foreign languages, hotel and restaurant manage-

ment, tourism promotion, travel agencies, tour guiding and transport. These skills are still limited and will need to be increased if the targets for more tourists - including Chinese tour groups - are to be met.

- **Visa waivers:** Lao visas are only waived for nationals of countries that offer reciprocal waivers for Lao nationals. Thailand offers waivers on a non-reciprocal basis for tourists from countries whose nationals are big spenders when they visit Thailand. The Lao PDR has less chance of attracting those tourists while they are in the region if they have to get a visa to visit.
- **Lack of government promotion:** There are some tariff waivers or reductions for FDI projects in tourism - for hotel construction materials and hotel equipment. But tourism as a whole is not nearly as favoured by government policy as manufactured exports such as garments. For example, waiver of tariffs and taxes on a fleet of new taxis would remove an obvious constraint. Arriving tourists must now cope at the airport with aged vehicles of uncertain reliability and air conditioning, and in the city with the tender mercies and high prices (to foreigners) of tuk-tuk drivers.

Indirect Employment, Estimated Multipliers, and Other Impacts

The World Tourism Organization views tourism as one of the best exports and best industries for LDCs. In discussing tourism in the 'Emerald Triangle' (expanding outward from Angkor Wat to encompass southern Lao PDR and Vietnam), World Tourism Organization Deputy Secretary General, Dr. de Villiers said that the potential was large and that, "Tourism has more small enterprises than any other industries, many a family or an individual who sells to tourists. Tourism is one of the best ways to alleviate poverty and promote development".

Some of the potential impacts of international tourism on poverty are direct and confirmed in LNTA studies of villages where rural trekking takes place

and in villages near national parks and other sites that draw foreign tourists where income increases in the range of 40 percent and above are documented. There is also the direct employment effect, including demand for workers to clean rooms, serve food and sell goods. Some of these workers are from poor families. The other and larger effects of international tourism come from demand for agricultural products, food preparation, handicrafts and other backward linkages that can and do benefit the poor.

How large the impacts are depends on the degree to which tourist expenditures multiply employment and income in the domestic economy - rather than 'leak' into imports. Direct employment in tourism in the Lao PDR is 18,000 workers, about the same as in manufactured wood products, but less than in garments - for now. A rule of thumb based on Thai research in the 1980s is that four international tourist arrivals create one full time job. There were 236,484 (non-GMS) arrivals in 2004. If the ratio holds in the Lao PDR, then those arrivals would create an estimated 59,000 jobs, or 41,000 indirect jobs in addition to the 18,000 direct jobs. This is the upper limit of what may be happening in terms of jobs and income benefits.

There are some anecdotes that point to relatively high multipliers and spill-over effects, partly because the backpackers (sometimes disparaged as not a 'good market' to serve) buy more local goods and travel more extensively throughout the country.³⁸

For example, the consequences of tourism and the Nam Ngum hydro system are seen in Nam Bak district in Luang Prabang province. The hydro project provides electricity, the Nam Kong river supplies irrigation, and access roads have increased international tourism to local waterfalls. Tourism services now account for 29 percent of district income. Agricultural and livestock production have also increased markedly. Annual average per capita income has increased by 164 percent since 2000. Now only 20 percent (1,960) of households



Ethnic Night Market in Luang Prabang Province

are classified as poor and only 320 in extreme poverty. Two thousand five hundred and ninety three households are now 'rich' and 5,167 are now classified as 'self-sufficient' and no longer poor. At least a third of the increased income is due either directly or indirectly to tourism.

Guest houses and hotels in Luang Prabang province have increased demand for pottery from Ban Chan Neua, a pottery-making centre, greatly improving living standards. One man interviewed said that his family is no longer poor. "I now live in a big house. Our family is much better-off because I earn more than ten million Lao Kip (US\$1,000) per year from selling pottery."

Another way to analyse the economic impact of tourism is through an analysis of the spending multiplier, which shows the flow-on impact of the tourist US Dollar throughout the economy in terms of employment. By taking into consideration the share of tourist US Dollars which are 'leaked' to imports it is possible to determine the domestic job creation impacts of international tourists (Oula, 2006). The estimates presented below are based on information from the LNTA and are likely to be conservative - likely to overstate the leakage to imports and to understate the domestic multiplier.

The estimates are that the leakage to imports of the recurrent costs of providing services to inter-

38 - Backpackers are young and well-educated. Many of their visits will be successful, and if they continue to return to the Lao PDR, will spend more in later visits. There is thus an automatic 'upgrading' over time. This pattern happened earlier in Thailand. Already, more than half of the international tourists have been to the Lao PDR at least once before (Oula, 2006).

national tourists (mainly backpackers) is about 30 percent, that is, approximately 30 percent of tourist spending is on imported goods and services. The recurrent domestic multiplier is estimated at 1.5 and perhaps as high as 2.0 which means that every US Dollar spent by an international tourist generates an additional US\$1.50 to \$2.00 of income as it works its way through the national economy. These estimates place the lower limit on estimated secondary employment from tourism at about 27,000 to 36,000 full time jobs. For high-end tourists the leakage to imports would be higher - perhaps above 50 percent - and the multiplier correspondingly lower - perhaps as low as 1.0. As the number of international tourists increases there will be more backward linkages with the domestic economy. Additionally, the facilities built for international tourists have led to increases in domestic tourism although no firm numbers are yet available. Domestic tourism also increases backward linkages that will serve the international tourists as well.

Of course tourism has other impacts that are not so easily quantifiable. It has a potentially big impact on exchanges of ideas and on culture, and it may also contribute to the spread of HIV/AIDS.

Agriculture

Overview

Exports from smallholder agriculture can be strongly pro-poor, with large and positive human development effects. Some exports are more labour intensive and may benefit women; some are less so and may benefit men. Large informal exports may also be pro-poor. If so, it may be best to leave the informal exports alone until more formal patterns can protect and extend the benefits of the informal ones.

The potential for exports is large. There is ample land. Only 40 percent of Lao farms are currently producing for the market and less than half of those are actively producing, in part, for export. Many more could produce for markets and for exports if constraints can be reduced and missing markets created.

If there is one key lesson from East Asian development success stories, it is that agriculture must be promoted and modernized. This cannot be emphasized enough. Excluding the city-states (Hong Kong and Singapore), not one of the East Asian newly industrialized countries initiated rapid growth with equity without initial promotion of a dynamic agricultural sector. Taiwan Province of China, the ROK and Thailand were early examples. Vietnam is the most recent. Dynamic growth of agriculture has direct effects on the incomes of rural families and indirect effects on the rest of the economy via increased demand originating in agriculture for inputs (seeds, tools and other simple capital goods) and consumer goods (Mellor, 1999).

China, Thailand and Vietnam are all competitors, but the cost of many raw products is lower in the Lao PDR. There are also some special niche products such as NTFPs that are in big demand in neighbouring countries, and organic products with high potential for export to the EU, Japan and elsewhere.

The main exports are cattle, grain, NTFPs, coffee and agricultural produce. Only the coffee exports are well measured in the official data. MAF estimates and cross-border trade studies confirm that 20 to 50 percent of the other exports (and more than 80 percent of cattle exports) are informal.

If the estimates of informal exports are reasonably accurate, then overall agricultural exports in 2004-2005 were more than US\$60 million. This is more than the net exports of garments and manufactured wood products combined and represents 7.3 percent of total exports. Lao farmers use very few imported inputs, making net exports of most products close to gross exports.

Structure and Potential

In 2005, agriculture accounted for 47 percent of GDP and employed 77 percent of the labour force. Almost all production, even of livestock and coffee, is undertaken by small family farms. Many family farms produce multiple items - rice, maize, fruit, vegetables, livestock and NTFPs. Some produce handicrafts as well. A few specialize in export crops such as maize, barley, potatoes, sugar cane,

Table 3.9: Value of Agricultural Exports 2004-2005: Official Data and Informal Estimates (US\$)

Export	Official Data	Informal Estimates	Totals	% Share of Total
Live Animals	3,107,908	12,431,632	15,539,540	25%
Coffee	9,599,327	0	9,599,327	16%
NTFPs*	5,878,334	5,878,334	11,756,668	19%
Other Products	19,645,326	4,911,331	24,556,657	40%
Totals	38,230,895	23,221,297	61,452,192	100%

Source: MOIC. Informal estimates are based on assumptions that 50 percent of NTFPs are informal (FAO, 2005 and mirror data), that 80 percent of cattle exports are informal (ADB, 2002) and that 20 percent of other exports except coffee are informal (NSC and NERI, 2005 and NERI, 2006).

*NTFP exports include rattan and bamboo.

and watermelons, or produce specified products for Thai food processors under contracted farming arrangements.

There is some plantation production and this will grow in the future. In 2003-2004, planned FDI in agriculture totalled US\$75.7 million, 15 percent of all planned FDI and the second largest sector of investment after mining (Paseuth and Phimmahasay, 2006). Much of the FDI is financing plantations of coconut, rubber, wood, sugar cane, cassava and tomatoes. But some of the plantations are contracted to farm families and, of course, all employ rural workers.

Most production for market and for export takes place in lowland areas, plateaus and in border districts accessible to border-crossings, markets and buyers from the neighbouring countries. The total agricultural labour force is 2,271,500. The number of workers in or near the border areas producing some products for export is estimated at 277,000 which accounts for 12 percent of the agricultural labour force.

In addition, while average agricultural productivity is still very low at US\$0.13 per hour worked, the provincial averages vary from US\$0.24 in Bokeo to \$0.08 in Saravanh and \$0.09 in Phongsaly (LECS 3). Bokeo's agricultural sector is faring bet-

ter because many more farmers there produce for the market and for export. There is extensive contract farming and exports of jasmine rice, maize, ginger, sesame, tobacco, green beans, peanuts, garlic, NTFPs and cattle mainly to Thailand but some to China and Myanmar as well (DAN, 2005, GTZ, 2002). If average agricultural productivity in the country increased to the level in Bokeo, rural incomes would nearly double. The potential for expansion of exports, for reducing poverty, and for improving rural income and opportunities is obvious.

Current and Potential Exports

The sector has a comparative advantage in a number of agricultural products, and in particular land intensive crops and patterns of productions. These include:

- NTFPs, including herbal ingredients used in Chinese traditional medicines for which demand is strong and other sources are limited. Sustainable export of these products depends, of course, on stemming the current rate of deforestation. Over-harvesting of NTFPs is more likely if villagers perceive that the habitat of the products, the forests themselves, is at risk from continued logging. NTFPs are harvested mainly by women



NTFPs offered at a market in Vang Tao, Champasak Province

and girls and provide income that women control. This income is likely to be used to improve the health, education and future opportunities for children (GRID, 2006). The current rate of harvesting of NTFPs may not be sustainable. Commercialization of production of some of the products such as cardamom has begun and experimentation with commercial production of other NTFPs is underway. Finally, local collectors of NTFPs may be the last to know when demand for some of the products has become price inelastic – that, for example, Chinese buyers of herbal medicine ingredients would in fact be willing to pay more than they currently pay. The Government may need to help reduce this lack of information among collectors and local sellers of high-value NTFPs.

- Cattle: MAF estimates that 50,000 head of cattle are exported to Thailand a year, most informally. This is to avoid some Lao export restrictions and border charges, and Thai charges and quarantine requirements

that pen up the cattle in Thailand causing weight loss. Lao cattle graze on natural fodder in a land-extensive pattern. The future potential for cattle exports is huge. MAF estimates that potential cattle exports from the Lao PDR to China alone could exceed one million head of cattle a year. To realize this potential, export restrictions and charges need to be reduced on the Lao side. Veterinary medicine and breeding techniques, and information for farmers need to be improved. Fewer export restrictions and charges, and better animal health and weight would induce farmers to raise more cattle. International standards of certification of animal health in the Lao PDR would, in turn, facilitate imports of live animals by Thailand, China and Vietnam without quarantine (ADB, 2002). In the longer-term, beef processing could be done in the Lao PDR with exports of higher value-added products.

- Coffee: The highest potential is to establish Lao coffee - mainly Arabica coffee - as



Farmer picking Coffee at a plantation on the Bolaven plateau, Champasak Province

an organic niche product for high-end consumers and retailers in Australia, the EU, Japan and the US. Two Lao companies have already had some success exporting to these markets. Coffee exports have been helped by tourism from these countries. To exploit this niche more aggressively will require more cultivation of Arabica in place of Robusta, and seeking and obtaining international certifications of organic production and processing that are recognized in the prime export markets.

- **Jasmine rice:** The Lao PDR shares with Thailand, Cambodia and Vietnam the right soil, the right climate, the right cultivation practices and the right seed stock to grow premium 'jasmine' or 'fragrant' rice that is highly prized and commands a premium price in overseas markets. The Lao PDR could establish a niche 'organic' brand and market for this export.

- **Rubber:** There is strong Chinese demand for latex. Rubber trees only grow in the

south of China and most there are now old and at the end of their productive lives. It is now cheaper for China to import. With some technical help from China, rubber trees in growing numbers have been planted in the north of the Lao PDR, particularly in Luang Namtha. The average cost of planting per hectare is US\$6,200. Once the trees begin to yield -in about six to eight years- the latex sold to China (at current prices) yields an average of US\$8,775 per hectare per year (MAF, 2003). The danger is that over-planting in the Lao PDR and in other countries will bring prices down in the future. Some of the planting in the north is also on steep deforested slopes susceptible to mud slides in the rainy season.

- **Bio-fuels:** Potential future Thai demand for agricultural products may include sugarcane and palm oil for ethanol and biodiesel respectively. Recent contract farming discussions for these products were held in December 2005 with Cambodia and Myanmar. Talks with the Lao PDR are

anticipated. The Thai Export-Import Bank is expected to provide loans on concessionary terms to support large-scale plantations.

- **Unprocessed products:** Most importantly, there is strong demand among major trading partners for raw unprocessed agricultural exports from the Lao PDR, including maize³⁹, barley, sugarcane, potatoes, other vegetables, watermelons and raw latex. Export duties on these Lao exports to Thailand, Vietnam and China have been reduced, eliminated, or are waived informally at the borders when the formal duty is high (Bui and Ngonvorarath, 2006 and NERI, 2006). Demand for these products is strong.

Although export of unprocessed agricultural production is not desirable in the long term, it is highly desirable in the short term. It increases the quantity and quality of marketed production and exports, and the percentage of farmers who produce for the market. The exports increase rural incomes. And initial export of raw products is part of the East Asian pattern, followed by a transition to more in-country processing and export of higher value-added processed foods.

The benefits are seen in cross-border sales of raw products in the north. Lao farmers produce sugarcane for a Chinese sugar mill across the border. There is some provision of seeds and fertilizer by the plant or by Chinese buyers, but no guaranteed price is offered. At harvest, the cane is weighed by Chinese buyers (after it has dried out as much as possible) and the cost of the inputs is subtracted from the 'selling price' - often not revealed to the farmer. This transaction is clearly one-sided and unfair. But still the Lao farmers are much better off than they were before, and other growers have shifted to sugar cane - even without help on the inputs - to join in these sales (NERI, 2006).

As quantity and quality improve, domestic processing of higher value-added products, including

processing of NTFPs, for export should and will increase. Duties on higher value added agricultural exports from the Lao PDR to its neighbours will reduce between 2008 and 2015. Exports of processed products to the EU, Japan and the US already benefit from zero tariffs.

Constraints

The problem with the export of raw agricultural products is not that this is undesirable; it is rather that not enough goods are produced to meet the demand. The reasons for this are complex and multiple and are best explained by looking at the patterns of cross-border contract farming between Thai food processors and Lao farmers.

The most developed patterns of contract farming are between Thai food processors and Lao farmers (DAN, 2005). Thai food processors and Lao companies that sell to them supply contracted Lao farmers with credit, modern agricultural inputs (including seed and fertilizer) and technical advice. A comparatively high purchase price - above typical Lao market prices - is specified in advance. The credit is used by the farmers to pay for the inputs. The amount of the loan is subtracted from the proceeds of the sale to the food processor. Farmers with no need for credit to pay for the inputs do not have to borrow. The food processor assumes a price risk in the event of a bumper harvest that reduces market prices. The food processor also assumes the risk of default on loans and/or of inadequate supplies in the event of drought, pest infestations, or other problems beyond the farmers' control.

The contract farming confirms that the Lao PDR is a low-cost producer of raw agricultural products for both the Thai and Chinese markets - both for further processing and for direct consumption. For the Chinese market, the products in high demand are 'land-intensive' products such as maize and sugar cane. For the Thai market, many agricultural products are competitive.

39 - Maize exports are very competitive but maize production rapidly depletes soil fertility unless crops are rotated (maize with soybeans for example) and/or organic or chemical fertilizers are used. Lao farmers need help with these options.

Most importantly, the contract farming patterns show that there are critical 'missing markets' in Lao agriculture that the cross-border contracts are helping to bridge. The missing markets are credit markets, high-quality input markets and futures markets - the contractors assume some of the price and weather risk that farmers otherwise have to bear alone.

These missing markets go along way in explaining why the agricultural sector still lags and why subsistence production is still so high. Poor farmers are necessarily risk adverse. Unless they are sure that there will be a market (at a dependable and profitable price) for new or expanded production, that they can get credit to expand production, and that they can buy better inputs with that credit, they will not take the risk. Potential investors in Lao food processing plants are likewise not sure there will be enough domestic supply, so they may keep their operations small, or not invest at all.

Markets in agriculture are also characterized by problems of asymmetric information - one actor knows more than another in a transaction. A Chinese buyer of NTFPs (particularly of ingredients for Chinese herbal medicine) knows much more about final market prices and premiums for quality than a Lao NTFP collector or other seller. As a result, returns to the collectors are lower and rural poverty higher than they otherwise might be. Chinese buyers are increasingly seen in NTFP markets, often buying directly from collectors and from first-stage Lao middle-men.

Missing or incomplete markets are a typical problem in economies undergoing transitions (Winter, 1999). The overall Lao economy is still in transition to more market-based patterns. In addition, Lao agriculture is in transition from subsistence to market production. Working markets will ease and speed up this transition by improving transparency, and providing information about prices and choices.

Impacts on Poverty and Human Development

The best way for farmers to learn about and improve markets is to participate in them. More

contract farming, improved roads and communication - in particular, access to mobile phones - will all help. The favourable trade concessions will also help. Agricultural exports to Thailand under AISP concessions increased rapidly between 2002 and 2005: potato exports more than doubled, other vegetable exports increased 13 fold, and maize exports (for animal feed) increased 40 fold (Bui and Ngonvorarath, 2006). As more farmers take advantage and participate in these markets, demonstration effects will encourage others to try.

More agricultural production for the domestic and export market offers high promise for broad-based economic growth, for reduction of poverty, expanded choice, and better education, health, and future prospects for rural children. Most of the labour force (and its most rapid growth) is in rural areas. If agriculture can succeed, then human development will be enhanced and the Lao economy will succeed too.

If agriculture lags, if export and food processing potentials are not realized, then the economy may come to depend too much on exports of minerals and electricity that employ few people and have far fewer connections to the domestic economy than the growth of agriculture will have.

Labour Exports

Overview

About ten percent of the Lao labour force works in Thailand. The migrants send or carry home at least US\$100 million a year. Labour migration could be viewed as a sign of failure, of under-development, of 'unpatriotic' behaviour - a pattern to be resisted and reversed. In fact, however, it is a normal pattern of trade, and a normal part of the East Asian pattern of development. In the 1960s, hundreds of thousands of Koreans migrated to work in the US and Japan. In the 1970s and 1980s hundreds of thousands of Thais migrated to work in the Middle East.



Queue of Lao people in front of the Border checkpoint at Friendship Bridge, Vientiane Capital

The General Agreement on Trade in Services distinguishes four types of trade in services⁴⁰. The fourth - Mode 4 - is “movement of natural persons” to supply labour services in another country. The importance of labour migration and of labour remittances for development in the poorest countries is now widely recognized (Rajan, 2004 and WB, 2004).

Remittances tend to be more stable than FDI and counter-cyclical, increasing when there are bad economic times in the migrants’ home countries. And remittances can flow back to the poor and poor communities, improving living standards, increasing investment and enrolment of children in school.

In the Doha Development Round, the poorest countries have asked for more liberalization and regularization of labour migration. There has been virtually no progress on this request. The July 2004 Doha package states only that, “Members note the interest of developing countries [...] in Mode 4”.

Lao ‘labour exports’ are large, informal, and mainly to Thailand⁴¹. All Lao workers who leave without passports and exit visas are subject to fines when they return. The fines increase with the amount of time the workers have been out of the country. Sometimes the fines are imposed on parents even before their children return; and sometimes the amount imposed on migrants or parents greatly exceeds what the law specifies (TRACE, 2005).

Some Lao workers migrate to find construction work or other work in Thailand during the dry season, but many now work longer-term. In mid 2004, a total of 181,614 Lao workers registered with the Thai Government for work permits. Most are 16 to 24 years old; 55 percent women and 45 percent men.

The Thai Ministry of Labour estimates that there are at least another 80,000 unregistered Lao workers in Thailand. The International Labour Organization (ILO) and Thai research institutes estimate 300,000 or more Lao workers in

40 - The first type (Mode 1) is cross-border supply of services such as telephone or postal services. Mode 2 is mainly tourism. Mode 3 is commercial services provided by branches of foreign banks and other commercial activities by foreign subsidiaries. Mode 4 is labour services.

41 - The other destinations, in order of numbers, are the US (made possible by the more than 1 million Lao Americans whose relatives have visa priority for “visits”) and Malaysia.

Thailand. The exact number is impossible to count. Lao workers are culturally and linguistically indistinguishable from north eastern Thai. They blend right in. Thai employers prefer Lao workers, want to keep them, and will protect the workers from discovery if they can. Thus a conservative estimate is that there are at least 250,000 Lao workers now employed in Thailand.

Migration can be a pro-poor export with high human development impacts when the migrants leave voluntarily and are not exploited. Remittances and earnings carried home benefit rural and poor Lao communities. But the negatives clearly include exploitation of voluntary workers and trafficking of women and children. Returning Lao migrants also have the highest rates of HIV infection of all groups tested in the country.

Characteristics of Migrants and Patterns of Migration

There is no census of Lao migrants. The available data come from Thai registrations, and from sample surveys in Lao provinces and districts that send the most migrants to Thailand: the border districts of Savannakhet, Khammouane, Champasak, Xayaboury and Bokeo.

The most comprehensive survey sampled returned migrants in 5,966 households in 3 provinces: Savannakhet, Khammouane and Champasak (ILO/NSC, 2005). The characteristics of the migrants in that survey are consistent with the Thai registrations, and with other smaller sample surveys.

Overall, the migrants are:

- Rural: Almost all migrants come from rural areas, or from ‘urban areas’ that still have many rural characteristics.
- Lowland Lao: Almost all migrants are ethnic Lao and thus fit in very well in Thailand.
- Young: Most migrants are 17 to 25, but 21 percent of migrants interviewed in the ILO/NSC survey were only ten to 17. (Some may have migrated with parents. But some migrate at young ages without parents.) The younger female migrants are most at risk of trafficking and abuse.
- Single and Female: More women migrate than men. The percentage of migrating females is higher than males in the 18 - 25 year age group. Most women stop migrating at marriage or at about age 26. Men continue to migrate until about age 30 and will sometime migrate even after marriage.
- Not well educated: Women migrants are generally less well educated than men who migrate. But both have lower educational attainments than do rural women working in the garment industry.

The information about the socio-economic status (SES) of the surveyed migrants shows that migrants to Thailand come from all quintiles, and more from the top three than from the bottom two.

Table 3.10: Characteristics of Sampled Lao Migrants

Characteristics	Women	Men
Ethnicity - Lowland Lao	95.5 %	96.3 %
Gender of migrants	55.0 %	45.0 %
Illiterate	9.9 %	5.4 %
Attended primary school	54.0 %	58.6 %
Completed primary school	28.2 %	23.7 %
Completed lower secondary	6.8 %	11.3 %

Source: ILO/NSC surveys in 2005

Table 3.11: Distribution of SES Groups by Countries of Migration

SES Group	Thailand	Asia	Europe	America	Total
Lowest 20 %	87.3 %	6.3 %	0.0 %	6.3 %	99.9 %
Lowest-middle 20 %	81.0 %	9.3 %	0.7 %	9.0 %	100 %
Middle 20 %	81.0 %	9.3 %	0.7 %	9.0 %	100 %
Upper-middle 20 %	79.2 %	6.7 %	0.4 %	13.6 %	99.9 %
Highest 20 %	80.0 %	10.9 %	0.4 %	7.8 %	99.1 %

Source: ILO/NSC surveys in 2005, (n = 2,042)

The results, however, need some interpretation. The survey measured the SES of respondents' households by the housing quality, the number of consumer durables, remittances received and monthly consumption as a proxy for income.

The ILO/NSC survey interviewed only returned migrants after their earnings had been sent home or carried home, spent and invested, thus increasing the SES of the household. In addition, other studies and field interviews of returnees from Thailand in 2005 suggest that multiple migration episodes are common, and that younger siblings migrate after older ones return. Almost half of the migrants interviewed in Savannakhet and Champasak in 2005 said that they planned to return (see Table 3.12).

Table 3.12: Lao Migrants Planning to Return to Thailand

	Number	Percentage
Male (49)	20	41 %
Female (52)	25	48 %
Total (101)	45	45 %

Source: Chanthavysouk, 2006

The first migration by the first migrant in a family often results in big increases in household SES. A new house is built with money sent back or carried home. There are many more appliances, televisions, VCRs, DVD players and other consumer durables. Remittances are received from the siblings still in Thailand.

Thus, it is highly likely that the survey interviewed returned migrants from household that were poor - or at least in a lower quintile - but are now no longer poor because of earlier migration. A more reliable measure of SES before migration is the educational attainment of the migrants interviewed. The average attainments recorded in the surveys are low - much lower than the average attainments of female garment workers from rural areas. This too suggests that the SES of households prior to the first migration was low, perhaps not among the very poorest households (it takes some resources to migrate), but not in the top three quintiles. Individual stories confirm that some of the migrant families were indeed very poor before the first migration, but not afterwards.

Most Lao workers in Thailand take mainly unskilled jobs that Thai citizens are no longer willing to do in sufficient numbers. Lao men work in construction, agriculture, fishing and some factories. Lao women work as domestics, hotel maids, and in restaurants, garment facto-

Box 3.3: Women Migrants and Poverty: Before and After

Venh and her husband went to Thailand in 2004 as a result of their long unemployment and resulting extreme poverty. They found work in a rubber factory. Venh came back after one year while her husband remains in Thailand. She explains that “if we had not gone to Thailand, we would not have had a proper house.” Money saved from working in Thailand was also spent on food and school expenses for her kids. She was happy because she could afford a television and a motorbike.

Venh, 32 years old, Nontabeng Village, Champasak

Kong was the eighth person in the family who went to Thailand for work. The family was in extremely difficult conditions - forcing her brothers and sisters to leave the village. Kong is married and still living with her parents. Her earnings and remittances from her brothers and sisters significantly improved the living conditions of the family. The money was invested in a new house, a motorbike, fertilizer, education, land, cattle, daily expenses and medicines. Her parents receive around 20,000 Baht per year from the children working in Thailand. Kong’s dream is to have a son working as a government official. Her son’s education is one of her life goals.

Kong, 31 years old, Nontabeng Village, Champasak

Source: Chanthavysouk, 2006

ries, and food processing plants⁴². Some of these jobs fit the International Labour Organization (ILO) 3D description: ‘dirty, dangerous, and difficult.’ But the earnings in Thailand exceed by a large margin what workers are paid for the same work in the Lao PDR.

A few Lao migrants with higher education levels education find management and other skilled work and do very well in Thailand.

Why They Migrate

The reasons for migration are typically divided between ‘push’ and ‘pull’ factors. Push factors are problems in the sending country. Pull factors are the attractions of the destination country. Returned migrants were asked in 2003 why they migrated and the main reason cited was to earn more money - both a push factor (hard to earn money at home) and a pull factor (they could earn much more in Thailand).

Table 3.13: Reasons for Migration by Gender

Reasons	Gender		
	Male	Female	Total
To earn more money	54.9%	45.1%	88%
To see modern places	48.0%	52.0%	12%
To acquire new experiences	65.3%	34.7%	9.7%
To follow the trend	53.1%	46.9%	9%
To avoid farm work	35.2%	64.8%	2.3%
To avoid attending school	65.1%	34.9%	2%
Others	76.7%	23.3%	2.3%

Source: Calculated from ILO/NSC, 2005 data

42 - A regulation of the MLSW (Number 3824/LSW on 19/12/2002) under the Prime Minister’s Decree (Group 2, Section 2, of 2002) prohibits Lao nationals from working in any other country as house maids, hotel maids, cleaners, restaurant service workers, supermarket workers, hospital cleaners and orderlies, parking lot attendants, road sweepers, or other “unskilled” work. Despite these laws, many Lao workers in Thailand - particularly women - take exactly these kinds of jobs.

Box 3.4: A Migrant Manager and a Security Guard

"After completing my upper secondary education in 1995, my family could not afford to support my further study. I could not find a job, and did not want to be a farmer. That left me only one option - heading to Thailand with a hope of saving for my further education. I tried many jobs there. And I ended up working as a fisherman for 6 years. I was trusted by my employer, so he let me run his business. My earnings varied each month depending on how much fish we caught. Some months, I could earn up to 30,000 Thai Baht. My income was never less than 10,000 Thai Baht a month.

I strongly believe that my educational background was a key factor of my success in Thailand. It helped me learn how to write and read Thai quickly, do calculations, communicate and negotiate successfully with my boss and other people as well. I think it is now too late for me to return to school. I will go back to Thailand. I'm now supporting the education of my siblings: one is an accounting student, one studies at the Police School and one is in the 11th grade."

Kongkham, 24 years old, male
Orkmeung Village, Xanasomeboune District, Champasak.

"I never wanted to go to Thailand. After finishing high school, I took a driving course in order to apply for a job with a big company in town. My parents spent 2,000 Thai Baht in an attempt to get me into the company. Unfortunately I did not get in. Therefore, I decided to go to Thailand. I first got a job as a butcher at a fresh meat market. I was paid 250 Thai Baht per day. Later a friend of my employer offered me a job as a security guard at an apartment. The salary was 280 Thai Baht per day. Security guards have to be Thai. But as I can speak, read and write Thai perfectly, my boss said that I could take the job.

Completing high school helped me to get a decent job in Thailand. I dreamt of going to the medical school in Vientiane. But my family does not have connections, so even if I became a doctor I would not get a job in the Lao PDR. So it is better that I work in Thailand where I can make some money to support my family."

Saixon, 28 years old, male.
Nontabeng Village, Phonethong District, Champasak.

Source: Chanthavysouk, 2006

Others went to see "modern places," and to have "new experiences." One young woman said she went, because she "wanted to see a beach" (TRACE, 2005). The attractions of Thailand may be magnified by images on Thai TV programmes watched by many in rural communities in the border districts. The attractions may also be magnified by the clothing, possessions and the stories told by returning migrants.

Other push reasons were mentioned by only a few respondents. But it is interesting that young women were almost twice as likely to want to "avoid farm work" as young men. (Surveys show

that young women in rural areas work more hours than young men.) And young men were almost twice as eager to avoid having to go to school as young women.

The attraction of working in Thailand increased dramatically when the Lao Kip dropped against the US Dollar and the Thai Baht after 1998. The Kip value of Thai Baht wages more than doubled. The change in the exchange rate and the revival of Thai demand for migrant labour in 2000 led to a rapid increase in migration of Lao workers: 74 percent of returning migrants interviewed had migrated between 2000 and 2003.

Box 3.5: Why Cash Matters: 'Informal Insurance' and School Fees

"Rice is our family's only saving. Some years we don't even have enough rice to eat. With no cash, life is extremely difficult when the school semester starts or when someone in the family is sick. And it is too dry to grow anything. I need to go to Thailand to get some savings for emergency needs".

A male returnee in Savannakhet Province.

Source: Chanthavysouk, 2006

Other reasons for migration include under-employment in Lao rural areas, high and growing demand for migrant labour in Thailand, language and cultural similarities, proximity, good transport and well-established migration networks.

The costs of migrating informally are quite low. Depending on where in Thailand the migrant needs to go to get work, the costs - mainly for transport - can range from US\$50 to US\$100. A broker would charge between US\$125 and US\$175, but most migrants now go by themselves or with friends and relatives using well-established networks, routes, contacts and ample available information.

Remittances

Information on remittances is fragmentary and incomplete. None of the money flows through the Lao banking system. None of the money is exchanged for Lao Kip because the Baht is accepted everywhere. Some remittances are transferred within the Thai banking system, for example from Bangkok to Nongkhai or to Mukdahan, and then carried across the border as needed by returning migrants or their families. Other remittances are sent by informal but reliable channels, and some of the money earned is carried home at holidays or at the end of a period of work in Thailand. The threat of fines - the fact that the earnings are considered illegal or 'black money' - leads understandably to under-reporting both by migrants and by their parents, particularly by poorer households least able to pay the fines.

The best available data come from a survey conducted in Bangkok and surrounding provinces in 2004 by the Ministry of Labour and Social Welfare

Table 3.14: Exchange Rate Lao Kip to US Dollar 1994-2003

Year	Exchange Rate kip/US\$
1994	720
1995	819
1996	926
1997	1,259
1998	3,296
1999	7,108
2000	7,845
2001	8,871
2002	10,109
2003	10,567

Source: Bank of the Lao PDR

(MLSW) of Lao PDR. The survey found that workers were sending or carrying home 1,000 to 2,500 Thai Baht per month - an average of about US\$500 per year. The ILO/NSC survey found that 50 percent of returning migrants sent remittances averaging US\$100 per month, or \$1,200 per year. Neither survey asked how much money workers carried home when they returned.

These two sources suggest that migrants to Thailand are sending home (and carrying home)

between US\$100 - \$150 million per year. The amounts could be even larger. But even with this range, labour exports in 2003-2004 may have been the largest Lao export of all.

Single migrant workers usually send money to their parents. Female migrants are more reliable in sending money and even though they may earn less than male migrants, they often still send more money home than men do. Married migrants workers send money to spouses remaining in the Lao PDR. If both husbands and wives go, remittances will normally go to the families of the wives. Thus the families of female migrants often

benefit more than the families of male migrants. Some mothers said they were able to visit their daughters and sons-in-law working in Thailand at least twice a year. Clearly the couples were doing well enough in Thailand to pay for and welcome these visits.

Remittances sent home and wages carried home are used mainly for improved housing and to pay for education of younger siblings and health care. Other purchases include mini-tractors, fertilizer, livestock and land. In the migration households, modern agricultural inputs are used, and there is more production for market and less for subsistence.

Table 3.15: Use of Remittances

	Number		Percentage		Total Percentage (n = 101)
	Male	Female	Male (n = 49)	Female (n = 52)	
House Purchase or Improvement	22	29	44.9%	55.8%	50.5%
Daily Food Consumption	12	18	24.5%	34.6%	29.7%
Education	13	17	26.5%	32.7%	29.7%
TV	12	14	24.5%	26.9%	25.7%
Fertilizer	11	13	22.4%	25.0%	23.8%
Motorbike or Bicycle	11	13	22.4%	25.0%	23.8%
Livestock and/or Land	6	9	12.2%	17.3%	14.9%
Health Care	6	7	12.2%	13.5%	12.9%
Mini-Tractor	5	6	10.2%	11.5%	10.9%
Gold Purchases	6	4	12.2%	7.7%	9.9%
Mobile Phones	5	1	10.2%	1.9%	5.9%
Running a Small Business	4	1	8.2%	1.9%	5.0%
Debt Repayment	2	1	4.1%	1.9%	3.0%
Hiring of Workers	1	0	2.0%	0.0%	1.0%
Others	1	2	2.0%	3.8%	3.0%

Source: Chanthavysouk, 2006

Some returning migrants use their earnings to buy mini-tractors, and then use the tractors to earn money locally by transporting agricultural products to markets, taxiing villagers to town, and hiring out their labour and tractors to prepare other families' fields. They make from US\$30 - \$50 per hectare - including the mini-tractor, labour and petrol.

Other Impacts: Individual, Social and Cultural

Other positive impacts of migration include the learning of new skills and changed perceptions of what is possible. Changes in perceptions may be particularly large for young women.

Young women who migrate to do domestic work and to take care of infants and young children return with higher expectations about the quality of medical care and proper nutrition of the young. They are more responsive to information and new sources of information. Most return with mobile phones. Some are now more respected, more influential in their families, and even become role models in their communities. They are likely to marry later, have smaller families, and invest more in their children's education, both girls and boys.

Of course, migration of young women entails greater risks of trafficking and other abuse (ILO, 2003). Migration of young teenagers cuts short their education even as their siblings fare better with help from remittances. Some migrants, mainly males, also pick up bad habits - excessive consumption of alcohol, stimulants, even yaa baa, and casual promiscuity. Some return with STDs and HIV/AIDS.

However, returned migrants in Champasak reported no cases of trafficking, abuse or illness. There seem to be well-established networks and ample good information. Teams of Lao workers contract to provide their labour to well-known Thai employers, some of whom provide the workers with (perhaps counterfeit) work permits. The patterns of safe migration are now very well established. No brokers are used.

The returned migrants are changed in other ways - they use more Thai expressions, they dress dif-

ferently, they act differently, they have mobile phones, and other electronic gadgets, they know how to make money. These changes affect others in their communities, but these affects are probably not as wide-spread and extensive as those of Thai TV.

Migration from the border districts - where irrigation systems and dry season crops are most common - may create local labour shortages during peak periods of labour demand. In a border district in Champasak, families whose children are working in Thailand hire workers for US\$1.5 per day (breakfast and lunch provided) to work on their fields. For each hectare of rice field about 10 workers are employed for one week. These workers may be from the village or more likely migrants from other villages and districts. This is an indirect benefit of migration (of a Lao export) which provides cash earnings for families that otherwise might have little or none.

In the last two years in all of Champasak and in some districts of Savannakhet there has been an interesting change in the view and treatment of migrants. Instead of being fined, the migrants are asked to contribute between US\$2 to \$5 to the village fund when they return. Village funds are used to renovate local schools, build temples, improve roads and support other development activities.

According to the village headmen, the payment is not compulsory. Unsuccessful returnees are not required to contribute. The request is seen by all as a 'contribution' not as a 'payment' or a 'fine'. Contributions have been made by almost all returnees and have mounted up quickly. For example, in Orkmeung village, Xanasomeboune District of Champasak Province, the village fund received more than US\$250 (or 2,800,000 Lao Kip) in just five months from these contributions.

The new pattern, if effectively implemented, benefits both returnees and their communities. The returnees are regarded as the main donors or supporters of community development projects. There is a new and positive perception of migrant workers among the public and in the communities. And community development is enhanced more quickly.

Normalization

The Government is still somewhat ambivalent about migration, and probably still does not fully recognize its potential benefits including the investments financed by remittances and earnings carried home. There have been recent positive steps toward normalization and new agreements with Thailand. Normalization would improve conditions for Lao workers in Thailand, would reduce the dangers of exploitation and trafficking, and would help Lao development. Unfortunately, the proposed total costs for legal migration (on both sides of the border) are still way too high.

According to the MLSW, the total costs of migration would be US\$445 or 17,767 Thai Baht (see Table 3.16).

Table 3.16: Average Cost of Migration

The Lao PDR	
Passport + Exit Visa	1,330 Thai Baht
Medical Check-up	570 Thai Baht
Thai Working Visa	5,000 Thai Baht (Multiple entry visa)
Work Permit Card	74 Thai Baht
Training	500 Thai Baht
Travel	500 Thai Baht
Subtotal	8,974 Thai Baht
Thailand	
Medical Check-up	600 Thai Baht
Social Security (2 years)	4,493 Thai Baht
Work Permit Card (2 years)	3,800 Thai Baht
Subtotal	8,893 Thai Baht
Total	17,767 Thai Baht

Source: Ministry of Labour and Social Wellfair, 2005

These costs need to be reduced on both sides of the border. The minimum wage in Thailand varies with location but averages about 150 Thai Baht a day. If a Lao worker borrows to go legally, is paid the minimum wage in Thailand and works six days a week, it would take the migrant almost five months to pay for the cost of migrating assuming all the money earned was set aside for repayment and she paid no interest.

These costs almost assure that most migration of Lao workers to Thailand will continue to be informal. As one worker interviewed said, "If we had that kind of money to pay in advance, we wouldn't have to go to Thailand at all."

Summary of Employment: Urban, Rural and Gender Impacts

The exports that contribute most to human development in the Lao PDR are exports that create employment, expand choice, increase income, reduce poverty, connect to and multiply in the domestic economy, change attitudes and expectations, and increase perceptions of personal efficacy. Exports of garments, wood products, processed foods, handicrafts, international tourism, agricultural exports, and labour exports have many of these impacts even if all the impacts cannot be precisely measured.

The combined direct employment generated by these exports is 611,000 jobs or more than 20 percent of the labour force. The numbers of jobs generated by cross-border trading and money changing activities are not available. Much of that work is done by women. Even so, more women than men are directly employed by the exports for which there is information.

Activities that are mainly urban-based - garments, manufactured wood products, and international tourism - directly employ 64,000 workers, or 9.4 percent of the urban labour force. But interestingly, agricultural exports, handicraft exports and labour migration to Thailand (almost all from rural areas) employ 547,000, more than 23 per-

Table 3.17: Direct Employment by Type of Export and by Gender 2002-2004

Export	Total Direct Employment	% Women	Number of Women	Number of Men
Agriculture + NTFPs	277,000	50 (est.)	138,500	138,500
Labour to Thailand	250,000	55	137,500	112,500
Garments	26,000	80	20,800	5,200
Wood Products⁴³	20,000	10 (est.)	2,000	18,000
Handicrafts	20,000	70 (est.)	14,000	6,000
International Tourism	18,000	50	9,000	9,000
Totals (Percent)	611,000		321,800 (52.7)	289,200 (47.3)

Source: Previous tables and sections. The 50/50 split in agriculture is based on the fact that some exports are produced mainly by women (NTFPs) and some by men (cattle), and on an assumption that the rest of the work and money are shared.

cent of the rural labour force, and more than 18 percent of the total labour force.

By that measure, at least, it is agriculture and rural communities that are, in important ways, more engaged in trade. This may prove to be more important for future trade than industries

and sectors that typically receive more attention. Total exports in the future will consist increasingly of electricity and minerals, and will also depend on the amount of informal exports of timber. Although all these exports also come from rural areas, their effects are likely to be quite different. These exports are taken up in the following chapter.

⁴³ - MOE/GTZ, 2005 estimates total employment in manufactured wood products at 13,000.



Chapter 4

EXPORTS WITH LOWER POTENTIAL FOR HUMAN DEVELOPMENT

Exports with lower potential for human development are minerals, timber, electricity and transit trade. These are capital intensive, use much less labour, and may damage the environment, local livelihoods and other exports.

There are positive benefits for human development if these exports also lead to increased irrigation, rural electrification, and improved living standards and enhanced choices for families in communities affected by dams, mining and new or improved roads. There is also small-scale artisanal mining which directly benefits poor and rural families. But most of the positive benefits for human development will depend on how future government revenues are used.

Exports of minerals, electricity and transit fees will increase government revenues. However, construction of new dams will also increase foreign debt, but net revenue is still expected to increase rapidly in the next ten to 15 years. If the increases in revenue are used for investments in agriculture, education and health, then the human development benefits of these exports will be large. If not, an important opportunity to transform the Lao economy from

a natural resource-based economy to more of a human-resource based economy may be lost.

Overhanging this need for fiscal discipline and good governance are the classic problems of commodity price cycles and a danger of ‘Dutch Disease’⁴⁴ – an appreciation in the value of the Lao Kip that could make agricultural exports, manufactured exports and international tourism less competitive.

Mining and Mineral Exports⁴⁵

Overview

In 2004 mineral exports totalled US\$64.7 million, or 11 percent of Lao exports (excluding services). Mineral exports include: gems, gold, copper, zinc, tin, potassium, gypsum, coal and lignite. So far, only 30 percent of the country has been surveyed in detail for mineral deposits and 550 mineral deposits have been found.

At the beginning of 2005 there were 88 mining companies in the country - 55 Lao private and state owned firms, and 33 JV and foreign-owned

44 - ‘Dutch Disease’ is an appreciation of a country’s currency that is caused by exports of natural resources such as oil, natural gas, or minerals. Foreign buyers want these commodities and buy up local currency to pay for them, in turn increasing the value of the local currency. This is a problem because it makes the country’s manufactured exports and agricultural exports less competitive. This pattern happened in Holland in the 1950s and 1960s because of their exports of natural gas; thus the name ‘Dutch Disease’.

45 - The content of this section (unless otherwise indicated) is drawn from: SKDC, 2006 Mining and Mineral Exports of the Lao PDR: A Technical Background Paper to the Third Lao PDR National Human Development Report. (Vientiane: NSC and UNDP).



Sepon Mine in Savannakhet Province

firms. Foreign investment in the sector comes from Australia, Canada, China, the Democratic People's Republic of Korea (DPRK), the ROK, Russia, Thailand and Vietnam. The 88 firms are involved in 145 projects, of which 109 have concessions for exploration and prospecting, and 36 are already in production. The total area of these concessions is 3,737 square kilometres. In comparison, the total area affected by the Nam Theun 2 (NT2) dam, the largest hydroelectric project in the country will be 'only' 1,000 square kilometres. In 2004-2005, new exploration agreements were signed involving an aggregate investment of US\$411 million.

The MEM expects mineral exports to increase rapidly. Australian and Lao firms are prospecting for and exporting gold. Gold exports alone were US\$60.7 million in 2004.

Australian, Chinese and Vietnamese firms are exploring for and exporting copper - some of the copper deposits are found in the same concessions as the gold and silver deposits. In January 2005, a Chinese company signed an exploration agreement to invest US\$1.3 million in exploring for copper in a 20 square kilometre parcel in Phongsaly province, and for zinc in a 20 square kilometre parcel in Oudomxay province. If commercial quantities

are found, a longer term agreement with royalties and land rents, and local processing will be signed. A project with Vietnamese FDI of US\$1 million is exploring for copper in a 48 square kilometre area in Oudomxay. Any copper found will be exported to China and Vietnam.

Chinese firms are exploring for potassium and 50,000 tons per year are already being exported to China. A US\$2 million investment by the Vietnam National Chemical Co. is funding the exploration for salt and potassium deposits in a ten square kilometre parcel in Khammouane province. Both minerals (if found and developed) would be exported to Vietnam.

Three companies (two domestic and one with FDI from the ROK) are doing surveys and have been prospecting for and producing sapphires for export in Bokeo since 2002. They have found blue sapphires able to compete with stones from Thailand, Cambodia and Myanmar. Current production consists of stones close to the surface which are exported to Thailand - a total of 4.96 million carats of uncut stones have been exported. Larger stones and larger deposits are expected to be found below the ground. Vietnamese and Chinese firms are also interested in obtaining concessions.

The Government expects Bokeo to become a centre for production, and for the cutting and polishing of blue sapphires - expected to be done by women in households that will have polishing machines. Surveys have also found blue sapphire in Attapeu and Houaphanh.

Gypsum is another export. A new company with Vietnamese FDI will begin surveying and mining an estimated three million tons in Savannakhet province. The company expects to produce 200,000 tons a year beginning in 2006. Most will be exported to Vietnam. The company will invest US\$2.4 million and will have a thirty year concession. The portion of production for local consumption (initially 10 percent) will replace imports used for making wall board. A government three percent natural resource tax will be applied to the value of the mined product. It will receive revenue from the tax on profits and the land concession. The company says it will fund community development in the district.

Small-Scale 'Artisanal' Mining

Small-scale or 'artisanal' mining - mainly the panning of stream sediment and river gravels for gold, sapphires, tin and semi-precious stones - takes place in many parts of the country. The activity is seasonal, affected by the water level in streams and rivers and by harvesting of rice and other crops.

'Artisanal mining', according to Article 35 of the Mining Law, is small-scale mining carried out by manual means with non-mechanised tools. Only Lao citizens using their own funds can be artisan miners. They may work full time or part-time, but the law requires all artisan miners to be licensed, and forbids exports of gold or sapphires without special export permits. Violators are subject to fines, and the incomes of artisan miners are, in principle, also subject to income tax.

In practice, few artisan miners probably seek or have licenses, or pay income taxes. But the threat of fines and taxes means that most of the activity is informal and conducted in ways designed not to attract attention. Thus there are no records available on how many people are involved, or on the value of gold, sapphires and other minerals they

produce. But it is estimated that as many as 15 percent of households living near rivers pan for minerals in the wet season.

It is estimated that 25 households, panning in pits dug in rivers, can recover a weekly production of 125 grams (four ounces) of gold. At a price of US\$330 per ounce, the gross value of the weekly production would be US\$1,320. The gold is often purchased by one or two families in the villages. It is then taken to districts to be combined with other village production, and finally sold on to Thailand. Prior to the Sepon mine, much of the gold mined in the country was produced by artisan miners.

Panning for tin is also widespread and the tin produced is usually sold to mining companies operating in the same river valleys. For example, a Lao-Korea tin company in Khammouane province purchases tin ore produced by the local people at a price of US\$2 to \$5 per kilo depending on the tin content. In 2004, the company purchased 60,000 tons of panned tin ore - paying the small-scale miners a total of between USD\$120,000 and \$300,000 (ibid.).

An estimated eight percent of households pan for blue sapphires in the rivers and streams flowing from the basalt area of the Ban Houayxay in Bokeo province. The stones found are not sold to the larger-scale sapphire mines in the province. Instead they are sold to local or Thai buyers and then on to Thailand.

Small-scale mining activity is likely to be pro-poor, providing cash income for households that otherwise may have little or none to pay for schooling, health care and basic consumer goods. This is a direct benefit of mineral exports that should be encouraged and protected, particularly because the small scale miners often exploit deposits that are too small to be economically viable for large-scale, capital intensive operations.

Sepon

By far the largest mining project and single source of mineral exports is the Sepon mine concession, covering 1,947 square kilometres in Savannakhet along the old 'Ho Chi Minh Trail.' The project is

being developed and operated by the Lane Xang Minerals Company - the Lao subsidiary of the Oxiana Corporation of Melbourne, Australia.

The concession is estimated to contain 3.5 million ounces of gold, up to ten million ounces of silver and one million tons of copper. Total investment by early 2006 was US\$375 million. Planned future expansion would involve investment of an additional US\$400-500 million. The company has built an air field and an all-weather highway connecting the project to Road No 9. It has built schools and health clinics. It ships in ten tons of

food a month, treats 10,000 gallons of water a day, and employs 300 people just to clear unexploded ordnance in the region. The site was heavily bombed during the war.

Sepon began producing and exporting gold in 2003, and has used the export revenues to assist in financing the construction of a copper hydro-metallurgical plant and an expansion to the first gold project. A US\$140 million debt facility was also provided for the completion of these projects by a consortium of six international banks – including Banque pour le Commerce Exterieur Lao. By 2006,

Box 4.1: Women Drivers

Ore is moved on the site by CAT 777D 100 dump trucks, among the largest ore carrying trucks in the world. More than half of the drivers of these big trucks are Lao women from the local area - 60 women drivers in all. The Company now prefers women drivers because they have never driven before, and thus have "no bad habits to break". The women are also "more careful than the men", they don't drink and require "fewer bathroom breaks".

The drivers work shifts of 28 days on and 10 days off, carrying ore from the mine to the processing plant. While working they receive food, and, if they are not from the local areas, they are given lodging.



CAT 777D at Sepon Mine, Savannakhet Province

Source: Interviews at the Sepon mine.

Sepon is expected to produce and export 200,000 ounces of gold and 60,000 tonnes of copper a year, and, depending on commodity prices, to provide the government an estimated US\$25 million or more per year in royalties, taxes and land rental.

At the end of 2005 the project was employing approximately 3,500 workers - 90 percent Lao and 60 percent from the local area. Some of the Lao workers have received extensive training. The lowest paid Lao workers make 700,000 Lao Kip a month. Lao technical and managerial workers make up to 15 million Lao Kip a month, and Lao truck drivers make more than one million a month.⁴⁶

The gold ore, mined in large open pits, is trucked to a crushing plant where it is mixed with water and then sent to leaching tanks where cyanide is used to separate the gold. The gold is adsorbed by carbon from coconut shells. The carbon with the adsorbed gold is then washed and heated until the gold - usually mixed with some silver- is molten and can be poured into ingots. These are then flown to Australia for refining to separate the gold and silver and then both products are sold on the international market.

The environmental risks of the project come from the clear-cutting and open pits (particularly in the rainy season), the need for state-of-the-art handling of cyanide, the disposal of slag and the need for uninterrupted tertiary treatment of water.⁴⁷

In mid-2005, another Australian company, mining gold in Vientiane province, mishandled and spilled cyanide, contaminating a stream and killing fish. Some villagers claimed to have become ill, perhaps from eating the fish.

At Sepon, there was one spill of run-off water supposed to have been contained by a dam, from the

copper plant during the rainy season. The villagers claimed injury to some livestock. There were negotiations with the villagers and compensation was paid. As the operations scale-up, these risks remain and may grow larger.

The project has set up a development trust fund for the local district which by 2007 is expected to provide US\$500,000 per annum. The fund supports many activities including business development and a variety of projects in agricultural development, education and infrastructure. Examples include planting of yang bong trees for the development of an incense industry, and training in farming and livestock production, including pig, fish and chicken farms. There are community development programs to help diversify agriculture toward cash crops such as mulberry trees (for silk production) and training women in weaving. The improved road makes marketing and transportation of the textiles and other products much easier. The company has built two schools and refurbished and equipped the local hospital. There has been growing in-migration to the district, at a rate of nine percent per year. There are now some conflicts between the original residents and the new arrivals.

The company buys products from local communities, including food such as vegetables, pigs and poultry once or twice a month on a contract basis at fixed prices. Some farmers have done well. One farmer is making one million Lao Kip (US\$100) per month selling vegetables. Other purchases are made in local markets at prices set by bargaining. The local production cannot meet the demand, and, as such, the project buys elsewhere in the province and even flies in food from Thailand.

Some local villagers are not impressed by the trust fund activities or the prospects of sales to the company. They still prefer to gather old metal shell cas-

46 - The field researcher was unable to interview Lao workers at Sepon, but there is every reason to suppose these workers use their incomes to support children's education, health and other investments that enhance human development, in the same way as do other export workers and Lao migrant workers returning from Thailand.

47 - Sepon is publicly committed to high standards of environmental protection, including World Bank Guidelines, Australian Standards, and as well as the Kofi Annan UN Initiative for Annual Sustainability Reporting. The mine's operations are independently audited by the project's financiers, the Lao Government, and a mine-appointed independent auditor.

ings for sale to scrap dealers, just as they have done since the war ended as it is “not as complicated as growing and selling vegetables and livestock,” said one old woman. Most of the metal is eventually exported to Vietnam.

There is potential for some linkages between Sepon and the building of industries that use copper or gold as inputs. A Lao firm plans to make electrical cable using Sepon copper. By using Lao copper with little transport cost and no import cost, the firm could undersell and compete with imported cable and even export competitively. In 2005, the firm said it was unable to buy any copper from Sepon. The firm claimed that most of the copper produced by Sepon in 2005 was pre-sold and committed in forward contracts. Sepon maintains that the Lao firm was unwilling to pay a fair market price for the copper.⁴⁸

In 2005, a Vietnamese company planned to build a telecoms factory near Sepon to take advantage of the availability of copper at zero transport cost. But it faced the same problem of no access to domestic supply.

A Tin Mine: Nam Pathene Valley, Khammouane Province

The Sepon project is large and uses modern technology and techniques. Most mining operations in the country are not large, nor up-to-date in the equipment they use or the practices they follow.

An example is a tin mine in Khammouane that is a state-owned JV with FDI from South Korea. The total concession area is 1,856.5 hectares, but the actual production area covers 143.5 hectares. Tin is mined on an alluvial plain and production in 2004 was 536 tons worth US\$1.9 million.

More than 20 percent of that total was purchased from local households, almost all of whom mine tin themselves by panning or using water pumps bought from the Company on an instalment plan. Three hundred miners a day sell tin to the Company. The average payout to these sellers is US\$2,500 each day, or US\$8.33 (85,000 Lao Kip) per seller.

Tin mining is the major work done by local people. Market agriculture and other business opportunities are few. Some sell agricultural produce to the 317 employees of the Company but most of the food needed is trucked in from elsewhere. The money that can be earned by growing and selling agricultural products to the Company is much less than the money that can be earned mining and selling tin to the Company.

Environmental protection is weak. The river has been contaminated by tailings and other discharges. Fish populations and fishing have disappeared. There is widespread deforestation in the valley from the tin mining operations and there are no plans or efforts to reforest and protect the watershed.

The Company has made some modest contributions to the local community: US\$30,000 for electrification, \$5,000 for school construction and \$650 a month to pay the teacher, local police and medical staff. The Company helped pay for a gravity-fed water supply system (no longer functioning) and for a bridge to connect local communities. But the road to the mine concession and the communities is poorly maintained, dusty in the dry season, and rutted and full of holes in the rainy season.

The biggest potential contribution of this operation to the community is the money that local people make by small-scale mining and selling of tin to the Company. Small scale mining may be

48 - When asked about the lack of agreement on sales to local firms, the Company replied, “In our contracts – which are internationally competitive otherwise we wouldn’t have customers – we sell our copper at spot London Metal Exchange (LME) price plus a premium. The premium relates to quality, location, time to market and other factors. For Sepon we have typically been able to negotiate premiums of US\$100 to \$130 per tonne of copper. The Lao customers initially wanted us to sell at a discount, i.e. LME minus US\$25 per tonne. This was later revised to LME plus US\$30 tonne. This would have resulted in a significant loss in revenue to the Company as well as to the government from reduced royalties and taxes. It would also have affected our relationship with our other customers.” But government revenue from successful Lao companies using Sepon copper will be likely to more than offset the government revenue loss from a lower premium to LME price.

pro-poor if conditions are not harsh, and market prices and fair treatment are offered by buyers.

In addition to tin, there is also individual mining of gold and sapphires elsewhere in the Lao PDR even though individual mining of gold and sapphires is not legal. The individuals mining tin in Khammouane province may have no other options for sale of the tin they find - the tin companies in the valley may collude to keep the prices low. But individual gold prospectors anywhere in the country and sapphire prospectors in Bokeo province do have other options. Foreign buyers are always close at hand.

Outlook

The mining industry and mineral exports in the country still face some serious constraints including: high transport costs, a shortage of trained people and persisting ambiguities in the mining law and regulations.

Still, the foreign investors are lining up and eager for concessions. Mineral exports are projected to grow very rapidly. By 2008, exports of just gold and copper are likely to be at least US\$390 million (IMF, 2005) - six times the value of all mineral exports in 2004.

Such exports offer both promise and challenges. If government revenues generated from mineral exports are used with care and transparency to invest in people and for protection of the environment, then these exports could improve the quality of life and support the building of an economy based on human resources.

Alternatively, there are the dangers of the 'resource curse'. There may be creation of export enclaves with little connection to the rest of the domestic economy, and there may be 'Dutch Disease'. There may also be government fiscal indiscipline and rent seeking. There may be continued environmental degradation. These impacts could eventually have negative consequences for education, health care, employment, human development and the quality of life.

In 2005, the Lane Xang Minerals Company loaned the government the money to buy a ten percent share in Sepon. This ownership will increase government revenues from the project by another US\$ six million a year. But this stake in the Company creates a potential conflict of interest between 'ownership' on the one hand, and oversight and regulation on the other.

Finally, all minerals are subject to commodity price fluctuations. There is a danger that government may overspend in good times and over-borrow in bad times.

Timber Exports

Overview

In 2000-2001, the forestry sector (including NTFPs) accounted for 3.2 percent of GDP (MAF, 2005) and 27 percent of merchandise exports (including electricity). In August 2001, export of logs was banned. There were initially some loopholes. Existing export quotas could still be filled. Big wood slabs called 'sawn wood' could still be

Table 4.1: Value of Timber Exports (Millions of Current US\$) and as a Percent of Total Exports 2000-2004

	2000		2001		2002		2003		2004	
	US\$	%	US\$	%	US\$	%	US\$	%	US\$	%
Timber Exports	70.1	18.1	106.8	26.6	114.3	28.4	128.4	25.7	144.9	24.7
Total Exports	387.9	100	401.8	100	402.6	100	500.2	100	586.6	100

Source: Mirror data

exported and were exported to the large buyers of Lao timber: Thailand, Vietnam, China (including Taiwan Province of China) and Japan. Exports of 'sawn wood' from natural forests were subsequently banned also. But mirror data indicate that exports of timber and sawn wood have continued.

In fact, the mirror data show that Lao timber exports more than doubled between 2000 and 2004, and that timber's share of total Lao exports (also measured with mirror data) has been at least 25 percent since the ban. But the increases and the shares may have been even higher.

Vietnam's information is the least complete, and its furniture exports and other manufactured wood product exports increased four fold between 2002 and 2005. These exports depend almost entirely on imported wood. In 2004, Vietnam eliminated all requirements for import licenses and all duties on imported timber and lumber. The available information from Vietnam was likely less complete in 2004 than it had been before. In July 2005, 20 trucks loaded with Lao lumber were observed crossing the Vietnamese border on Road No 9 in Savannakhet. The destinations of these trucks were Vietnamese furniture factories producing for export.

Even with the existing mirror data numbers, timber (including lumber) is a huge informal export - in US Dollar terms perhaps the largest of all. Why, what are the impacts and what might be done?

Why the Exports Continue

Some exports continue under new export quotas authorized in response to special requests from neighbouring country governments - for example, for Olympics construction in Beijing or temple restoration in Hue. More timber may be exported under these quotas than authorized.

Some exports may continue under old export quotas authorized in the late 1990s - before the export ban and when demand was reduced by the Asian financial crisis. Even if the amounts authorized by these quotas have since been exported, accurate records may not be available at customs checkpoints.

Harvesting quotas are assigned by the MAF to each province. Some provinces may enforce the quotas strictly while others may not.

Most importantly, the exports continue because the supply price has decreased and demand has increased. The supply price has decreased because of



Trucks near Denesavanh, Vientiane Province transporting logs in one direction, and with heavy machinery heading in the other

road building and road improvements, new hydro-electric projects and electric transmission lines with access roads. Timber in areas to be flooded by new dams is auctioned, cut and trucked away. Hydro-electric companies interviewed in mid 2005 did not know where the timber went after it left the site. They also complained that logging continued in the watershed and in areas set aside for conservation, parks and tourism promotion.

The new roads, dams and transmission lines make forest areas accessible that were previously inaccessible or too expensive to harvest. At the same time, demand has increased as natural forests have been depleted in China, Thailand and Vietnam. Profit margins are high, borders are long and the customs service is not yet as strong as it needs to be.

Under these circumstances, export bans do not work. Just as in Thailand and Cambodia, the ban has only led to large-scale logging and an increase in informal exports. The problem is that there may now be a growing informal structure that supports and arranges these exports - a structure that could be well-connected and well-capitalized - with chain saws, loaders, trucks and money-in-hand to pave the way. A growing number of people may have a stake in the continuation of informal exports. If this is so, it will be hard to change but not impossible.

The Impacts

Because of the informal exports, natural forest timber quotas for the domestic wood processing industry are insufficient and declining. Sawmill operators have developed some informal schemes to deal with the problem. For example, a sawmill operator persuades local people to cut certain trees. Once the trees are cut, the sawmill operator reports the trees as illegally logged to the district forestry office. Eventually the authorities dispose of the timber by selling it to the sawmill that arranged the logging in the first place (Paseuth and Phimmahasay, 2006).

There is also lost government revenue. Between 2000 and 2004, 16 percent of government tax revenues were from log royalties. But if royalties had been assessed on the informal exports, the

log royalties would have doubled during the four years. Thus there is less revenue than there might have been for education, health and other expenditures to improve human development and the quality of life.

Logging of watersheds that supply reservoirs for hydro-electric projects and irrigation systems will result in erosion and silting, thereby shortening the life span of these investments, and reducing the income and exports they produce. There may also be fewer tourists visiting rural areas and thus reduced expenditures that benefit poor communities.

The timber exported can never be replaced. There is a requirement that any timber cut must be replaced with seedlings, or that a fee is paid so the Government can do the re-planting. It is unlikely that this requirement is met for the timber cut for informal export. But even if it is, slow growing natural forest trees such as teak, mahogany and rosewood (Mai Dou, Mai Tekha and Mai Yang respectively) take many decades of unmolested growth to grow to the size of the trees that have been lost.

Most importantly, there are direct negative impacts on the poor. These include increased dangers of floods in the rainy season, longer periods of drought, and reduced access to and supply of NTFPs, firewood, and wood for construction of houses.

Future Outlook

Without some changes, the informal timber exports are likely to continue, and the local wood processing industry and manufactured wood product exports are likely to be hurt both by the shortage of wood and by neighbouring-country competition using Lao timber.

It would be far better to legalize sustainable harvests as an input to the Lao wood products industry. Policing the forests will not work. But community forestry and changing the incentives at the border might.

First, the informal rents need to be reduced by giving customs officials an incentive to turn back trucks loaded with timber and lumber at the major border crossings with Vietnam in Khammouane

and Savannakhet. Customs agents would have an incentive to turn back the trucks if the cargos are auctioned to local wood processing industries, and customs agents get a percentage of the proceeds. (Whistle-blowing in rich countries on tax cheats and corporate and government agency misdeeds is encouraged by financial incentives, publicity and protection. For example, whistle-blowers in the US get ten percent of the money collected from tax cheats they report.)

Those involved in illegal logging and export also need a positive incentive to stop the exports, in addition to the negative incentive of the turning back of some of their trucks.

Sustainable quotas should be allocated to the domestic industry on the basis of competitive bidding. FDI restrictions in the Lao manufactured wood products industry should also be relaxed. The auction bid should include the cost of direct payment to the people who cut, trim, load and transport the timber to the winning bidder(s) in the Lao PDR - rather than to the border for export. Everyone needs to have a stake in changing the system.

Finally, there should be a large and much expanded role of communities in forest protection. This works well in other ASEAN countries where the stake of communities in the forests is less than it still is in the Lao PDR. NTFPs in those countries have long since disappeared.

Electricity Exports⁴⁹

Overview

Between 2000 and 2004, electricity exports to Thailand were more than US\$100 million a year, except for a dip to US\$91 million in 2003. The exports vary year to year with the water levels



Pylons near Road No. 10

in the reservoirs. In 2004, exports of electricity accounted for 18 percent of Lao exports (mirror data, excluding other services exports). The US Dollar value of the exports would have been higher except for a contract for exports to Thailand that is to be paid half in Dollars and half in Thai Baht with the exchange rate fixed (until 2008) at US\$1=25 Thai Baht.

Once a dam is constructed and goes on line, net exports are close to gross exports. The only import components are the salaries of any foreign employees who remain working at the dams after construction is completed and exports have begun, and any future maintenance that may require imported parts and/or expertise.

All past exports of electricity have gone to Thailand. But electricity exports will soon also go to Vietnam and eventually to China. The GMS electricity grid is being integrated. When that is complete, Lao exports of electricity will be able to go to any county where demand exceeds supply - including the possibility of peak load pricing.

The sector is given high priority by government. Once all approvals are obtained, the needed imports are cleared with import duties of one percent or less. The high priority also means that there is some reluctance to require international standards for resettlement of households or to impose some of the standards of the World Commission on Dams⁵⁰. The worry is that the requiring of international standards will reduce FDI in the sector.

49 - The content of this section (unless otherwise indicated) is drawn from: Leechuefoung, 2006.

50 - The World Commission on Dams (WCD) was an independent, international, multi-stakeholder process which addressed the controversial issues associated with large dams. It provided a unique opportunity to bring into focus the many assumptions and paradigms that are at the centre of the search to reconcile economic growth, social equity, environmental conservation and political participation in the changing global context (www.dams.org).

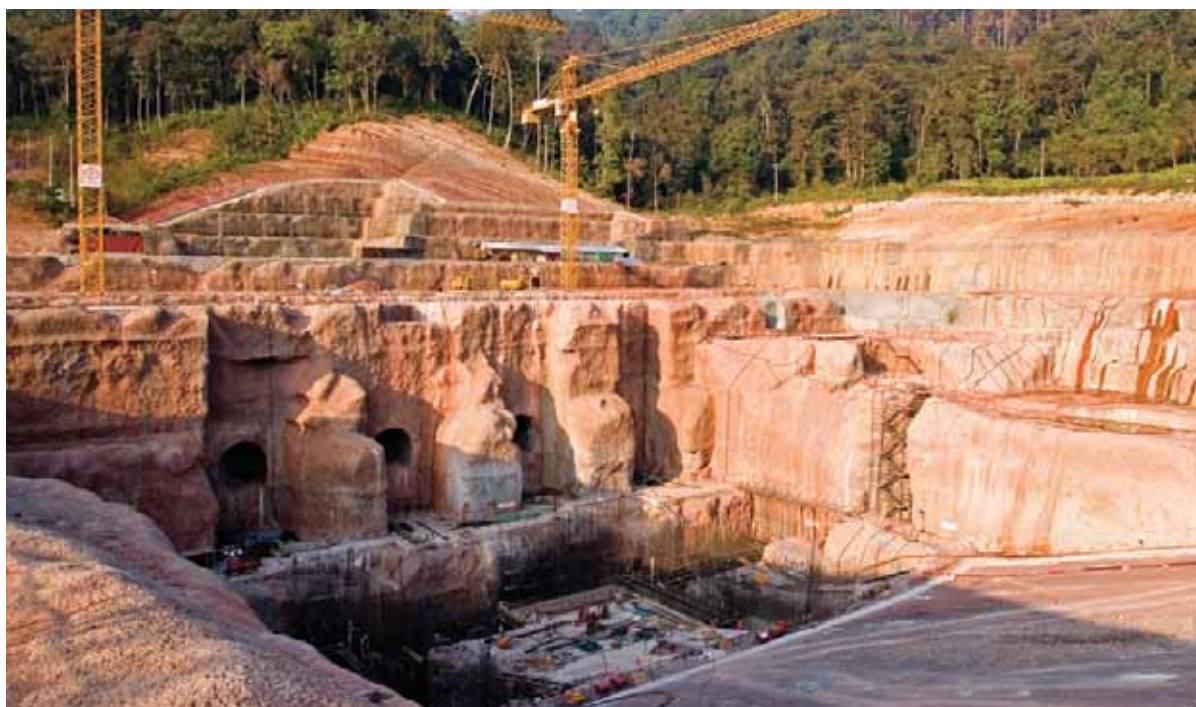
Recently, however, global prices of oil and natural gas have increased rapidly. Lao power is now even more cost-competitive. It is cheaper than most alternatives, and greener and cleaner than coal or lignite. Depending on the prices negotiated and charged, Lao power may even be cheaper than coal. In early 2006, a Thai company investing in the NT2 dam reported that the cost of the power from the project will be among the lowest in the world (Leechuefoung, 2006). If so, and if oil and natural gas prices stay high, demand for Lao power will be strong - higher than predicted in 2004.⁵¹ Pressure to build more dams will increase, and the FDI to build them will be available as countries in the region scramble to secure energy sources close to home.

Even without changes in relative prices, exports of electricity will increase rapidly as new dams are completed and come on line between 2005 and 2020. The biggest single increase will come with

completion of the construction of the NT2 dam in 2010. Exports will increase to an estimated US\$354 million a year and government revenues from electricity exports will increase to US\$100 million.

The Potential

The Lao PDR already has more than 40 hydropower projects. Six dams are classified as large or medium sized, including nine major hydropower plants: Nam Ngum I, Xeset, Selabam, Theun-Hinboun, Houay Ho, Nam Leuk, Nam Ko, Nam Dong and Nam Phao. Yet, only two percent of Lao hydropower generating capacity has been developed. The total capacity of the country is estimated at 23,000 MW - 81 percent of the hydropower potential in the Mekong basin south of China. Exploiting more of the capacity is seen as a key way to help the country escape under-development, lessen its dependence on foreign aid, eliminate deficits, and provide revenues for needed investments in education and health.



Construction work at NTPC, Bolikhamxay Province

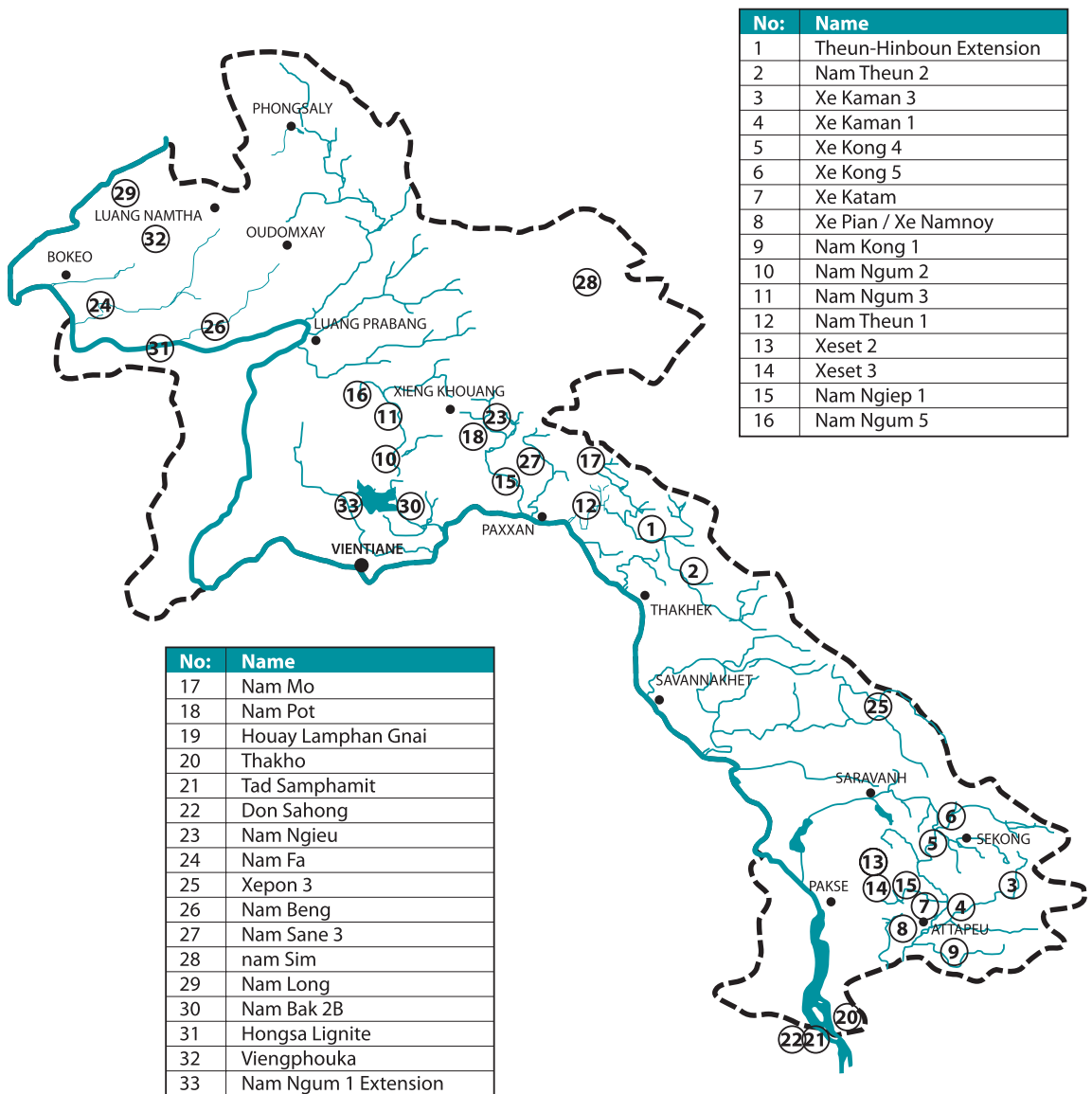
51 - Lao pricing power for future hydro projects may be limited by Myanmar's role in meeting future power demand in Thailand. Myanmar exports natural gas to Thailand. In December 2005, EGAT signed an MOA with the Electricity Authority of Myanmar to build a 1,200MW dam on the Salween River at Hatgui, near the Thai border at Mae Sot. Most of the power will be exported to Thailand. Chinese investors have expressed interest along with EGAT. Construction will take 6 years—coming on stream just after NT2. Five sites along the river including the first dam have an overall potential of 10,000MW. A second dam with 600MW capacity near the Thai border at Prachuap Khiri Khan may be constructed next.

The Lao PDR has signed an MOU with Thailand to supply 3,000 MW of power by 2010 and an MOU with Vietnam to supply 2,000 MW also by 2010. To meet these targets and expected demand from China, 30 small, medium and large hydropower plants will be constructed between 2005 and 2020. These hydropower projects include the NT2, the extension of Theun-Hinboun and Nam Ngum II and III.

The largest project by far will be the NT2 dam and power station, to be completed in 2010 at a total investment cost of US\$1.2 billion. The project will initially export 5,354 MW a year to Thailand and supply 200-300 MW to the domestic grid. International loans will cover 70 percent of the total investment and 30 percent will be provided by private investors. The private share holders include Electricité de France (EDF, 35%), the Electricity

Map 4.1: Locations of the Shortlisted Projects

Source: Maunsell & Lahmeyer, 2004



Generating Public Company (EGCO, 25%), Electricité du Laos (EDL, 25%) and the Italian-Thai Development Public Company (ITD, 15%).

Six other large dams are scheduled to be completed in 2010 or earlier. Clearly, it is critical that construction and operation of these new dams and power stations create as many positive benefits and as few negative effects as possible.

Dam projects funded with WB or ADB support are given very careful review before construction begins and must meet at least some international standards for resettlement and mitigation of impacts. But dam projects funded by individual countries or companies are not as carefully reviewed and may not meet international standards.

Impacts on Employment⁵²

Employment opportunities during the construction phase of large dam projects - even for short periods of a year or two - have helped and can help rural households build wealth and make investments that they otherwise could not have made.

For example, during the construction of Theun Hinboun, Ban Kengbit and Ban Khounkham villagers - at least one person from every household were employed and earned US\$250 to \$300 per month. Fifty to 60 villagers in Ban Nam Sanam were hired by the project for approximately two years, earning from US\$70 to \$600 per month. The money earned was used to build houses, and buy motorcycles and mini-tractors. One man from Ban Nam Sanam said, "No dam - no house".

In the Nam Leuk project, villagers in Ban Houai Leuk were employed as drivers and construction workers and in other jobs. They also used the money to invest in better housing and to buy motorcycles. They reported that access to health care was now easy and that their overall health was better.

NT2 is expected to generate up to 40,000 construction and other jobs for local residents until its completion in 2010. But so far these jobs have been slow to appear. Most villagers in Ban Sengkeo, near the dam site, had been unable to find work with the project in July 2005. Only 14 people from the village were working for the project as construction workers. 'Connections' were said to be required to get a job. By mid-2005, the project employed 2,774 people: 2,092 Lao workers, and 682 foreign workers.

Other projects being constructed by Chinese, Malaysian and Thai companies tend to hire large numbers of their own nationals to build the dams and power stations. They do this by claiming that Lao workers lack the necessary skills and that construction must keep to tight deadlines so that the investors can begin to earn returns on schedule. The MLSW is concerned about this problem and is working to pre-certify the skills of Lao workers.

Apart from construction workers, hydropower projects also generate indirect employment through tourism. For example, Nam Ngum I reservoir is a well-known and often visited tourism site. The provincial tourist authority recorded 327 local people employed around the reservoir, and 250 (including 160 women) in family businesses serving international and local tourists.

There are plans to develop the reservoirs of the Nam Mang 3 and Nam Leuk projects as tourist sites. But so far no work has begun. Future projects should include development of sites for tourism as part of the concession agreements and requirements.

Impacts of Infrastructure

Households near the projects or near routes to the projects may benefit from improved roads and bridges. Expanded irrigation systems may permit dry season crops and more production for markets and for export.

52 - Analysis of impacts is based on literature reviews and field trips to five hydropower projects, Nam Ngum I, Nam Mang 3, Nam Leuk, Theun-Hinboun and NT2, and their affected villages. Ban Phou Kao Khouay and Ban Phou Kao Keo are the two resettlement villages of Nam Mang 3 and Ban Houai Leuk is a downstream village affected by the Nam Leuk dam and Nam Mang 3. For the Theun-Hinboun plant, Ban Kengbit, Ban Nam Sanam and Ban Khounkham were visited. The other three villages - the pilot village, Ban Sengkeo and Ban Nakai Neua - are those villages affected by NT2.

Some of these positive benefits are visible in Nam Bak district in Luang Prabang province. The Nam Ngum I project provides rural electricity, the Nam Kong river supplies irrigation, and access roads have increased international tourism to local waterfalls (services now account for 29 percent of district income). Agriculture and livestock production have increased markedly. Annual average per capita income has increased by 164 percent since 2000. Now only 20 percent (1,960) of households are classified as poor and only 320 in extreme poverty. And 2,593 households are now rich and 5,167 are now classified as self-sufficient - no longer poor.

Nam Mang 3 in Vientiane province came on line on January 18, 2005, with Chinese support and construction help, but 100 percent owned by the Government and managed by EDL. The project will supply power to the Vientiane grid and the rest will be exported. Water in the reservoir will be used to irrigate the Na Pheng Plain - about 3,000 hectares of irrigated land. The project paid about US\$2.5 million to resettle villagers and cemeteries. It may also provide access roads for eco-tourism.

Impacts of Electrification

Dams in the Lao PDR have been built faster and larger because of exports. A 1999 MEM decree requires that ten percent of the electricity generated by the projects be used for domestic consumption,

including expanded electrification in rural areas. The number of Lao households with access to electricity has increased from 25 percent in 1995 to 47 percent in 2005. The Government target for 2010 is 70 percent. Ninety-five percent of urban households were already connected by 2003 (LECS 3). Most of the increases are occurring and will occur in rural areas.

International research and research in the Lao PDR shows multiple potential benefits, particularly for girls and women, from rural electrification (Modi, 2004). These benefits can include: increased productivity, time savings, improved access to information, increased educational attainment, reduced burdens on girls and women for collection of fuel and water, and improved health of women and girls from less indoor air pollution from charcoal, wood and other bio-mass cooking fuels.

Households resettled by the dam project are and should be "first in line" for electrification. Although all of the resettled villages visited in 2005 did have access to electricity, not all households could afford it. Households that did have electricity reported many benefits - some special to their culture and circumstances.

Electricity also increases economic activities and incomes. For instance, Ban Khounkham now has 17 rice mills and two wood processing factories.

Box 4.2: The Benefits of All-Weather Roads

Ban Phou Khao Keo is one of the relocated villages directly affected by the Nam Mang 3 project. A new dirt road passes through the new village which can be travelled all year round - in the old village the road was not passable in the rainy season. Villagers can now easily reach the market, big rice mills, hospitals and schools. In the old village students had to walk 10-20 kilometres to go to the lower secondary school (in the lowlands). Many dropped out after Grade 5. Now they continue their schooling.

"In the old village, sometimes I had to carry firewood and a sack of rice on my back due to the impassable road. Now, the family uses a mini-tractor to carry heavy goods home. And in the old village, rice mills were small; sometimes I had to come back and manually crush rice by myself as well. If the family wanted to go to the bigger rice mills, the only way was by bus which was very costly."

Woman in Ban Phou Khao Khouay, Vientiane Province.

Source: Leechuefoung, 2006

In Ban Phou Khao Khouay, some men would like to open their own motor repair shops. In Ban Nam Sanam, some villagers now produce handicrafts at night.

Electricity not only makes it easy for women to work at night, it also creates a safer environment for women to move about at night and thus increases women's participation in night-time meetings. One woman in Ban Kengbit said that in the past only men were allowed to go to the

community meeting. It was considered inappropriate for women to go out at night for security reasons. This, in turn, had limited the involvement of women in activities and decisions that affected them.

With electricity - and with the money households get for resettlement - the first purchases are often television sets and video players. Television can obviously have both positive and negative impacts in rural areas. It can provide new informa-

Box 4.3: The Benefits of Electrification

"My life is easier - Nam Lai Fai Savang. There is enough water and electricity provides a bright light for the villagers. Buying or selling products is also easier." (Woman in Ban Khounkham)

"It is easy to look after my baby at night." (Woman in Ban Kengbit)

"Electricity makes it easier to move around at night. With electricity I can see things and know where things are with my own eyes." (Woman in Ban Kengbit)

"When batteries were used for light, I would have to go to bed when the batteries gave out even if I wanted to study more. Now, I can study as long as I want at night." (Young male student in Ban Houai Leuk)

"My family is small. Electricity is now used to cook rice and sometimes other meals." (Woman in Ban Phou Khao Khouay)

"Now, if I am too lazy to make a fire for cooking, I can use the electric cooker." (Woman in Ban Kengbit)

"We feel more urbanized with electricity." (Village headman and male representatives of Ban Hoai Leuk)

Source: Leechuefoung, 2006

Box 4.4: Ban Phou Khao Khouay: Electricity and Handicrafts

Approximately 95 percent of villagers, especially women and girls, do embroidery. Villagers earn 100,000 Lao Kip (US\$10) for a big piece and 20,000 Lao Kip (US\$2) for a small piece. In the past, lighting was limited and so were night activities. Now incomes have increased because the villagers can do cross-stitching at night. One mother said that her daughters can do embroidery after school work at night. Thus, the burdens on girls and women may not decrease with electricity, but their incomes may go up.

Source: Leechuefoung 2006

tion for farmers, traders and students. Children in Ban Phou Kao Khouay were observed watching Hmong music videos (some produced in the Lao PDR, some in Thailand and some in the US) and a programme on frog raising presented in Lao on Lao TV. Women in Ban Kengbit said that their children were smarter because television was broadening their knowledge. The women also liked that their children could now watch TV at home because content and hours watched could be controlled.

On the negative side, most of channels available and those most watched are Thai channels. Some women said that culture of the villages had been influenced

by Thai TV. One woman in Ban Kengbit said that young girls had started wearing miniskirts.

On balance, the benefits of electricity seem clearly to outweigh the negatives. The problem is that not all households can afford it. In some resettled villages only half the households are connected. Some could not afford the connection fees - ranging from US\$50 to \$100. Only in the NT2 “model village” the dam project paid the connection fees for resettled households.

Other households could not afford the monthly charges - in part because land and water have not

Box 4.5: Resettlement: What Some Villagers Said

During the field research, a small number of resettled families were asked how it went and how their lives have been affected since the move. Most were very pleased by the good quality of the housing provided, by access to electricity, and by the proximity and the all-weather access to schools, markets and health care. Most were also pleased with the cash compensation they received which they used to buy televisions and mini tractors.

But some villagers in Ban Phou Kao Khouay and Phou Kao Keo said that they had received less compensation than promised, and - at the time of the interview - had also not been provided the promised paddy land. Low levels of education may put villagers at a disadvantage in the negotiation of resettlement allowances and speaking up when they do not get what they are promised.

Other villagers said that land provided for crops was infertile, that they had limited access to clean water, and that promised health clinics had not been built. Some said they had no jobs, that they now found it difficult to earn a living, and that they could no longer collect NTFPs - an important source of income in their previous locations.

International Standards

International standards for resettlement require that the resettled families have at least the same standard of living, adjusted for changes in the cost of living, as they had before. This requires not only compensation, but also ample opportunities to earn income in the new locations. The number of households to be resettled in the Lao hydro electric projects is tiny compared to hydro electric projects in any other East Asian country. The Three Gorges Dam in China will resettle more than one million households.

It is unconscionable and unnecessary that some of the Lao families being resettled are not being provided with basic necessities like water and arable land, that health facilities and free electricity connections are not provided, and that some are taken advantage of. Promises made should be kept, and international standards for resettlement should be met. These social costs to the projects are low in comparison with their total costs. The political and social stability costs of not doing it right could eventually be very high.

Source: Leechuefoung, 2006

yet been provided as promised in the resettlement agreements. These households have been disconnected. (The monthly rates in the rural areas are the same as in the urban areas; there are no cross-subsidies.) Clearly electricity is not important if there is nothing to support the family. As one man in Ban Phou Kao Keo said, “I don’t eat electricity. There is no rice and no water. What is electricity for?”

Environmental Impacts

The direct negative environmental impacts of the hydro electric projects may include increased illegal logging, reduced soil fertility, erosion of alluvial plains, decreased fish populations and low downstream water quality, decreased wildlife and NTFPs, conflicts between power generation and supply of irrigation water in the dry season and conflicts between excessive reservoir levels and down stream flooding in the wet season.

Logging from and near dam sites and from transmission line rights-of-way has continued even after completion of their construction. The dam officials interviewed in mid-2005 were concerned about the logging but were uninformed about where the timber was going. Logging trucks full of natural forest logs were observed leaving the Phou Khao Khouay National Park adjacent to Nam Ngum I reservoir. Villagers said that this has been going on for years.

Downstream erosion of river banks is occurring. For example, the Theun-Hinboun power project has eroded ten metres from the river banks in some parts of the Nam Hai and Nam Hinboun rivers. In Ban Nam Sanam, households have lost nearly all of their riverbank gardens, and many are now afraid to grow vegetables along the riverbank. The company has offered some compensation including construction of new gardens (further from the riverbank) with varieties of fruit trees, and provision of fertilizers and training. More compensation and resolution of the problem have been promised. The problem was apparently not foreseen or analysed before the project was built.

Some of the projects have altered the habitats of wild animals. For example, the Nam Leuk project has reduced habitat and food sources of wild elephants. Now the elephants are entering local

communities, destroying agricultural crops and have killed one villager.

There has been deterioration of downstream water quality. River flows have been reduced. For example, villagers in Ban Kengbit reported the Nam Theun is now dirty and smells bad. It takes longer for dead animals or leaves to decompose.

Most serious is the impact of dam projects on fish populations and fishing. Seventy percent of rural households in the Lao PDR supplement their incomes (and diets) by fishing. For example, before construction of the Nam Leuk hydropower project, fishing was an income-generating activity for villagers. During the rainy season when water was high, villagers could catch plenty of fish. “You could catch as many as you wanted,” said one villager. Nowadays, fish are smaller and far fewer. Villagers can only catch two or three fish in a whole day using the same techniques and equipment.

Fish catches have decreased by 70 to 90 percent on the Nam Hai River. An old lady in Pak Kading village said that she has to work five times as hard to catch one fifth of the fish she used to get. “I don’t know how I’ll survive if the fishing gets worse” (Leechuefoung, 2006).

All of these environmental impacts could be much larger for NT2. The project will flood 450 square kilometres of the Nakai Plateau inevitably altering the wildlife habitats. The project will displace 6,200 indigenous people from the reservoir area, and another 6,700 people from other areas of infrastructure construction. The effect on fishing could be extensive. About 790,000 people could be affected by changes in the flows and water quality of the Xe Ban Fai, Nam Phit and Nam Katang rivers. Unlike some of the other projects, the likely downstream impacts of NT2 have been analysed. Money is to be set aside for mitigation and compensation. It is important that these promises be kept.

Reduced Imports and Support for Industry

One impact of the many hydroelectric projects will be the reduction in imports of electricity from Thailand and Vietnam. The provinces that still import electricity are Bokeo (from Thailand),

Houaphanh (from Vietnam), Xayaboury (from Thailand), Khammouane (from Thailand) and Savannakhet (from Thailand and Vietnam). Khammouane and Savannakhet are the biggest importers. The imported power is not as dependable or as cheap as it needs to be to promote industrial development.

In the near future, Khammouane and Savannakhet will receive electricity from Theun-Hinboun extension project, and Houaphanh will get power from the Nam Sim Hydropower plant which is to be completed in 2008. If construction stays on schedule, imports will decrease markedly in 2007 and end in 2009.

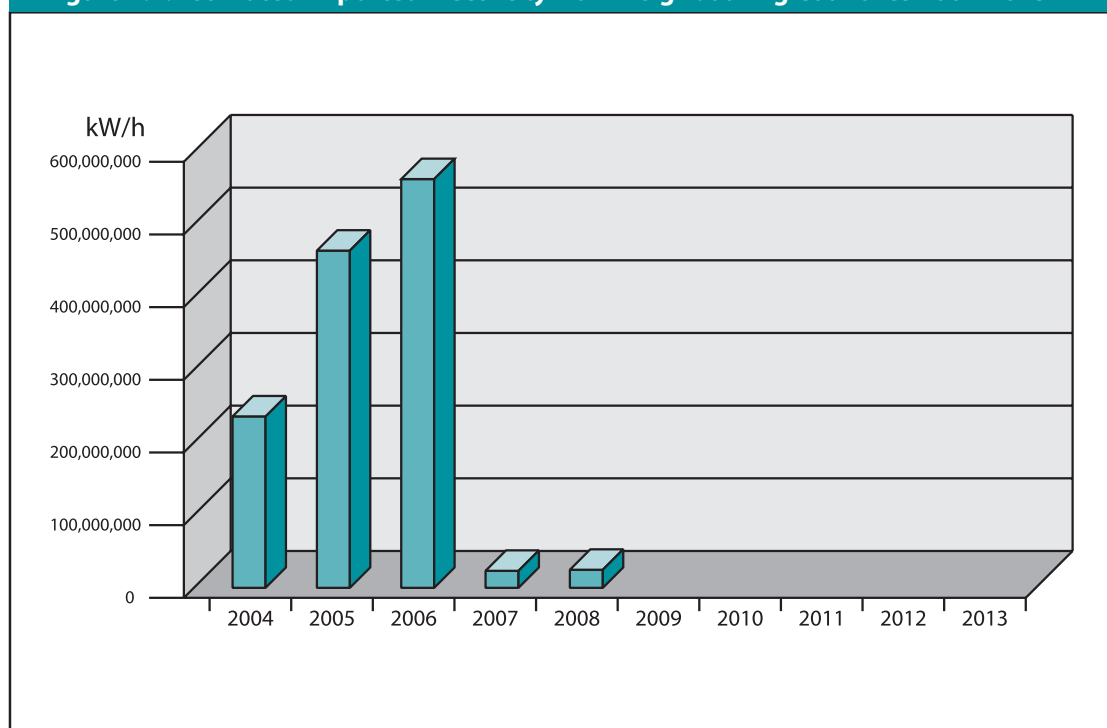
Electricity supply is still limited in most provinces. This has slowed the development of industry and tourism. A much more ample supply should help increase the level and geographic distribution of economic activities and thus improve people's options and living standards. For instance, in Vientiane province, in the past, factories were concentrated in one or two districts with access to

electricity. Now factories have spread out to other districts and to rural areas, such as paper factories in Muang Fuang and Xannakham.

There have also been some positive linkages between power generation and creation of new industries. For example, in January 2005, a 50/50 ROK/Lao company opened an electric transformer company to produce 30 transformers a month to replace about 30 percent of the imports needed for the export of electricity, and for step-downs in rural electrification and other domestic supply. Additional investment is planned to increase that proportion to 80 percent of past exports and to begin exports from the Lao PDR to other ASEAN countries. The units are reportedly 20 to 25 percent cheaper than imports.

Similarly, a 95 percent Thai and five percent Lao owned firm in Vientiane began producing copper electrical cable in early 2005 to support electrification and electricity exports. There is also a Chinese/Lao JV to produce cable in Savannakhet that began in 2001.

Figure 4.1: Estimated Imported Electricity from Neighbouring Countries 2004-2013



Source: Department of Electricity, MEM

Macroeconomic and Budget Effects: Future Outlook

The potential indirect benefits of the hydroelectric projects include reduced dependence on foreign aid, reduced fiscal and balance of payments deficits, and more revenues for investments in education and health and for environmental protection.

The Government is expected to get US\$2 billion in revenue over the next 25 years and then \$240 million per year thereafter from NT2 alone. NT2 revenues in 2011, adjusted to FY2003 prices, will amount to 60 percent of domestically financed expenditure on education and health in FY2003.

Some indirect negative effects may include fiscal indiscipline, poor debt management, “Dutch Disease” and other currency risks. The new hydro projects will increase debt, but projected revenues are more than enough to service the debt and make new investments in education and health if there is fiscal discipline. Conditions for approval of NT2 include transparency in revenue management, and allocation of revenue for poverty alleviation, environmental protection, and mitigation of social and other impacts in the dam affected areas.

Construction of the new dams, particularly NT2 and increased exports may increase the value of the Lao Kip but not by much if macroeconomic management is otherwise strong. The export contracts are priced in US Dollars and Thai Baht. There may be currency risks related to these contracts that could affect repayment of debt. Again, good management is needed.

Whatever the other impacts, if construction of all the projects stays on schedule, electricity exports will increase more than six fold between 2004 and 2010 and nine fold by 2020.

Transit Trade and Over-Flights

Transit Trade⁵³

In 2003-2004, about US\$83.4 million of merchandise trade consisted of transit trade and re-exports to and from Vietnam, Thailand and China. More than half of the transit trade passed through Savannakhet along Road No. 9 between Vietnam and Thailand. Eighty-five percent of transit trade was between Vietnam and Thailand.

But the level of “transit trade” may still be a bit overstated. Official goods in transit are to be sealed and specified for exit from the Lao PDR at a specific checkpoint. But that is not yet happening. Verifying that the goods exited is not done, and there is no check yet on what did happen to the goods. Thus some of the “transit trade” cargoes entering from China, Thailand, and Vietnam, may in fact be imports.

Table 4.2: Transit Trade 2003-2004

Province	Transit Trade (US\$)
Savannakhet	53,414,651
Bolikhamxay	15,000,000
Luang Namtha	8,491,677
Champasak	2,332,996
Bokeo	1,945,327
Vientiane Capital	1,242,269
Phongsaly	676,229
Khammouane	287,232
Total	83,390,381

Source: MOIC

53 - Some of the content for this section is drawn from: Bui and Ngonvorarath, 2006.

Some of the most common routes used for transit trade include:

- **Thailand-Vietnam:** The main route to and from Vietnam and Thailand is via Savannakhet. When the bridge between Savannakhet and Mukdahan in Thailand is completed in late 2006, traffic on this route will increase even more. The second most travelled route between Thailand and Vietnam is via Bolikhamxay.
- **China-Thailand:** Goods from China are sent via Luang Namtha or Oudomxay-Bokeo to Thailand or vice versa from Thailand to China.
- **China-Vietnam:** Chinese goods enter the Lao PDR through border crossings in Phongsaly and Oudomxay, and go to Vietnam through Phongsaly, Xieng Khouang, or through central and southern provinces.

Some of the transit trade via Savannakhet involves imports for (partial) re-export and there is some value adding in the Lao PDR (NERI and NSC, 2004). Goods such as garlic and clothing from Vietnam are ordered by Lao trading companies. The garlic is peeled, sorted and repacked by Lao workers. The smaller cloves are sold in the Lao PDR. The larger cloves are sold to Thai traders for re-export to Thailand - mostly informally to escape relatively high Thai import duties. The clothing is also sorted. Some is sold in the Lao PDR and the rest is re-exported to Thailand - again mostly informally.

As the North-South and East-West Corridor Road Projects are completed, as Vietnam complies with its AFTA 2006 commitments and the EHP includes more products, transit trade will increase markedly. Road charges and other transit and re-export charges will increase government and provincial revenues that could be used to invest in human development.

Under the Customs Law, transit goods through the Lao PDR are to be exempted from duty. However, fees and charges related to infrastructure usage (including roads) and administrative services are applied.

In the provinces, however, transit goods are still categorized as temporary imports for re-export and are still subject to fees based on trade value rather than on the services used in transit. For example, in Luang Namtha transit trade between Thailand and China is subject to a fee of three to seven percent of the value of the goods depending on the type. The fee on agricultural products is seven percent of their estimated value. In Khammouane, transit goods are charged twice both on entry and on exit.

Transit trade charges in the future need to be competitive. The Lao PDR's pricing power varies with the route. The Lao PDR has a strong comparative advantage in east-west transit trade. The ADB forecasts that transit trade on the East-West Corridor will double between 2000 and 2010 and double again in the next decade. The Lao PDR has less comparative advantage on the China - Thailand trade because of a more direct alternate road route between Kunming and Northern Thailand via Western Myanmar (see map in Chapter 1) and direct passage on the Mekong River between Yunan province and Northern Thailand.

Over-Flights

The least labour-intensive export of all is over-flights - a services export. The Lao PDR is located beneath flight paths to and from Bangkok and other airports in mainland South East Asia and cities in Vietnam, China, Korea, Japan and North America. Presumably, someone has to monitor the flights and airlines crossing the county to be sure that the correct fees are received from each airline. But that is all it takes and the fees are significant. In fiscal year 2004-2005 revenues from over-flights amounted to US\$23 million - higher than hydropower royalties, or natural resource taxes, or even timber royalties and equal to 51 percent of the revenue generated by all import duties (NGPES).



Chapter 5

THE IMPACT OF IMPORTS ON HUMAN DEVELOPMENT

The impact of imports on human development is mixed. Some improve infrastructure and transport, and thus can facilitate trade and enhance development. Others facilitate exports with high benefits for human development. Yet others promote exports with lower benefits.

Some imports increase employment in trade and retail sales. Others may threaten jobs, enterprises and livelihoods. “Import” of workers from Vietnam and China - most of it informal - may mean that fewer jobs in trade, wood-working and construction are available for Lao workers. Some imports improve education and information and thus markets, choices and opportunities.

Imports of consumer goods and simple capital goods may have the largest of all impacts on human development. Some of these imports, such as water pumps and electric cookers, help reduce burdens on women and girls. Other imports, such as mobile phones and TV, improve access to information, and also change ideas, language and culture - both positively and negatively. And some imports are just negative - HIV/AIDS and yaa baa, in particular.

Impacts on Trade Facilitation, Infrastructure and Transport

Imports of banking services facilitate international trade by providing letters of credit, foreign exchange, and other payment and clearance services.

Imports of construction machinery, construction company services and of intermediate goods such as asphalt and cement are contributing to the completion of the road corridor projects and other infrastructure, and thus to reduced transportation costs which benefit the export market and transit trade.

Imports of fuel and vehicles contribute to improved transport for trade, for international tourism, for better connection and integration of the economy, provinces and the peoples of the Lao PDR, and between the Lao PDR and its neighbours.

Improved transport directly affects human development. The ADB research in the GMS and in South Asia found road improvements increase access to information, and access to and use of health services, and enrolment in education. In particular, information about the availability and importance of Mother and Child Health (MCH) services, and shorter time and lower travel costs to reach such services can reduce maternal and infant mortality, and - together with higher incomes - improve child nutrition (ADB, 2004). The research also found that improved roads and transport were associated with “increases in school enrolment especially of girls” and with improvements in poor people’s “safety, social interaction and security, even marriage prospects” (ibid.)⁵⁴. Without the necessary imports these benefits would not occur.

54 - The impacts of road improvements are subject to diminishing returns. In the ADB research, the impacts were largest where roads were the least developed and the smallest where road coverage was already good (ADB, 2004).

Impacts of Imports on Exports

Exports that are Labour-Intensive

To a large extent, the Lao PDR's export sector depends on imports of intermediate products, for instance machinery and other equipment and imports used for producing and packing finished goods. In this respect, these imports play a vital role in sustaining and expanding the export sectors. Imports have a positive impact on human development when they facilitate exports, which in turn create employment and improve other opportunities for Lao people.

As examined in Chapter 3, there are certain exports that are particularly beneficial to human development due to their high employment generating capacity and their links with the domestic economy. These export sectors include agriculture, garments, food processing and wood products. All rely to a certain extent on imports of intermediate products.

Garment exports depend on imports of thread, fabric, dyes and packaging materials. Wood product exports depend on imports of finishing products. Exports of processed foods depend on imports of cans and glass jars. Delays or high formal or infor-

mal import charges can affect the competitiveness of the Lao PDR's exports and employment and human development may suffer.

As these export sectors grow, domestic production of the most frequently used intermediate goods will expand as local firms are able to compete in price and quality with imports. These firms too will, of course, need imports of both capital and intermediate goods.

Increases in international tourism also require imports of capital goods, equipment, construction materials for new hotels and guest houses, and imports of vehicles to increase domestic transport capacity. Tourism depends also on the import of intermediate goods - such as fuel, condiments and cooking oil - and imports of some consumer goods such as beverages, cable TV and English language newspapers and magazines. Imports of these consumer goods also create employment in the distribution, and wholesale and retail sales.

It is not good policy, and in any case, increasingly not permitted by trade agreements, to protect local producers of intermediate goods with NTBs (for example import quotas in general and on specific items such as construction materials) or by informal charges at border crossings. Higher domestic

Table 5.1: Imports Needed for Manufactured Exports

Garment Exports	Wood Products	Processed Food
Weaving machines	Routers	Refrigeration equipment
Washing and dyeing machines	Drills	Furnaces and ovens
Folding and cutting machines	Saws	Labelling machinery
Sewing machines	Planing and milling machines	Water purification equipment and filters
Cotton fabric	Sanders and sand paper	Vinegar
Woven fabrics	Joiners and cutters	Lactose syrup
Dyes	Solvents and thinners	Pectin
Thread and yarn	Glue	Bottles, lids and stoppers
Zips	Paints and varnishes	Cans
Buttons	Polishes	Shrink wrap
Packing materials	Packing materials	Cartons

Source: Mirror data on Lao imports.

prices of intermediate goods are, in effect, a “tax” on Lao manufactured exports and international tourism. The effect is to make these exports less competitive and to create fewer jobs for Lao workers than might otherwise be created.

Imported inputs can improve agricultural productivity and exports, and thus farm household income and human development. Some of these imports, such as seeds, fertilizer and breeding stock are subject to quotas or bans. This makes Lao agricultural exports less competitive than they could be, and Lao agriculture less responsive to market opportunities than it otherwise would be. However, import restrictions on chemical pesticides may be beneficial for the health of Lao farmers, and also assist in developing organic agricultural products for export.

Impacts on Other Exports

Other imports - such as mining and smelting equipment - facilitate exports of minerals. Imports of turbines, transformers, construction equipment, and construction materials facilitate increased exports of electricity. These exports will not create many jobs but they will greatly increase government revenues that can be used to enhance human development. These exports are also likely by 2010 to create more of a balance between Lao exports and imports. Import quotas (and the quota rents earned by favoured trading companies) should be dismantled by then if not before.

Impacts of Imports on Employment and Lao Firms

Increased Competition from Imports

Some imports of intermediate and consumer goods, particularly as Lao tariff lines are lowered for AFTA 2008 and ASEAN-China 2015, may threaten local firms, production, products and employment. For example, some domestic cement plants are neither large enough nor modern enough to benefit from scale economies and other efficiencies in production. They need to invest in new technology and marketing to be able to compete with imports. Imports will become more competitive not only

because of the lower tariffs, but also because of lower transport costs as the GMS and other road improvement projects are completed.

Similarly, Lao garment firms producing for the local market will face increased competition from Vietnamese imports in 2008. To thrive under these new conditions, these firms need to invest to become more productive and cost-effective, and to produce designs that have special appeal to Lao consumers.

Some imports of labour-intensive agricultural products under the EHP will require Lao farmers to switch to other crops that are more land-extensive and thus more competitive. This should not be a concern. It is not necessary for the country to be self-sufficient in all crops as long as net agricultural exports and rural incomes are increasing.



Offloading a truck with Chinese imports at BanPak Mong, Luang Prabang Province

Labour Imports⁵⁵

The Lao PDR exports labour to Thailand. It also “imports” labour. Some of the imports are of skilled workers with visas approved for work in foreign firms, to manage and work on construction of dams, power plants and mines, or to work in foreign aid projects. According to the MLSW there were 1,570 registered foreign workers in the country in 2004.

But most “imports” of labour are informal, consisting mainly of workers from Vietnam and China. Some enter with border passes or short-term visas and stay on. Others just cross the borders without passes or papers of any kind. Most of the migrants are not seasonal migrants. They work for sustained periods in the Lao PDR. Some have been working in the country for many years. Unfortunately, there is even less information about these workers than there is on Lao workers in Thailand.

The Asian Migration Centre estimated that in 2000, there were at least 15,000 Vietnamese workers and 80,000 Chinese workers in the country. The estimate for Vietnamese workers is likely to be conservative. Vietnamese workers are often seen working on building and home construction projects. Indeed Vietnamese workers built most of the buildings of the National University of Laos. Small wood product companies employ and often prefer Vietnamese workers. They are said to be more skilled and also willing to work for less money than Lao workers.

The number of Vietnamese working (informally) in Savannakhet province has increased in recent years. There are many new Vietnamese restaurants, barber shops, beauty salons and ‘entertainment restaurants’ (including prostitution).

Are these workers taking jobs that would otherwise be taken by Lao workers? In some cases, the answer is probably yes. If Vietnamese workers were not readily available for construction and some factory work, and Chinese workers were not so active

in road construction, trade and commerce, then more Lao workers would have learned these skills and be doing that kind of work.

On the other hand, some Vietnamese and Chinese workers may be doing work that Lao workers will not do, or will not do for the same wage. Lao workers may be better off doing the same work in Thailand for much more money. Lao workers, compared to Vietnamese and Chinese, have the large advantage of speaking Thai. They can compete successfully for the higher paying Thai jobs whereas the Vietnamese and the Chinese cannot. Between 200,000 and 300,000 Lao workers - perhaps more than ten percent of the Lao labour force - are currently working in Thailand. It may be that the smaller numbers of Vietnamese and Chinese workers estimated by the Asian Migration Centre to be in the Lao PDR are mainly substituting for some of the Lao workers who have left.

Employment in Cross-Border Trade and Retail Sales



Retailer coming back from Thailand at the border in Vang Tao, Champasak Province

55 - This section is based on Chanthavysouk, 2006.

Traders involved in cross-border trade sell Lao products in Thai, Chinese and Vietnamese border markets, and import products from those countries for resale in the Lao PDR. Often the imports are simple consumer goods. Female cross-border traders interviewed in Vientiane and Savannakhet exported Lao skirts, other Lao clothing, NTFPs and bamboo baskets (GRID, 2006). They imported fish sauce, soap, toothpaste, detergent, cooking oil and instant noodles. Cross-border traders in the north imported and sold VCD and DVD players, mobile phones and other electronic goods.

These traders generate employment for others in retail sales. They also hire others, including

children, to carry some of the goods both ways in order to evade ceilings on the amount and value of exports and imports not subject to duties (GRID, 2006).

The traders encounter frequent problems with customs and some get started way before dawn to avoid customs entirely.

Not surprisingly, when asked what changes they want most, the women interviewed in Vientiane and Savannakhet wanted reduction of tariffs as the first priority (85 percent); followed by improved access to credit (69 percent) and removal of road blocks (58 percent) (GRID, 2006).

Box 5.1: Ms. Thongdy: A Cross-Border Trader

"I am 39 years old and started my business at the age of 35. I completed primary education. I am a single mother with four children. In the past, I was a street vendor with a push cart selling fruit in Vientiane Capital. As street vending made only a small profit, I quit the job and found new work as an illegal border trader.

I started my business in 2001 by copying Thai traders who do illegal cross-border trade at the Thai-Lao border checkpoint (at Ban Dankham). I buy Chinese goods (keys, batteries, machinery, materials used for repairs and so on) at Nongdouang market and sell them in Thailand. While doing informal cross-border business, I developed a business network with Thai traders. I employ more than ten workers who live along the bank of the Mekong River (Ban Dankham and Ban Kaoliow) to carry and deliver my goods to Thailand. The fact that the trade is illegal is my main problem. Everyday I have to plan to avoid police control both at the Lao and Thai sides. I make a good income because the prices of Chinese goods in the Lao PDR are very cheap and I sell them at much higher prices in Thailand. I have used my income to build a new house, pay the school fees of my children and for food. I start work at 7 am and finish at 5 pm each day. As the Lao government allows Chinese traders to do business in the Lao PDR, now I have many challenges because of more competition from Chinese traders. Now, I don't think this business is a permanent job. It faces higher risks. So I would like to change my job. I would like to get a loan to begin raising livestock in the future."

Source: GRID, 2006

Box 5.2: Fines, Taxes, and Fees for Informal Trade at the Lao-Thai Border

"The police harass us as illegal traders. We're only fighting for survival. Everyday, I cross the border to sell NTFPs at local villages in Thailand and come back home in the evening. The tax officers, both on the Thai and Lao sides, hassle me by demanding trade certificates. They rush to fine me and threaten to confiscate my goods. Together with my friends, we sell Chinese clothes. The district officers sometimes visit us to collect contributions. They don't give us any idea about where the money goes.

I import food items from Thailand and the customs officer requires us to pay a bribe every time we cross the border. If we do not pay, they are very tough on us."

Source: GRID, 2006

Regardless of these risks and challenges, the women traders earn a good living. Many were poor when they started. They now earn an average of 1.6 million Lao Kip (about US\$160) a month and they use the money to assure food security for their families and to pay for the education of their children (GRID, 2006). Imports thus not only generate employment for traders and sellers, they improve human development - living standards and the future prospects for children.

Impacts on Health and Health Care

There are two forms of health care imports. Lao nationals who travel to Nong Khai or Mukdahan for health services is one kind of health care import. This is common behaviour among middle and higher income urban households who can afford health care treatment in Thailand

The other is the import of medicines and medical equipment. Under a 2003 WTO agreement, the Lao PDR is now able to import essential generic drugs that it is not yet able to produce. These imports can have a positive impact on the health of Lao people.

Alternatively, import, over-consumption and misuse of pharmaceuticals, particularly antibiotics, can create resistant strains that threaten health. Adult consumption of expensive imported curative services can crowd out preventive health care of infants and young children and price-out the poor. There has recently been a significant increase in imported curative services (expensive clinics with lots of imports) and in their cost (WB, 2004).

Impacts on Information, Education, Ideas and Culture

Information and communication technology (ICT) imports, including telecom equipment, mobile phones and services, satellite and cable TV, and VCD and DVD players have multiple effects on human development.

Information and Markets

More and better information improves markets that are incomplete or missing, as some are in the Lao PDR particularly in agriculture. A principal reason for incomplete or missing markets is lack of information and asymmetric information among potential producers, sellers and buyers.



CD, VCD and DVD shop in the Morning Market in Vientiane Capital

International research identifies the importance of having information about market opportunities and market prices to increase farmers' income and wellbeing (Timmer, 1991). For example, in the absence of sufficient market information, farmers may be unsure if there will be a market for a particular product and potential buyers may be unsure if there will be domestic supply of that product and so they may use imports instead.

Recent research indicates that access by the poor to mobile phones may be initially more important than access to the internet for improving information flows and thereby reducing poverty (Waverman, Meschi and Fuss, 2005). This is consistent with earlier findings in Indonesia that price information obtained by farmers by radio and land-line telephones led to rapid diversification of agricultural production and increases in farm incomes (Timmer, 1991). There are four providers of mobile phone services in the country, and some people along the Thai border use Thai SIM cards to access and call Thailand at lower Thai domestic charges. Prices of phones in the Lao PDR have recently dropped to as low as US\$60 and SIM cards to as low as US\$5. Between 2003 and 2005 the number of mobile phone subscribers - excluding Thai phones - increased seven fold to 350,000. In

rural areas without land-lines, mobile phones are the only option (Schönweger, 2006).

In late 2005, 145 people in Vientiane, Pakse, and rural Champasak near the Thai border were interviewed about their use of mobile phones, TV, video players and the internet. Eighty-three percent in the urban areas and 33 percent in the rural areas had mobile phones. In the rural areas some of the phones were rented out one call at a time. The same pattern was also found in communities near dam sites in other provinces (Leechuefoung, 2006). In rural Champasak, none of the farmers said they were using mobile phones yet to check market prices for agricultural products or inputs. But others did report use of mobile phones for business activities including retail sales. Overall, 71 percent of mobile phone users said that the phones saved time - they needed to travel less - and 48 percent said mobile phones helped them save money (Schönweger, 2006). The Thai phones help families keep in touch with relatives and migrants in Thailand.

Television, Language and Culture

Television, particularly the 'import' of Thai TV, and the low cost and wide availability of foreign VCDs and DVDs are changing ideas, language



TV-Satellites in front of wooden houses in Ban Houay Satap, Luang Prabang Province

and culture. Culture is an important component of human development. National and ethnic cultures set norms and expectations, and provide identity, a sense of belonging, comfort and self-confidence. Of course all cultures evolve and change with time and new influences. Some of the evolution is positive - creating new and valid perceptions of opportunity and expectations of what is possible. Other effects may be negative - creating false hopes, feelings of dissatisfaction and inadequacy.

Television and video players have become remarkably pervasive in the Lao PDR. Migrant workers returning from Thailand, estimated at 50,000 a year, are influencing Lao language and culture by using more Thai words, expressions, idioms, and dressing and acting differently. But the impact of the migrants does not compare to the impact of television.

Between 1997-1998 and 2002-2003, the percentage of Lao households with television increased from 30.6 to 40.9 (LECS 3). Many households with television also have video players. The biggest percentage increases (from small bases) were in rural areas without all-season roads, in the north, in districts bordering Vietnam, in minority districts and in first and second priority poverty districts. All families with a television near the Thai border have access to Thai channels. Sometimes they have access to Thai channels only. Rural households without a TV watch in friends' homes or in shops with a television.

TV is seen by almost all households as improving the quality of their lives through providing information, entertainment, and a 'window' on the world outside their direct experience (Schönweger, 2006). There is perhaps also an illusion of social mobility. Goods once too expensive for all but high-income Lao households are now affordable by middle and lower-income households. Prices are lower because of economies of scale, lower tariffs and increased cross-border trade. Lower income households may feel they are 'moving up'. In reality, however, the goods are moving down (Levy, 1966). But this illusion of social mobility has a powerful effect of economic growth, interna-

tional trade and lower prices of consumer goods. It may be quite important for social stability in rich countries and poor countries alike.

The 'window' on the outside world, particularly perhaps the view of urban labour markets in Thai dramas, is having an effect on school enrolments. Parents see the increased importance of education. They now want their children to attend, to continue to attend and succeed in school.⁵⁶

Most viewers watch both Thai and Lao TV. Lao TV is watched mainly for news and Thai TV for entertainment, particularly for Thai dramas, or 'soap operas', and also for news. For example, farmers interviewed in Champasak reported they were learning a lot from Thai programmes on agriculture and new production techniques. Overall, 64 percent of the people interviewed in Vientiane, Pakse and rural Champasak watched mainly Thai TV, 27 percent watched both equally, and only 9 percent watched mainly Lao TV. Sixty eight percent watched Thai soap operas regularly, particularly women and young people (Schönweger, 2006).

As a direct result, a generation of Lao youth is growing up bilingual, often surprising their parents by speaking fluent Thai. This could be beneficial as long as it is clear to all that Thai is not the national language. But how long will the separation and the distinction last? There is evidence that it is breaking down already. According to the Institute for Linguistic Research of the MIC, Thai words have begun to replace Lao words, even on Lao TV (Schönweger, 2006).

There are other impacts. The 'good life' portrayed on Thai TV is a factor in the migration of workers to Thailand, perhaps particularly of young women. Television also affects how villagers interact. People interviewed in one village said that before electricity and television, people usually spent more time together - drinking or doing other activities. However, now villagers spend most of their time at home watching television. Some parents said that their children are lazier and spend a lot of time watching television instead of studying. This par-

⁵⁶ - This effect is confirmed in some JICA field projects according to Mr. Kuroda, Coordinator for Aid Strategy in the JICA office in Vientiane.

ticular village only receives Thai channels, and the villagers reported that the culture of villages has been influenced by Thai television with young girls now wearing miniskirts (Leechuefoung, 2006). Overall, the biggest impact of Thai TV is upon the young. More than 60 percent of the Lao population is under 25, so the impact will be large.

But there is no reason why Lao TV cannot be improved to compete more successfully for viewer attention. There has been a surge in the commercial success and creativity of Lao popular music, including pop stars such as Alexandra and Pan. They are popular even with young Thais in Bangkok. Lao TV needs a similar surge of creativity.

Finally, the internet is potentially an even greater source of information than TV. But access is still limited to urban areas. Internet cafes initially set up for international tourists are now also attracting Lao youth. Hmong people are increasingly using the internet to stay in touch with relatives in the US (Schönweger, 2006). The potential benefits of internet access are large. It will take much more active government promotion for these benefits to be realized.

Impacts of Imports on Consumption

Imported consumer goods can ‘improve’ consumption and human development by lowering prices and making available new products that save time, particularly of women and girls in household production.

In agricultural households, simple producer goods, combined with electricity, can enhance productivity, production for market and export, and support other economic activities that reduce poverty - pumps for irrigation, power for storage and processing of agricultural and other primary products. Imports can also reduce burdens on women for collection of fuel and water, by using electric appliances for cooking and pumps for household water.

Alternatively, imported consumer goods can have a negative impact on human development in two ways. First, they may come to be preferred to local goods and styles because of the influence of TV, international tourists, returning migrants, the internet, Lao Americans on holiday and other impacts of globalization.

Box 5.3: Changing Patterns of Consumption

“As the workday ended, young and old Lao begin to congregate along the newly refurbished promenade that runs along the Mekong, in Vientiane. Most people were gravitating to a number of new shops, restaurants and cafes that had emerged, post NEM. I chatted with a young man who was wearing a replica of Croatian national soccer jersey. Fashionable sunglasses were perched on his gel-laden, spiked hair and he wore newer sneakers that clearly were counterfeit iterations of Nike. No matter, he likes them; he guessed they came from Thailand or China. The young man straddled his new motorbike, which was apparently designed in Japan, made in China and distributed through Vietnam. He was preparing “to play some football (soccer) before (the evening’s telecast of) the World Cup” which he intended to watch with friends at a local pub/restaurant and which would be beamed to Laos from Korea and Japan, complete with all the advertisements of the global sponsors and their brands. He knew almost all these brands, well; he liked them too.

Before his match, we chatted a bit more – his English was quite good – and watched about 60-70 Lao women gather in an open pavilion. Soon they began to stretch, twist, jump and gyrate. Each woman was clad in various hues of fluorescent spandex tights and followed the lead of the aerobics instructor and pulsating rhythms of blaring ‘techno’ pop-music. Saffron-draped monks and other folk nonchalantly strolled by or watched nonplussed from cafes, with soda-pop, beer or tea in hand...”

Source: Shultz, 2002

The impact of these preferences can hurt local producers and local employment. The local goods may be of similar quality and durability. They may even cost less for comparable quality, but producers may still lose market share, profits and even be forced out of business by the changing tastes.

Second, and more serious for human development, the appeal of imported goods - televisions, video players, components for mini-tractors - may be so great that they radically alter how poorer households spend increased income.

In the years before television, advertising and globalization, poor households spent extra income in ways that had higher payoffs for human development - more and better food, improved housing conditions, better clothing and footwear, education and health care⁵⁷. These expenditure patterns are still prevalent in the Lao PDR, visible in cross-section in the LECS 3 consumption patterns. But the 'transport and communications' expenditures are unusually high compared to other countries at similar levels of per capita income and human development.

Table 5.2: Lao Consumption and Expenditure

**Household Consumption of Goods and Services. Monthly Average Consumption in Thousands of Lao Kip
(1 US Dollar = approx. 10.800 Lao Kip)**

Group of Products and Services	Monthly Consumption (1000 Lao kip)	Confidence Interval (Margin of Error)	Share of Total (Percent)
Consumption of Own Produced Food	312.2	(+ 9.6)	28.6
Food Expenditure	288.2	(+ 16.9)	26.4
Housing	138.0	(+ 11.7)	12.6
Transport and Communications	128.8	(+ 25.8)	11.8
Household Utensils and Operations	44.6	(+ 4.6)	4.1
Recreation	40.3	(+ 7.0)	3.7
Alcohol and Tobacco	27.5	(+ 2.4)	2.5
Clothing and Footwear	26.7	(+ 2.7)	2.4
Personal Care	24.5	(+ 2.6)	2.2
Medical Care	19.0	(+ 2.1)	1.7
Education	11.0	(+ 2.4)	1.0
Others	30.5	(+ 7.4)	2.8
Total	1091.3	(+ 50.5)	100.0

Source: LECS 3

57 - This is the 'Engel's Curve' expenditure pattern, observed first in 19th century Prussia. It was subsequently observed in many countries, but can be altered by advertising, demonstration effects and other influences.

Increasingly, television and other influences are beginning to reach even previously remote areas of the Lao PDR. The consumption patterns may change. Television does bring increased information and other benefits. But if it comes at the expense of school enrolment and persistence, or health care for sick kids, in very poor households, the 'price' may be too high.

Worse still, if poor households borrow to buy a television, video player, motorbike, or mini-tractor, their land and future livelihood will be at risk. There are many anecdotes that this is increasingly happening in poor rural areas. It would be wrong to blame imports alone for this problem. The fact is that neighbours do have these goods, and there are now changed expectations of what all households should have. It is this 'culture change' that places poor households at risk.

Imports and Human Development

As in the case of exports, some imports enhance human development directly or by increasing exports that benefit human development. Others improve information, health, education enrolment, and the status and incomes of women. The import of mobile phones, televisions, video players and Thai TV programs - accessible to many households with a simple antenna - have powerful impacts, some good for human development and culture, some not so good.

Thus, as in the case of exports, there is an important role for policy to increase the positive benefits of imports and to reduce the negative impacts.



Chapter 6

SUMMARY, SCENARIOS AND SUGGESTIONS FOR POLICY

Development Challenges, but Favourable Trends

The Lao PDR faces a number of challenges to human development, economic growth and international trade. The educational attainment of the labour force is still low, particularly that of women, reducing options, choices and productivity. Persistent health problems reduce the quality of life, enrolment and success of children in school,

and the productivity of workers. More than half of all farm households live close to the margin, producing for subsistence and are at the mercy of weather, blights and pests. Mining, logging and hydro electric projects threaten the environment. The national economy is not yet fully integrated. The country is landlocked. The 660 kilometre trip from Vientiane to the port in Bangkok accounts for more than one third of the total cost of sending one container of Lao exports to Europe.



The new Hotel Don Chan Palace behind a Buddhist temple in Vientiane Capital

International trade is still very concentrated. In 2004, 80 percent of Lao exports went to Thailand, the EU and Vietnam; 80 percent of imports came from Thailand, China and Vietnam. And nearly 80 percent of Lao exports consisted of wood, electricity, garments and tourism. This concentration increases vulnerability to shocks.

But recent economic growth has been steady at six percent or more. Income poverty, by three measures, fell between 14 and 28 percent between 1997-98 and 2002-03. Most importantly, the severity of income poverty dropped by 28 percent, and the income distribution improved. The recent growth has been equitable and pro-poor.

The Lao PDR's HDI - calculated in the UNDP Global Human Development Reports - has increased steadily since 1985. Between 2000 and 2003 it increased from 0.522 to 0.545. Yet based on national data and local calculations the HDI in 2002 was 0.557 - higher than the UNDP calculation for 2003. The country is solidly in the 'Medium Human Development' category in the 2005 UNDP Global Human Development Report, and now ranks ahead of Bangladesh, Nepal, Pakistan and Bhutan.

Positive Contributions of International Trade

How, and how much, has international trade contributed to these positive trends? Certainly, international trade contributes to economic growth. Economic growth, in turn, can contribute both to poverty reduction and to human development, but the connections are neither automatic nor guaranteed.

For international trade to benefit human development and to reduce poverty, there need to be clear 'pathways' connecting trade directly and indirectly with lots of Lao families and providing them and their children improved living standards, new choices and new opportunities. This Report finds at least five such pathways: cross-border trade, migration and remittances, employment, rural electrification and improved information. Trade

can also contribute indirectly to human development by increasing government revenues - assuming, of course, that the increased revenues are used to enhance human development.

Cross-Border Trade - 'Democratic' Access to Trading Opportunities

There has been an important and on-going shift in the geographical distribution of the Lao population. More than 50 percent now lives in border districts. The districts bordering Thailand have always been the most populous, benefiting from past patterns of migration, irrigation investments and economic activity. Internal migration between 1995 and 2005 has been to Vientiane Capital and to districts bordering China, Myanmar and Vietnam.

Between 1995 and 2005, the overall population grew by 22.6 percent. Vientiane Capital aside, 16 border districts in ten provinces grew by 29 percent or more in the ten years. Of these districts, six border Vietnam, three China, two Myanmar, one both China and Myanmar, and one Cambodia. In these districts, there are ten local and traditional check points, and in two cases there are no official border crossings of any kind.

Clearly, there has been substantial internal migration to the border districts. People are voting with their feet. There is no other country in East Asia (excluding the city-state of Singapore) in which more than half the population lives along the borders - not even close. Why does this matter?

Except for air freight, all trade in the Lao PDR moves across land borders and the Mekong River. Some of the trade is done in large lots, moved by trucks and containers by companies with import quotas and licenses and/or export permits and licenses.

But four recent studies show that a significant amount of the cross-border trade is conducted by individual traders, often without permits and licenses. Along the Chinese border at least, companies are losing market share to the individual traders, in part because of how the individual traders operate. The trade by-passes many of the permit requirements because threshold amounts

Table 6.1: Population Growth in Border Districts (1995-2005)

Province & District	Growth 1995-2005	Type of Border Crossing(s)	Bordering Country
Vientiane Capital			
Sikhotabong	948%	International	Thailand
Hatsaifong	145%	International	Thailand
Sangthong	65%	International	Thailand
Maykhetpakngeung	56%	International	Thailand
Saravanh			
Samuai	55%	International	Vietnam
Bokeo			
Meung	44%	Local	Myanmar
Houay Xay	29%	International	Thailand
Bolikhamxay			
Pakkading	38%	Local	Thailand
Viangthong	38%	No check point	Vietnam
Khamkeut	35%	International & Local	Vietnam
Attapeu			
Sanamxay	36%	Local	Cambodia
Sanxay	35%	Local	Vietnam
Luang Namtha			
Sing	36%	Traditional	China and Myanmar
Long	34%	Local (river port)	Myanmar
Phongsaly			
Bounneua	35%	Local	China
Bountay	33%	No check point	China
Xieng Khouang			
Morkmay	34%	Traditional	Vietnam
Khammouane			
Bualapha	32%	International & Local	Vietnam
Champasak			
Champasak	30%	International	Thailand
Oudomxay			
Namor	29%	Traditional	China

Sources: NSC, 1995 and 2005 (National Population and Housing Censuses), and MOIC.

are exempted by the customs service, or because informal payments are made, or because the trade by-passes the customs service entirely, sometimes on both sides of the border. For example, Lao sugar cane exports to China - to a Chinese sugar mill near the Lao border - are allowed free passage by Lao customs. The cane is recorded as 'Chinese sugar cane' and enters duty free and unrecorded on the Chinese side because the mill needs the supply, and sugar cane is still not included in the EHP. Thus there is a pragmatic by-passing of permits and other formal constraints on trade because of a trading opportunity that benefits both sides exists.

Land-locked countries are at a disadvantage. Some estimates suggest that the economic growth rates in landlocked countries may be one to two percentage points lower than they otherwise would be (Warner and Sachs, 1997). But for ordinary Lao families the fact that the country is land-locked, that it borders large and growing economies, that all trade is cross-border, and that the customs service is both weak and lenient, means small-scale trading opportunities are much more 'democratically' available to people than in any other country in the region. The studies show that while very few households in the border districts are active traders, households producing traded items are better-off and benefit also from inexpensive imported consumer goods.

There is a demand for raw agricultural products, for NTFPs, for handicrafts and other products that households can produce for sale across the borders (often informally) with few effective restrictions. This pattern of exports is pro-poor and has contributed to the improvements in the income distribution and in poverty reduction over the past five years.

There are more people in the border districts, there is more cross-border trade, and thus more equitable growth as multiplier effects create employment and improve living standards for families not directly involved in trade. Little wonder that people are migrating to the border districts. This 'democratic' access to trading opportunities needs to be protected and not restricted in the future.

Migration and Remittances

There are at least 200,000 Lao workers in Thailand, 55 percent of them women. The number may be as high as 300,000. Thai employers in industries that need labour have a strong preference for Lao workers because the Lao workers understand Thai and Thai culture. They are perceived to be honest, trustworthy and diligent.

Lao workers in Thailand send or carry home an estimated US\$100 million a year or more. Information on the number of migrants and the amount of remittances is inexact because the migration is still informal and illegal on the Lao side, and all of the remittances flow through informal channels. Thailand now offers work permits and other benefits if foreign workers register with the Thai government. In the latest registration period 180,000 Lao workers registered. Others - perhaps another 80,000 - did not.

Recent surveys of Lao workers who have returned from Thailand indicate that most of the labour migrants to Thailand are from rural areas in border districts. Many of the migrants and their families were poor or near-poor before they migrated. The costs of migration depend on the destination in Thailand. Most of the costs are for transportation and range from US\$50 to \$100. Brokers are now rarely used as good information and networks with Thai employers have evolved. The cost for travel for the first migration is often borrowed from relatives, or other migrants returning to Thailand who travel with those going for the first time. Thus it is possible for young people from poor families to go.

After the migration - if it is successful - the family is no longer poor. The money sent or carried home is used for improved housing, for investments in land, livestock, mini-tractors, agricultural inputs, and for education and health care.

Remittances from Lao workers in Thailand (and from garment workers in Vientiane Capital) thus flow back to rural areas and are used to improve living standards, including education of siblings. One of the reasons for the improvement in human development as measured by the increase in the Lao HDI is more and longer enrolment in schools. Free provision of education does not mean free

consumption. Families have to pay for uniforms, notebooks, other supplies and sometimes 'informal fees' for enrolment and taking of examinations. School enrolment may also have increased because of better information - also due, in part, to international trade. The other reason the Lao HDI went up was because of the increase in per capita GDP - to which trade also contributed.

Employment

In recent years there have been large increases in direct employment in exports and in small-scale retail trade due to increased imports.

Employment in garment factories - mainly of rural women from the northern provinces - increased from 17,200 in 1998 to 26,000 in 2004 - by more than 50 percent.

Direct employment in international tourism increased from an estimated 10,000 jobs in 1998 to 18,000 in 2004 - by 80 percent. Tourist expenditures in rural areas directly reduce poverty and expand income opportunities for rural families. The impact of tourism expenditures is shown by the employment growth in the Phou Khao Khouay National Park and by the poverty reduction in the Nam Bak district in Luang Prabang.

The number of labour migrants to Thailand (mainly from rural areas) increased from an estimated 120,000 in 1999 to 250,000 in 2005 - by more than 100 percent.

Employment from increased exports of agricultural products both informally and under the AISP and the EHP, is hard to estimate because farmers always work whether they are producing only for subsistence or for export. But the number of women and men producing for export in 2005 is estimated at 277,000 - about 12 percent of the rural labour. They are better-off and their local expenditures have important multiplier effects as well. The LNTA has estimated - based on a provincial survey - that the number of farmers producing at least some products consumed by international tourists is 231,000. International tourism is an export. Thus the total numbers of farmers producing something for international trade may exceed

300,000, unless there is a complete overlap of the farmers producing for both types of export.

It is important for human development that most of the estimated direct employment in exports is in rural areas - farmers, handicraft producers and labour migrants to Thailand - and that more than half of the direct employment in exports is of women - mainly due to garment exports, handicrafts and labour migration to Thailand.

Rural Electrification

Because of electricity exports, dams have been built bigger and faster than they otherwise would have been. Since 1999, ten percent of the power generated by the dams is set aside for domestic use including rural electrification which, as a result, has occurred faster than it otherwise would have. Rural electrification is directly related to increased school enrolment and continued attendance, particularly of girls, and to reduced burdens and better health of women, and more opportunities for all family members - all important components of human development. Electricity can also increase access to information - in particular via television and mobile phones.

Better Information

International trade improves information in lots of ways. Traders in border markets gain better information on what is wanted by buyers and what they are willing to pay. Farmers not yet producing for export observe and learn from the successes (and problems) of those who do. Exporters not accessing trade preferences such as AISP learn from their competitors who are exporting more by using the preferences.

Imports such as mobile phones and television sets (and rural electrification) are particularly important. Not all the impacts are positive or good for human development, but some are. Mobile phone use in rural areas has the potential to provide farmers better information about prices of inputs and products, to give families better information about health problems and options for care, and to give traders and shop owners the ability to make and track orders easily.

Perhaps most important for enrolment in education, television gives parents a 'window' on the urban world. For all the false impressions the 'window' may give, it does show the importance of education, credentials and skills in the urban labour market.

There have recently been quite large increases in enrolment and retention in Lao schools. Supply has increased, but not by as much. And road access is also better. But the increases seem more the result of increases in private demand by rural parents now newly eager that their children get to school and stay longer in school. Better information, brought about in part by trade, accounts for this change. Supply needs to catch up with the increased demand.

Government Revenues

International trade will greatly increase government revenues - particularly from electricity and mineral exports - by 2010 and increasing thereafter.

The government will receive US\$2 billion over 25 years from NT2 alone - NT2 revenues in 2011, adjusted to FY2003 prices, will amount to 60 percent of domestically financed expenditure on education and health in FY2003.

The impact on human development of the increase in government revenues will depend on how the revenues are used.

Some Negative Impacts of International Trade

The impacts of international trade are not, of course, all positive. There are problems of commodity price cycles, threats to the environment and quality of life, some mistreatment of workers, threats to Lao culture, threats from external shocks and threats to employment.

Commodity Price Cycles

In the next five years exports of minerals and of some agricultural commodities (coffee, maize, cattle, sugar cane and rubber) will increase. This will

mean that the Government and the economy will have to cope more and more with the impacts of commodity price cycles.

Some commodity prices move together, some do not. For example, rapid recent increases in minerals and energy purchases by China and India have driven up the prices of those commodities. Conversely, the rapid increase in coffee production in Vietnam over the past ten years has tended to reduce world coffee prices.

Thus in some years total revenue will be up. Other years it will be down. The danger is that the Government and other actors during a boom will think that the good times will go on forever, and will borrow if prices go down in the expectation that the high prices will soon return. Sometimes, of course, they do not for many years, and debt builds rapidly.

Thus, there needs to be policies to dampen and smooth the fluctuations and their negative impacts on the economy and on the government budget. One option is a stabilization fund. Revenue increases in the good years go into a stabilization fund which is then used to maintain the level of the government budget, particularly the investment budget, when revenues decrease. It is prudent to keep the fund a bit larger than likely fluctuations as a hedge against bigger than expected declines in the future.

Threats to the Environment and Quality of Life

Hydroelectric projects create some risks, including downstream effects on fishing and farming. The projects may also lead indirectly to illegal logging because of new road construction and transmission line rights-of-way. There is some loss of habitat. And, in some cases, there may also be lower quality of life in the resettled villages if promises made are not kept and resettled households cannot find adequate new livelihoods.

Some mines also have downstream effects on fishing from tailings, erosion and leakage of chemicals used in processing including cyanide from gold mines. Mining also provides pro-poor opportuni-

Table 6.2: Environmental Challenges and Policy Options

Trade and Economic Growth Induced Change	Environmental and Other Effects	Policy Options
Deforestation Facilitated by New Roads and by High Demand from China, Thailand, and Vietnam for Hardwood Logs and Lumber	Destruction of watersheds, erosion and silting of rivers and dams, less water retention and more flooding in the rainy season; reduced availability of NTFPs; and, longer-term, reduced rainfall and tourism	Bans on cutting and exports make it likely that some cutting exports will be done illegally; better to legalize sustainable harvest as an input to the Lao wood products industry; expand the community role in protection; tourism and NTFPs as incentives to reduce deforestation
Open Pit Mining, and Ore Processing	Risk of silting and pollution of rivers and the ground water, particularly with cyanide-based ore processing techniques, as in the Sepon project	Strong government regulation; frequent review of the concessions with right to cancel; full bonding of companies for clean up and site restoration as a condition of concessions
An Increase in Urbanization	Increased solid waste	Municipal composting and recycling
Hydroelectric Projects, including Dams, Transmission Routes and Access Roads	Down stream changes in rivers and fisheries, increased illegal logging due to access roads and transmission routes, conflicts between water demand for power and water demand for irrigation in the dry season	Company compensation for downstream effects and for high-quality resettlement; periodic review of the concessions; company bonding; logs cleared for new dam construction to be supplied to the Lao wood products industry, not exported
An Increase in FDI	New technology and new management techniques reduce pollution per unit of output	Incentives for new technology and management innovations
An Increase in International Tourism	More hotel and other construction in sensitive sites like Luang Prabang, overbuilding, and gradual environmental degradation	Incentives and support for protection of environmentally fragile sites and areas as the way to sustain tourism in the future. Learn from the mistakes of other countries in the region
Increased agricultural exports	Deforestation and loss of habitat, biodiversity and NTFPs due to increased land use for agriculture, Increased erosion and loss of top soil and soil fertility, water and soil pollution due to increased use of chemical fertilizers and pesticides	Stricter and better enforced regulations on land use (e.g. each province should have a master plan for land use). Promotion of integrated and organic agriculture and developing niche markets for high quality products
Increased Sanitary and Phyto-Sanitary Barriers (SPS) Barriers to Lao Agricultural Exports.	Greater reliance on minerals and electricity exports with their environmental threats; fewer opportunities for Lao farmers in international trade	Harmonization of Lao standards with international standards based on the SPS and technical barriers to trade (TBT) agreements; incentives and promotion for ISO 14000 certification; understanding of and adjustments for “green consumerism” in important trading partners

Sources: NSC, 1995 and 2005 (National Population and Housing Censuses) and MOIC.

ties for small-scale artisanal mining by rural households in the wet season, exploiting with pans and other hand tools deposits that are too small for large-scale projects. The environmental impact of small-scale mining is also less.

Timber exports and logging continue. The environmental impacts include erosion, loss of habitat, biodiversity and NTFPs - a loss that falls most heavily on women and girls who do almost all of NTFP collection and sale and typically control the money they earn. The timber exports are also helping neighbouring country furniture makers and other wood product exporters to compete against Lao exporters of similar products. For example, Vietnam's furniture and other wood product exports went up four fold between 2002 and 2005 to over US\$1 billion - more than the Lao PDR's exports of all products and services combined. Some of the timber and lumber for these Vietnamese exports comes from Lao forests.

Finally, tourism can have mixed impacts. It may lead to environmental degradation by overbuilding in areas important for biodiversity conservation and increased air and water pollution, due to increased transport, higher amounts of solid waste and higher grey water discharges. Growing numbers of tourists may have negative social impacts on youth, particularly young women, and may overwhelm rural communities living near trekking routes and popular sites. Alternatively, the special appeal of the country to tourists is still the unspoiled environment and the culture. There are clear incentives to protect both.

Mistreatment of Workers

The working conditions in some Lao garment and wood processing plants are poor - long hours, obligatory overtime, repetitive work, few breaks, overcrowded, hot and with little attention to occupational safety and health.

In the garment plants and food processing factories, there is a clear preference for young women workers. This preference provides these young women - many from rural areas - with opportunities and income that they otherwise would not have had. It is good news if these young women

are hired because of their manual dexterity and diligence. It is bad news if they are hired because they can be paid less and disciplined more easily than men. It is clearly bad news that some labour migrants to Thailand, mainly young women, are trafficked and abused.

Finally, there is a loophole for concession holders that allows the hiring of foreign workers to construct dams, power plants, mineral processing plants, etc, if skilled Lao workers are not available. This loophole is being abused and fewer Lao workers benefit from FDI and construction projects and from learning on-the-job than otherwise would and should.

Threats to Lao Culture

Lao culture is being affected by many influences including foreign tourists and Lao workers returning from Thailand. All cultures evolve but sometimes the impacts may be too large and threaten the security, identity and self-confidence the culture provides. The biggest impact on Lao culture by far is Thai TV - a pervasive import, now reaching previously remote and poor rural areas. In some locations only the Thai channels are available. This import is changing language, attitudes, expectations, fashions and consumption patterns - adding to the already strong preferences for Thai consumer goods. Some of the impacts are positive. Some, perhaps many, are not.

Shocks

As a small economy with few exports and concentrated patterns of trade, the country is particularly vulnerable to shocks - to steep downturns in demand in Thailand, Vietnam or China, or reduced garment orders from the EU. The country is also vulnerable to avian influenza, other cross-border health problems, and - in the case of international tourism - even fears or rumours of health problems.

Threats to Employment

Some threats to employment come from the impact of trade agreements. The ATC and AFTA 2008 may reduce employment in the garment industry. AFTA 2008 may reduce employment in some Lao

Table 6.3: Comparison of Investment Needed to Create One Export Job

Sector, Activity or Company	Investment/single Job Creation (US\$)	Main Source of the Investment
Four Hydro Projects	142,400	Government borrowing
The Sepon Mine	113,000	Company
Tin Mine (ROK JV)	19,400	Company
Food Processing	7,134	Companies
Wood Products	4,134	Companies
Garments	3,344	Companies
Migrant to Thailand	<100	The migrant (for travel costs)
Handicraft Weaver	<30	Retail shop and/or weaver
Contract Farmer	<20	Food processors
Farmer	<20	Farmer
NTFPs Collector	0	Increased gatherer effort

Sources: Authors' calculations and estimations based on data in Chapters 3 and 4, and data in Chanthavysouk, 2006, Leechuefoung, 2006, Paseuth and Phimmahasay, 2006 and SKDC, 2006. Data on the Sepon Mine were provided by Mr. Peter Albert, Managing Director, LXML, Oxiana Limited.

industries that may have trouble competing with imports. These industries may include cement, motorbikes, wallboard and roof panels.

A final impact of international trade on employment will come from the future composition of Lao exports. The threat is evident in the amount of investment needed to create one full time (direct) job by type of export.

Minerals and electricity are important exports, but they will create few jobs. Manufactured exports are in the middle category. Investment per job in wood products and food processing would be lower if raw material supplies were more dependable. Capital is currently being under-utilized. The best prospects for large increases in direct employment in exports are in agriculture, handicrafts and labour migration. Agriculture is clearly the most important sector, with the highest potential to increase exports at the lowest investment cost and with the highest potential benefits for human development.

Future Scenarios: Export Composition

The key question is whether the positive impacts of international trade observed between 1998 and 2005 can and will continue and whether the negative impacts can be reduced? The answer will depend in large part on the future composition of Lao exports - and on future policy.

The composition of Lao exports will change rapidly by 2010. Exports of minerals and electricity will increase. Labour-intensive exports may also increase but account for a lower share of the total. Alternatively, some of the labour-intensive exports may not grow, and may even decline in some sectors.

The policy environment will also change rapidly. By 2010, the Lao PDR will be a member of the WTO (hopefully with appropriate S&D protections of agriculture). MFN tariffs will be the same

as the AFTA rates. The Lao PDR's AFTA commitments for 2008 will have been met. The EHP will cover many more items. A VAT will have replaced the turn-over tax, and will be rebated for exports. The country will be 'land-linked'. Work will have begun on the Seventh Five Year Plan. There will be five years left to meet the MDGs, and ten years left for graduation from LDC status.

Loss of Employment Scenario

Two scenarios for the period between 2004 and 2010 have been constructed, noting that 2004 is the latest year for which there is full-year export information. The first scenario is a 'worst case', or 'loss of employment case' based on the following assumptions:

Table 6.4: Loss of Employment Scenario: 2004-2010

Export	2004			2010		
	US\$ Millions	Share of Exports (%)	Direct Employment	US\$ Millions	Share of Exports (%)	Direct Employment
Minerals	65	8.0	6,000	450	26.0	18,000
Electricity	100	12.2	1,000	650	37.5	6,000
Timber	145	17.6	N/A	145	8.4	N/A
Transit	83	10.1	N/A	150	8.7	N/A
Sub total	393	47.9	7,000	1,395	80.6	24,000
Agriculture	60	7.3	277,000	60	3.5	277,000
Labour	100	12.2	250,000	75	4.3	150,000
Handicrafts	13	1.6	20,000	13	0.7	20,000
Wood Products	6	0.7	20,000	6	0.3	20,000
Tourism	119	14.5	18,000	119	6.8	18,000
Garments	132	16.0	26,000	66	3.8	10,000
Sub total	430	52.3	611,000	339	19.4	495,000
Totals	823	N/A	618,000	1,734	N/A	519,000

Sources: Stated assumptions, and calculated from data in Chapters 3 and 4, and in Chanthavysouk, 2006, Leechuefoung, 2006, Paseuth and Pimmahasay, 2006 and SKDC, 2006.

- Electricity exports grow rapidly based on current construction and export plans. Direct employment (after construction) is estimated based on data from four large dam projects, with adjustment for the large size of NT2. The estimate is the maximum that might be expected by 2010.

- Mineral exports grow rapidly based on current construction and export plans, mainly for gold and copper. Direct employment (after construction) is estimated from the Sepon project, with adjustment for direct employment in small-scale mining. The estimate is the maximum that might be expected by 2010.

- Informal timber exports continue at the 2004 level. (No estimate of direct employment in timber can be made.)

- Transit trade increases rapidly, particularly on the East-West Corridors. (No estimate of direct employment in transit trade can be made.)

- Exports of manufactured wood products, handicrafts and all agricultural products stay the same. Direct employment from exports in these sectors also stays the same.

- International tourist arrivals and direct employment in tourism stay the same.

- Garment exports decrease by 50 percent because of the ACT and direct employment in garment production drops by 16,000.

- Cambodia and Myanmar normalize labour exports to Thailand, but the Lao PDR does not. The number of Lao workers in Thailand drops to 150,000, and remittances (and money carried home) drop to US\$75 million a year.

- Exports by cross-border traders (other than agriculture) and employment in these activities are excluded because of lack of information.

In this scenario, the Lao PDR exports more than double, perhaps ending the chronic imbalance between exports and imports. The share of electricity and mineral exports combined jumps from 20 to 64 percent of exports. Direct employment created by exports decreases by almost 100,000 jobs.

Between 2005 and 2010, the labour force is projected to grow by more than 380,000 new workers. Increases in government revenues from mineral and electricity exports would likely not be enough to offset the loss of direct employment, and the multiplier effects of the lost jobs in exports⁵⁸. Human development would likely be set back, or at least, not progress very much at all.

‘Better Case’ Scenario

The second scenario is a ‘better case’ example. In this scenario, all exports grow except garments and timber. The scenario is based on the same assumptions as the first scenario about exports of electricity, minerals and transit trade. Exports by cross-border traders (other than agriculture) and employment in these activities are again excluded because of lack of information.

The rest of the assumptions change as follows:

- Informal timber exports decrease and sustainable harvests contribute to a rapid growth of Lao exports of manufactured wood products. (No estimate of direct employment in timber can be made.)

- Garment exports and direct employment stay the same as in 2004.

- Exports of manufactured wood products and direct employment more than double.

58 - In both scenarios it is assumed that increased government revenues are used to enhance human development. But in the loss of employment scenario, about ten percent of the labour force loses direct or multiplier created jobs from exports. Even with careful government spending it would be hard if not impossible to make up for these losses.

- Exports of handicrafts more than double and the number of workers producing handicrafts for export doubles.

- International tourist arrivals meet the LNTA target of 1.5 million in 2010, length of stay and expenditures per day increase slightly and direct employment increases proportionally.

- The Lao PDR normalizes labour exports to Thailand and remittances home. The number of normalized Lao workers in Thailand

increases to 300,000 and remittances (and money carried home) increase to US\$200 million a year.

- Exports of all agricultural products - and the number of farmers producing at least some products for export - double.

In this scenario, total exports increase 2.4 fold, almost certainly ending, perhaps for good, the chronic imbalance between exports and imports. The combined share of minerals and electricity increases to 55 percent of all exports - less than

Table 6.5: 'Better Case' Scenario: 2004-2010

Export	2004			2010		
	US\$ Millions	Share of Exports (%)	Direct Employment	US\$ Millions	Share of Exports (%)	Direct Employment
Minerals	65	8.0	6,000	450	22.4	18,000
Electricity	100	12.2	1,000	650	32.4	6,000
Timber	145	17.6	N/A	45	2.2	N/A
Transit	83	10.1	N/A	150	7.5	N/A
Sub total	393	47.9	7,000	1,295	64.5	24,000
Agriculture	60	7.3	277,000	120	6.0	550,000
Labour	100	12.2	250,000	200	10.0	300,000
Handicrafts	13	1.6	20,000	40	2.0	40,000
Wood Products	6	0.7	20,000	20	1.0	40,000
Tourism	119	14.5	18,000	200	10.0	30,000
Garments	132	16.0	26,000	132	6.5	26,000
Sub total	430	52.3	611,000	712	35.5	86,000
Totals	823	N/A	618,000	2,007	N/A	984,000

Sources: Stated assumptions, and calculated from data in Chapters 3 and 4, and in Chanthavysouk, 2006, Leechuefoung, 2006, Paseuth and Phimmahasay, 2006 and SKDC, 2006.

the 64 percent in the first scenario, but still more than half of all exports in 2010. The relative shares of most of the labour intensive exports decrease except for exports of handicrafts and manufactured wood products. But direct employment in export production increases by 366,000, just about keeping pace with the projected growth of the labour force.

This scenario is clearly the better one for meeting national goals. It puts less of a burden on the Government because of the multiple positive and independent effects of direct employment growth in exports and multiplier effects. Human development in this scenario improves, perhaps markedly. As before, what happens in agriculture and rural areas matters most for these positive outcomes.

On the basis of current trends neither scenario may be likely. The value in looking at the two opposites is to help identify what policies might make the positive example more likely and the negative one less likely.

But in either scenario, or anywhere between them, the government will need to use its increased revenues from mineral and electricity exports with great care and efficiency to improve the skills, health and choices of Lao people.

Some Suggestions for Policy

Suggestions for policy are based on the changes and initiatives that seem most likely to promote the second scenario, keep and increase the positive benefits of international trade and reduce the negative impacts.

Do Less

Some suggestions would require simplifications and fewer interventions. The suggested changes would cost the government little or nothing, and some would likely increase revenues because of increased economic activity.

These suggestions could include:

- Not requiring export permits (or payment of any provincial export taxes) on agricul-

tural exports including exports of live animals. All these permits and exports taxes do is increase informal exports and reduce production for export as the taxes and costs of permits are borne by the small producers.

- Not applying profit taxes on small-holder exports of live animals - the estimates for tax calculations often bear little relationship to real costs of production, the overall 'balance sheet' of the household, or to selling prices in export markets, mainly Thailand. All this does is increase informal exports and reduce the likelihood of increased production for export. These taxes and export taxes are always borne by the small-scale producers.

- Not requiring import forecasts or issuing import quotas. These quotas are assigned to favoured import companies and then are sold to smaller importers - thus giving quota rent to the favoured companies. This distorts the prices of imports and may hurt the competitiveness of Lao exports.

- Not fining Lao workers (or their families) when the workers return from Thailand. The fines are often arbitrary, sometimes confiscatory, but do not dissuade migrants from going to Thailand or going back again. In Champasak and some districts of Savannakhet, migrants are no longer fined. They are asked instead to contribute to the village funds. This is a positive change that provides the migrants more respect and self-respect, and enhances village development.

- Not fining or requiring licensing of small-scale artisan miners. Small-scale mining is often pro-poor. It should be facilitated not punished.

- Not requiring reciprocity for waiver of visas for high-spending tourists. The highest spending tourists in the Lao PDR come from Australia, France, Germany, Japan, the UK and the US. Thailand offers non-reciprocal waivers for all these countries. Loss of

visa revenue is more than offset by the government revenue from increased tourism. Everybody benefits.

- Not prohibiting or requiring special licenses for the import of improved agricultural inputs - breeding animals, hybrid seeds, fertilizers, etc. All this does is make Lao agriculture less competitive. The barriers protect domestic producers of lower quality inputs. These producers should improve their products to compete with imports. Lower quality and higher prices charged by protected domestic producers represent a double tax on Lao farmers and Lao agricultural exports.

- Not hurrying WTO agreements and entry. There will be no gain in market access by joining the WTO, and there may be some threats to sensitive sectors, particularly agriculture and some services, and imposition of stricter provisions for FDI and protection of IPR than required of existing WTO members. The benefits of WTO membership may include more support for reforms, and improvements in the investment and business environment. But these benefits are not worth an unfavourable deal that it is reached in haste.

6 Do Nothing

Some of the existing patterns and practices, including some patterns of informal trade with high human development pay-off may best be left alone, at least for the time being.

- Leave informal patterns of cross-border trade alone until more formal patterns can replicate all the benefits of the 'democratic access' to trading opportunities for Lao families in the border districts. A more formal pattern would, for example, increase the permissible legal limits for exempted imports and exports in cross-border trade to bring them in line with the de facto waivers that now occur at many border crossings.

- Leave remittances alone for now. Lao workers in Thailand send home and carry home some of the money they earn and tend to invest it in ways that improve human development and create multiplier effects mainly in rural areas. When and if normalization occurs, the remittances should be given some of the same privileges as FDI - which in a very real sense they are - money earned abroad that is invested in the Lao PDR.

Do More - At Little or No Cost to the Government Budget

These are policy options that would require new government action but at little or no cost to the government budget. These suggestions could include:

- Adopting international standards for resettlement of families by dam and mining projects. International standards require that all resettled families have at least the same standards of living, adjusted for changes in cost of living, as they had before - including housing, income, water supply, access to social services and environmental quality.

- Setting clear occupational health and safety standards for workers in all industries and sectors.

- Certifying the skills of Lao workers so that more are hired for dams, mining and other export construction projects.

- Requiring that all new mining and dam projects pay for initial electricity connections to households in the project areas.

- Cross-subsidizing the cost of electricity so that the costs to rural households are lower than for urban households. This would increase the human development benefits of electricity exports for even the poorer rural households. Other countries in the GMS, including Thailand, do this.

- Requiring performance bonds of all new mining and dam projects to assure compliance with resettlement standards and envi-

ronmental protection. This would give the Government more leverage after concessions are awarded. It would give the Government the resources it would need if it has to step in and provide for resettlement or environmental clean-ups.

- Normalizing labour exports to Thailand. There has already been important progress toward this goal. Thai employers prefer Lao workers. Demand in Thailand is increasing. (50,000 additional Lao workers were requested by the Thai seafood industry in November 2005.) Normalization would mean fairer treatment in Thailand, and less trafficking and exploitation of Lao migrants at every stage of the migration process.

- Allowing higher legal waivers of duties and licenses on both imports and exports in 'small-scale' cross-border trade.

- Establishing 'whistle blower rewards' in the Customs Service particularly for rejected timber and lumber exports.

- Auctioning confiscated natural timber shipments and natural timber harvest quotas to Lao producers of manufactured wood products.

- Relaxing FDI restrictions in new firms for production and export of manufactured wood products.

- Requiring mineral set-asides (e.g. up to five percent of production) to promote forward linkages - for jewellery production, for gem cutting and polishing, for manufacturing of electrical cable and electronic components.⁵⁹

- Naming each year outstanding handicraft producers as 'Living National Treasures', and promote and display their work.

Do More - With Increased Expenditure of the Government Budget

These final policy suggestions would require increased expenditures of the Government budget to increase the human development benefits of international trade. But international trade - in particular exports of electricity and minerals - will greatly increase government revenues by 2010.

These suggested policies could (and should) include:

- Investing in education and training - this is the top priority. School enrolment and continuation rates need to increase rapidly. School quality needs improvement. Training and upgrading of the labour force need to be done. Unless these investments are made, there is a real danger that the country will not make the East Asian transition from a natural-resource based economy to a more human-resource based economy, and that Lao exports employing lots of people will become less competitive.

- Replacing the turnover tax with a VAT.

- Improving the Customs Service with less focus on revenue generation and more focus on rapid clearing of imports needed for enhancement and competitiveness of Lao exports. (Revenue from imports will decrease in any case with AFTA 2008, the EHP and WTO accession, and will be much more than replaced by revenues from electricity exports, minerals exports and transit trade.)

- Establishing an 'ombudsman office' or 'hot-line office' to monitor and respond to resettlement problems and environmental threats in dam and mining projects.

- Increasing support for the MOIC to help reduce lack of market information among exporters and potential exports.

59 - This could be done in a number of ways. Government could purchase from artisan miners and resell to jewellery makers. Large-scale mines could be required to sell a small amount of their products to local firms at the world market price (set in commodity exchanges in London, Chicago or New York) at the time of sale plus local transport costs. Products not sold locally at the end of each year could then be exported.

- Increasing support for the MAF to help deal with problems of missing markets in agriculture and problems of information among farmers; to help improve veterinary medicine; and to help agricultural exports meet SPS standards, and 'organic' certification requirements in export markets.
- Increasing support for the MEM's efforts to improve productivity in labour intensive export industries.
- Supporting 'Community Forestry' - a reimbursed role of communities in forest protection. This is effective, and cost effective, in other GMS countries where the community stakes in protection of forests are lower than they still are in the Lao PDR.
- Investing to improve the quality and diversity of Lao TV programming. It is not possible to keep out Thai TV channels. But it is possible to compete more effectively for viewer attention.

TECHNICAL NOTE TO THE LAO PDR NATIONAL HUMAN DEVELOPMENT INDEX

The attempt to calculate the HDI with national data revealed discrepancies between national and international estimates for the Lao PDR.

Discrepancies between national and international estimates are commonly encountered while preparing National Human Development Reports. When the international data are based on national statistics, as they usually are, the national data may need to be adjusted. When country data are missing, an international agency may produce an estimate if other relevant information can be used. Furthermore because of difficulties in coordination between national and international data agencies, the international data series may not incorporate the most recent data. All of these factors can lead to significant discrepancies between national and international estimates. Therefore, when compiling international data series, international data agencies often need to apply international standards and harmonization procedures to improve comparability across countries. This was the case in the Lao PDR when national data were used to calculate the HDI.

Several initiatives are under way to build stronger statistical capacity in countries. For example, the International Round Table Conference put in place the Marrakech Action Plan for Statistics with emphasis on statistics for the MDGs and the World Health Organization established the Health Metrics Network. The United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics is developing new tools for measuring literacy. And the Millennium Round of the International Comparison Program promises to provide sounder basis for assessing standards of living across countries (UNDP-HDR, 2004).

National and International Data Sources on Human Development Indicators

Life expectancy at birth, years: The Lao PDR has no life-registry. All population and mortality data are estimates from surveys and census. The latest source is the 2000 Lao Reproductive Health Survey. Only the census provides a sample size big enough at the provincial level to allow reliable estimates. The Committee for Planning and Investment - Department of General Planning (CPI-DGP) performed a population projection based on the 1995 Census and calculated the life expectancy by provinces. International data are provided by the UN through its biannual Revision of World Population Prospects.

Adult literacy rate, age 15+ years, %: Data on literacy are collected through surveys and census. The latest data are from the 2001 Lao National Literacy Survey (LNLS). The Ministry of Education (MOE) made a projection for 2002-2003, based on the 1995 Census, the 2001 LNLS and international data from the

UNESCO Institute for Statistics Assessment, which combines direct national estimates with their own estimates. Due to differences in methodology and timeliness of underlying data, comparisons across countries and over time should be made with caution.

Adult illiteracy rate, age 15+ years, %: This indicator is calculated in the same way as the adult literacy rate, age 15+ years, % (See above for 'Adult literacy rate'.)

Combined gross enrolment ratio for primary, secondary and tertiary education, %: The MOE provides the administrative data series for this indicator based on the number of students enrolled in primary, secondary and higher education in accordance with the International Standard Classification of Education. Disaggregated data by province are available for the primary and secondary levels only. The number of students in higher education is set to zero to allow comparability. The population of the corresponding age group is projected by the MOE in cooperation with the UNDP Lao PDR. International data are based on enrolment at the beginning of the school year collected by UNESCO from the MOE. Population data are from the UN's biannual Revision of World Population Prospects.

GDP per capita (PPP US\$): To compare standards of living across countries, GDP per capita needs to be converted into PPP terms that eliminate differences in national price levels. In the Lao PDR the CPI-National Statistics Centre (NSC) estimates the GDP from national accounts and estimates the population by a projection based on the 1995 Census and the latest Lao Reproductive Health Survey of 2000. The GDP per capita (in Lao Kip) is then converted to international US\$ PPP by multiplying with the PPP conversion factor published by the WB in their World Development Indicators Report. International data are provided by the WB and based on price data from the latest International Comparison Program (ICP) surveys and GDP in local currency from national accounts data. For countries not covered by the last round of ICP, estimates are made using econometric regression analysis and for countries not covered by the WB, PPP estimates are made using data provided by the Penn World Tables of the University of Pennsylvania.

Though much progress has been made in recent decades, the current PPP data set suffers a number of deficiencies, including the lack of universal coverage, of timeliness of the data and of uniformity in the quality of results from different regions and countries. The importance of PPPs in economic analysis underlines the need for improvement in PPP data. A new Millennium Round of the ICP has been established and promises much improved PPP data for economic policy analysis, including international poverty assessment (UNDP HDR, 2004).

Private consumption, investment and government expenditure per capita (PPP US\$): As GDP data are not available at the provincial level, a proxy indicator is used to assess the differences in the standard of living between the provinces of the Lao PDR.

Probability at birth of not surviving to age 40, %: Data are not available from existing sources in the Lao PDR. A proxy indicator is used. If the 'under-five mortality rate', expressed as deaths per 100 live births, is used as a proxy then the value is 10.7 percent at the national level. For future editions of the NHDR the population division at CPI-NSC together with CPI-DGP will prepare the data for this indicator.

Population without sustainable access to an improved water source, %: National data are based on the results from the 2002-2003 Lao Expenditure and Consumption Survey (LECS 3). International data are based on UNICEF's State of the World's Children Report.

Children under weight for age, age under 5 years, %: This indicator was last surveyed by the Lao National Health Survey in 2000. An update is expected by the next multiple indicator cluster survey (MICS) of

2006. International data are based on UNICEF's State of the World's Children Report.

Estimated earned income, (PPP US\$): National data are not available for this indicator as there is a lack of data to calculate the female share of the wage bill. The ratio of female to male non-agricultural wage is not surveyed in the Lao PDR; neither is the female/male percentage share of the economically active population. Thus international data from the HDR were used. Because of the lack of international gender-disaggregated income data, female and male earned incomes are crudely estimated on the basis of data on the ratio of the female non-agricultural wage to the male non-agricultural wage, the female and male shares of the economically active population, the total female and male population and GDP per capita (PPP US\$). International estimates are based on data for the most recent year available during 1991-2000.

Comparisons Over Time

As international data agencies continually improve their data series, including periodically updating historical data, the year-to-year changes in the HDI values and ranking across editions of the HDR often reflect revisions of data - both specific to a country and relative to other countries - rather than real changes in a country. Trend analysis should not be based on data from different editions of the Report. Instead the HDI trends should be used as these are based on consistent data and methodology.

DEFINITIONS OF STATISTICAL TERMS

Births attended by skilled health personnel

The percentage of deliveries attended by personnel (including doctors, nurses and midwives) trained to give the necessary care, supervision and advice to women during pregnancy, labour and the postpartum period, to conduct deliveries on their own and to care for newborns.

Children reaching grade 5

The percentage of children starting primary school who eventually attain grade 5 (grade 4 if the duration of primary school is four years). The estimates are based on the reconstructed cohort method, which uses data on enrolment and repeaters for two consecutive years.

Consumer price index, average annual change

Reflects changes in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or may change at specified intervals. It is an indicator of measuring the levels of inflation in the country.

Debt service, total

The sum of principal repayments and interest actually paid in foreign currency, goods or services on long-term debt (having a maturity of more than one year), interest paid on short-term debt and repayments to the International Monetary Fund.

Earned income (PPP US\$), estimated

Roughly derived on the basis of the ratio of the female non-agricultural wage to the male non-agricultural wage, the female and male shares of the economically active population, total female and male population and GDP per capita (PPP US\$).

Earned income, ratio of estimated female to male

The ratio of estimated female earned income to estimated male earned income. See *earned income (PPP US\$), estimated (female and male)*.

Economic activity rate, female

The share of the female population aged 15 and above who supply, or are available to supply, labour for the production of goods and services.

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 gross enrolment ratio for primary, secondary and tertiary schools.

Calculating the education index

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.

Formula:

$$\text{Education index} = 2/3 (\text{adult literacy index}) + 1/3 (\text{combined gross enrolment index})$$

Education levels

Categorized as pre-primary, primary, secondary or tertiary in accordance with the International Standard Classification of Education (ISCED).

Pre-primary education (ISCED level 0) is provided at such schools as kindergartens and nursery and infant schools 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 such establishments as primary and elementary schools.

Secondary education (ISCED levels 2 and 3) is based on at least four years of previous instruction at the first level and provides general or specialized instruction, or both, at such institutions as middle schools, secondary schools, high schools, teacher training schools at this level and vocational or technical schools.

Tertiary education (ISCED levels 5 - 7) refers to education at such institutions as universities, teachers colleges and higher level professional schools - requiring as a minimum condition of admission the successful completion of education at the second level or evidence of the attainment of an equivalent level of knowledge.

Electricity production and consumption per capita

Refers to gross production, in per capita terms, which includes consumption by station auxiliaries and any losses in the transformers that are considered integral parts of the station. Also includes total electric energy produced by pumping installations without deduction of electric energy absorbed by pumping. In Lao PDR the big difference between production and consumption is explained by electricity exports.

Employment by economic activity, women

Female employment in industry, agriculture or services as defined according to the International Standard Industrial Classification (ISIC) system (revisions 2 and 3).

Agriculture refers to activities in agriculture, hunting, forestry and fishing.

Industry refers to mining and quarrying, manufacturing, construction and public utilities (gas, water and electricity).

Services refer to wholesale and retail trade, restaurants and hotels, transport, storage and communications; finance, insurance, real estate and business services; and community, social and personal services.

Enrolment ratio, gross

The number of students enrolled in a level of education, regardless of age, as a percentage of the population of official school age for that level. The gross enrolment ratio can be greater than 100% as a result of grade repetition and entry at ages younger or older than the typical age at that grade level. See *education levels*.

Enrolment ratio, gross, combined for primary, secondary and tertiary schools

The number of students enrolled in primary, secondary and tertiary levels of education, regardless of age, as a percentage of the population of official school age for the three levels. See *education levels and enrolment ratio, gross*.

Calculating the combined gross enrolment index

$$\text{Gross enrolment index} = \frac{\text{Actual value} - \text{Minimum value}}{\text{Maximum value} - \text{Minimum Value}}$$

Goalpost for the combined gross enrolment ratio: minimum 0% and maximum 100 %.

If calculating gender sensitive indicators:

- Female combined gross enrolment ratio: minimum 0% and maximum 100 %.
- Male combined gross enrolment ratio: minimum 0% and maximum 100 %.

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 *education levels*.

Exports, manufactured

Defined according to the Standard International Trade Classification to include exports of chemicals, basic manufactured goods, machinery and transport equipment and other miscellaneous manufactured goods.

Exports of goods and services

Defined according to the Standard International Trade Classification to include the export value of merchandise, freight, insurance, transport, travel, royalties, license fees and other services, such as communication, construction, financial, information, business, personal and government services. Excludes labour and property income and transfer payments.

Exports, primary

Defined according to the Standard International Trade Classification to include exports of food, agricultural raw materials, fuels and ores and metals.

Fertility rate, total

The number of children born to each woman if she lived to the end of childbearing years and gave birth in accordance with prevailing age-specific fertility rates.

Foreign direct investment, net inflows of

Net in-flows of investment to acquire a lasting management interest (10% or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital and short-term capital.

GDP (gross domestic product)

The sum of value added by all resident producers in the economy plus any product taxes (less subsidies) not included in the valuation of output. It is calculated without making deductions for depreciation of fabricated capital assets or for depletion and degradation of natural resources. Value added is the net output of an industry after adding up all outputs and subtracting intermediate inputs.

GDP (US\$)

GDP converted to US Dollars using the average official exchange rate reported by the International Monetary Fund. An alternative conversion factor is applied if the official exchange rate is judged to diverge by an exceptionally large margin from the rate effectively applied to transactions in foreign currencies and traded products. See *GDP (gross domestic product)*.

GDP index

One of the three indices on which the human development index is built. It is based on GDP per capita (PPP US\$).

Calculating the GDP index

The GDP index is calculated using adjusted GDP per capita (PPP US\$). 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.

$$GDP\ index = \frac{\log(\text{actual PPP\$}) - \log(\text{minimum PPP\$})}{\log(\text{maximum PPP\$}) - \log(\text{minimum PPP\$})}$$

Goalpost for GDP per capita (PPP\$): minimum value is 100 PPP US\$ and maximum value is 40,000 PPP US\$.

GDP per capita (PPP US\$)

See *GDP (gross domestic product)* and *PPP (purchasing power parity)*.

GDP per capita (US\$)

GDP (US\$) divided by midyear population. See *GDP (US\$)*.

GDP per capita annual growth rate

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.

Calculating GDI

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:

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

E measures the aversion to inequality. The value *E* = 2 is used in calculating the GDI (as well as the GEM). This value places a moderate penalty on gender inequality in achievement. Thus the general equation becomes:

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

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.

$$\begin{aligned} \text{GDI} = & 1/3 (\text{equally distributed life expectancy index}) + \\ & 1/3 (\text{equally distributed education index}) + \\ & 1/3 (\text{equally distributed income index}) \end{aligned}$$

Gini index

Measures the extent to which the distribution of income (or consumption) among individuals or households within a country deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. A value of 0 represents perfect equality, a value of 100 perfect inequality.

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.

Calculating HDI

The HDI is calculated as a simple average of the three dimension indices:

$$\text{HDI} = 1/3 (\text{life expectancy index}) + \\ 1/3 (\text{education index}) + \\ 1/3 (\text{GDP index})$$

Human poverty index (HPI-1) for developing countries

A composite index measuring deprivations in the three basic dimensions captured in the human development index - a long and healthy life, knowledge and a decent standard of living.

Calculating HPI -1

$$\text{HPI-1} = [1/3(P_1^3 + P_2^3 + P_3^3)]^{1/3}$$

Where:

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

P_2 = Adult illiteracy rate.

P_3 = 1/2 (Population without sustainable access to an improved water source)
+ 1/2 (Children under weight for age) = [Unweighted average]

Illiteracy rate, adult

Calculated as 100 minus the adult literacy rate. See *literacy rate, adult*

Imports of goods and services

The value of all goods and other market services received from the rest of the world. Includes the value of merchandise, freight, insurance, transport, travel, royalties, licence fees and other services, such as communication, construction, financial, information, business, personal and government services. Excludes labour and property income and transfer payments.

Income poverty line, population below

The percentage of the population living below the specified poverty line:

- \$1 a day—at 1985 international prices (equivalent to \$1.08 at 1993 international prices), adjusted for purchasing power parity.

- \$2 a day—at 1985 international prices (equivalent to \$2.15 at 1993 international prices), adjusted for purchasing power parity.
- National poverty line—the poverty line deemed appropriate for a country by its authorities. National estimates are based on population weighted subgroup estimates from household surveys.

See PPP (*purchasing power parity*).

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 were to stay the same throughout the child's life.

Life expectancy index

One of the three indices on which the human development index is built.

Calculating life expectancy index

$$\text{Life expectancy index} = \frac{\text{Actual value} - \text{Minimum value}}{\text{Maximum value} - \text{Minimum Value}}$$

Goalpost for life expectancy at birth: minimum 25 years and maximum 85 years.

If calculating gender sensitive indicators:

- *Female, life expectancy at birth: minimum 27.5 years and maximum 87.5 years.*
- *Male, life expectancy at birth: minimum is 22.5 years and maximum 82.5 years.*

Literacy rate, adult

The percentage of people aged 15 and above who can, with understanding, both read and write a short, simple statement related to their everyday life.

Official development assistance (ODA) disbursed, net

Disbursements of loans made on concessional terms (net of repayments of principal) and grants by official agencies of the members of the Development Assistance Committee (DAC), by multilateral institutions and by non-DAC countries to promote economic development and welfare in countries and territories in part I of the DAC list of aid recipients. Includes loans with a grant element of at least 25% (calculated at a rate of discount of 10%).

Official development assistance (ODA) to basic social services

ODA directed to basic social services, which include basic education (primary education, early childhood education and basic life skills for youth and adults), basic health (including basic health care, basic health infrastructure, basic nutrition, infectious disease control, health education and health personnel development) and population policies and programmes and reproductive health (population policy and administrative management, reproductive health care, family planning, control of sexually transmitted diseases, including HIV/AIDS, and personnel development for population and reproductive health). Aid to water supply and sanitation is included only if it has a poverty focus.

Official development assistance (ODA) to least developed countries

See *official development assistance (ODA) disbursed*, net and country classifications for least developed countries.

Official development assistance (ODA), untied

ODA for which the associated goods and services may be fully and freely procured by the recipient country.

Openness of the economy as percentage of the GDP

It measures the level of openness of an economy to the rest of the world. It is the proportion of the sum of imports and exports to the total of the GDP.

Population growth rate, annual

Refers to the average annual exponential growth rate for the period indicated. See *population, total*.

Population, total

Refers to the de facto population, which includes all people actually present in a given area at a given time.

Population, urban

The midyear population of areas classified as urban according to the criteria used in Lao PDR.

Poverty gap ratio

Poverty gap ratio is the mean distance separating the population from the poverty line (with the non-poor being given a distance of zero), expressed as a percentage of the poverty line. The poverty gap ratio is the sum of the income gap ratios for the households below the poverty line, divided by the total number of households. The poverty gap can also be expressed (and thus calculated) as the product of the average income gap ratio of poor people and the headcount ratio.

PPP (purchasing power parity)

A rate of exchange that accounts for price differences across countries, allowing international comparisons of real output and incomes. At the PPP US\$ rate (as used in this Report), PPP US\$1 has the same purchasing power in the domestic economy as \$1 has in the United States.

Private flows, other

A category combining non-debt creating portfolio equity investment flows (the sum of country funds, depository receipts and direct purchases of shares by foreign investors), portfolio debt flows (bond issues purchased by foreign investors) and bank and trade-related lending (commercial bank lending and other commercial credits).

Probability at birth of not surviving to a specified age

Calculated as 1 minus the probability of surviving to a specified age for a given cohort. See *probability at birth of surviving to a specified age*.

Probability at birth of surviving to a specified age

The probability of a newborn infant surviving to a specified age if subject to prevailing patterns of age specific mortality rates.

Sanitation, improved, population with sustainable access to

The percentage of the population with access to adequate sewerage disposal facilities, such as a connection to a sewer or septic tank system, a pour-flush latrine, a simple pit latrine or a ventilated improved pit latrine. A sewerage disposal system is considered adequate if it is private or shared (but not public) and if it can effectively prevent human, animal and insect contact with excreta.

Sanitation, improved, population without sustainable access to

Calculated as 100 minus the 'Proportion of population with sustainable access to improved sanitation'. See *Sanitation, improved, population with sustainable access to*.

Under-five mortality rate

The probability of dying between birth and exactly five years of age, expressed per 1,000 live births.

Under weight for age, children under age five

Includes moderate underweight, defined as more than two standard deviations below the median weight for age of the reference population, and severe underweight, defined as more than three standard deviations below the median weight.

Water source, improved, population without sustainable access to

Calculated as 100 minus the percentage of the population with sustainable access to an improved water source. Unimproved sources include vendors, bottled water, tanker trucks and unprotected wells and springs. See *water source, improved, population with sustainable access to*.

Water source, improved, population with sustainable access to

The share of the population with reasonable access to any of the following types of water supply for drinking: household connections, public standpipes, boreholes, protected dug wells, protected springs and rainwater collection. Reasonable access is defined as the availability of at least 20 litres a person per day from a source within 1 kilometre of the user's dwelling.

Source: UNDP (2005) Global HDR 2005 and UNDP (2001) NHDR Lao PDR 2001

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APPENDIX I: Lao Basic Data and Human Development Indicators

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(ELIGIBLE FOR ZERO-TARIFF UNDER AISP AND ONE-WAY FREE TRADE)

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TABLE 29: CASES OF REMITTANCES BY GARMENT WORKERS

TABLE 30: SUMMARY OF THE MINERAL PRODUCTION IN 2001/04

TABLE 31: VISITOR ARRIVALS INTO THE LAO PDR IN THE FIRST 6 MONTHS OF 2005

TABLE 32: LIST OF INVESTMENTS ON MINING SECTOR IN THE LAO PDR

TABLE 33: SOME MAJOR EXISTING AND POTENTIAL HYDROPOWER PLANTS IN THE LAO PDR

APPENDIX I

Lao Basic Data and Human Development Indicators

TABLE 1: LAO PDR BASIC DATA, 2005

	Total Population Thousand*	Total Area km2	Population Density Persons per km2
LAO PDR	5,610	236,800	24
Urban	..	..	..
Rural With Road Access	..	..	..
Rural Without Road Access	..	..	..
PROVINCES			
Vientiane Capital	695	3,920	177
Phongsaly	167	16,270	10
Luang Namtha	145	9,325	16
Oudomxay	265	15,370	17
Bokeo	146	6,196	24
Luang Prabang	406	16,875	24
Houaphanh	281	16,500	17
Xayaboury	338	16,389	21
Xieng Khouang	229	15,880	14
Vientiane Province	387	18,526	21
Bolikhamxay	225	14,863	15
Khammouane	337	16,315	21
Savannakhet	825	21,774	38
Saravanh	324	10,691	30
Sekong	85	7,665	11
Champasak	604	15,415	39
Attapeu	112	10,320	11
Saysomboun SR	39	4,506	9

Note:

* See more in Annex: Table 5 (Demography) and Table 9 (Gender)

Sources:

CPI-NSC (2005): "Population Census 2005"

Districts Number	Villages Number	Households Number	Average Household Size Persons per household
141	10,552	959,595	5.9
..	1,291	..	..
..	5,721	..	..
..	3,541	..	..
9	499	126,185	5.6
7	607	29,554	5.7
5	380	26,113	5.6
7	587	42,832	6.2
5	354	25,632	5.7
11	855	69,802	5.8
8	784	43,288	6.5
10	487	62,452	5.4
7	541	36,143	6.4
12	593	68,664	5.7
6	327	38,438	5.9
9	803	61,505	5.5
15	1,543	132,301	6.3
8	724	53,141	6.1
4	253	12,640	6.8
10	924	104,857	5.8
5	207	19,762	5.7
3	84	6,286	6.2

TABLE 2: HUMAN DEVELOPMENT INDICATORS

	Life Expectancy at Birth	Adult Literacy Rate, Age 15+ Years	Combined Gross Enrolment Ratio for Primary, Secondary and (Tertiary = 0) Education
	Years	(%)	(%)
	N:2000, P: 2002	2001	2001-2002
	1	2	3
LAO PDR	59	69	50
PROVINCES			
Vientiane Capital	63	90	55
Phongsaly	61	47	34
Luang Namtha	58	48	45
Oudomxay	60	55	39
Bokeo	57	60	48
Luang Prabang	56	58	44
Houaphanh	56	57	47
Xayaboury	54	74	50
Xieng Khouang	57	70	58
Vientiane Province	59	75	59
Bolikhamxay	55	76	58
Khammouane	59	67	51
Savannakhet	59	64	44
Saravanh	59	47	39
Sekong	57	67	42
Champasak	59	83	47
Attapeu	57	73	41
Saysomboun SR	56	66	42

Note:

Column 1: National data (N) is from 2000, Provincial data (P) is from 2002.

Column 4 & 7: GDP per capita at provincial level is substituted by a proxy of "Private consumption, investment and government expenditure by capita".
(See technical note)

Sources:

Column 1: National: CPI-NSC (2001), "Lao Reproductive Health Survey 2000"; Provincial: CPI-DGP (2004); "Population projection by the Department of General Planning"

Column 2: MoE (2003), "Lao National Literacy Survey 2001"

Column 3: Calculated from data provided by the Ministry of Education 2001-2002

Column 4: National: Calculation from NSC's 2005; Provincial: Calculation from LECS 3 and Official Gazette

Column 5-9: Calculated from national data

GDP per Capita (PPP US\$)	Life Expectancy Index Value	Education Index Value	GDP Index Value	Human Development Index (HDI)	
				Rank	Value
2002	2002	2001-2002	2002	2002	2002
4	5	6	7	8	9
1,766	0.57	0.62	0.48		0.557
2,516	0.63	0.79	0.54	1	0.652
942	0.60	0.42	0.37	17	0.466
1,462	0.55	0.47	0.45	14	0.489
931	0.58	0.50	0.37	15	0.485
1,198	0.53	0.56	0.41	12	0.502
1,377	0.52	0.53	0.44	13	0.496
1,077	0.52	0.54	0.40	16	0.484
1,513	0.48	0.66	0.45	6	0.533
1,100	0.53	0.66	0.40	7	0.532
1,606	0.57	0.69	0.46	3	0.574
1,356	0.50	0.70	0.44	4	0.546
1,448	0.57	0.61	0.45	5	0.542
1,148	0.57	0.57	0.41	9	0.516
889	0.57	0.44	0.36	18	0.458
1,143	0.53	0.58	0.41	11	0.508
1,469	0.57	0.71	0.45	2	0.575
1,290	0.53	0.62	0.43	8	0.528
1,338	0.52	0.58	0.43	10	0.509

HUMAN DEVELOPMENT INDEX TREND

	Value HDR 2005 (International Data)				
	1985	1990	1995	2000	2003
LAO PDR	0.423	0.450	0.487	0.522	0.545

Sources: Source: UNDP (2005) "Global Human Development Report 2005"

TABLE 3: HUMAN POVERTY INDICATORS

	National MDG			MDG			MDG
	Poverty Headcount Ratio			Poverty Gap Ratio			Proportion of Population Below \$1 (PPP) per Day
	%	%	%	%	%	%	%
	1992/93	1997/98	2002/03	1992/93	1997/98	2002/03	1997/98
	1	2	3	4	5	6	7
LAO PDR	46	39	34	11	10	8	26.3
Urban	27	22	20	6	5	4	..
Rural	52	43	38	13	11	9	..
Rural With Road Access	..	..	..	..	..	..	..
Rural Without Road Access	..	..	..	..	..	..	..
PROVINCES							
Vientiane Capital	34	14	17	7	3	4	..
Phongsaly	72	58	51	16	17	13	..
Luang Namtha	41	51	23	10	14	5	..
Oudomxay	46	66	45	10	25	11	..
Bokeo	42	39	21	7	10	5	..
Luang Prabang	59	41	40	16	10	21	..
Houaphanh	71	71	52	25	23	15	..
Xayaboury	22	18	25	5	3	6	..
Xieng Khouang	63	43	42	18	12	13	..
Vientiane Province	31	28	19	7	6	4	..
Bolikhamxay	17	28	29	2	7	6	..
Khammouane	47	45	34	12	11	8	..
Savannakhet	53	42	43	11	10	11	..
Saravanh	44	39	54	9	10	14	..
Sekong	67	50	42	24	15	12	..
Champasak	41	37	18	10	9	4	..
Attapeu	61	48	44	22	12	12	..
Saysomboun SR	..	63	31	..	10	7	..

Sources:

Column 1-2 and 4-5: CPI - NSC (2002) "Poverty in Lao PDR during the 1990s" (Vientiane: 2002)
 Column 3 and 6: CPI - NSC (2005) "Lao Poverty Trends 1992/3—2002/3 - Draft Report" (Vientiane: 2005)
 Column 7-8: World Bank (2002) "World Development Indicators" (Washington DC: 2002)
 Column 9-14: CPI-NSC (2004), "Lao Expenditure and Consumption Survey 2002/03 (LECS 3)"

MDG	Proportion of total consumption		Daily Rice intake per capita			
Proportion of Population Below \$2 (PPP) per Day	Food	Self Produced Products	All Areas	Urban Areas	Rural Areas with Road Access	Rural Areas Without Road Access
%	%	%	Gram	Gram	Gram	Gram
1997/98	2002/03	2002/03	2002/03	2002/03	2002/03	2002/03
8	9	10	11	12	13	14
73.2	55	29	575	509	595	591
..	45	9	..	..	..	..
..	63	44	..	..	..	..
..
..
..	42	6	478	442	589	..
..	69	57	592	541	629	585
..	58	41	702	785	735	594
..	65	49	644	545	658	666
..	67	50	637	684	643	521
..	52	25	608	476	601	662
..	65	50	649	689	634	654
..	50	33	704	544	759	645
..	60	42	672	676	712	637
..	50	23	573	584	569	599
..	62	37	532	521	542	535
..	64	43	717	646	733	714
..	60	34	452	475	455	415
..	66	48	597	600	597	596
..	68	47	533	563	545	495
..	58	23	502	433	514	513
..	57	38	573	637	571	551
..	65	39	740	519	762	..

INEQUALITY MEASURES - GINI INDEX

Indicator	Unit	1992	1997	2002
Inequality Measures - Gini Index	Value	31	35	33

Sources:
CPI - NSC (2005) "Lao Poverty Trends
1992/3—2002/3 – Draft Report"
(Vientiane: 2005)

TABLE 4: HEALTH PROFILE

	MDG	MDG		
	Under Five Mortality	Prevalence of Underweight <5 Years	Population Without Sustainable Access to an Improved Water Source	Population Without Access to Improved Sanitation
	Deaths per 1000 Live Births	%	%	%
	2000	2000	2002/03	2002/03
	1	2	3	4
LAO PDR	107	40	50	49
Urban	49	33	18	15
Rural	114	42	..	..
Rural With Road Access	53	54
Rural Without Road Access	76	83
PROVINCES				
Vientiane Capital	9	5
Phongsaly	70	79
Luang Namtha	43	47
Oudomxay	83	58
Bokeo	41	32
Luang Prabang	58	60
Houaphanh	78	51
Xayaboury	54	15
Xieng Khouang	73	44
Vientiane Province	50	23
Bolikhamxay	61	40
Khammouane	59	78
Savannakhet	45	70
Saravanh	46	84
Sekong	24	65
Champasak	50	61
Attapeu	63	53
Saysomboun SR	26	26

Sources:
 Column 1: CPI-NSC (2001) "Lao Reproductive Healthy Survey 2000"
 Column 2: CPI-NSC and MoH (2001) "National Health Survey 2000"
 Column 3-4: CPI-NSC (2004) "LECS 3"

TABLE 5: DEMOGRAPHIC INDICATORS

	Total Population		Population Growth Rate	Total Fertility Rate		Crude Death Rate		Population Not Born in the Same District as Their Residence		Rural Population	
	Thousand		%	Births per Woman		Deaths per Thousands People		%		(as % total)	
	1995	2005	2005	1995	2005	1995	2005	1995	2005	1995	2005
	1	2	3	4	5	6	7	8	9	10	11
Whole Country	4,575	5,610	2.0	5.4	4.5	15	9.8	19	18.3	83	73
PROVINCES											
Vientiane Capital	524	696	2.8	4.7	..	11	..	44.2	41.1	37	..
Phongsaly	153	167	0.9	5.7	..	11	..	13.5	8.8	94	..
Luang Namtha	115	145	2.4	5.7	..	14	..	21.5	20.7	83	..
Oudomxay	210	265	2.3	6.6	..	12	..	13.6	13.3	85	..
Bokeo	114	146	2.5	5.5	..	14	..	27.3	25	95	..
Luang Prabang	365	406	1.1	6.1	..	16	..	14.8	16.5	89	..
Houaphanh	245	281	1.4	6.2	..	15	..	7.8	9	94	..
Xayaboury	292	338	1.5	5.6	..	16	..	13.4	12.5	93	..
Xieng Khouang	201	229	1.3	6.3	..	14	..	23.2	21.5	93	..
Vientiane Province	287	387	3.0	5.9	..	14	..	28.5	29	83	..
Bolikhamxay	164	225	3.2	5.8	..	17	..	22.7	24	94	..
Khammouane	273	337	2.1	5.4	..	12	..	12.4	11.8	87	..
Savannakhet	672	825	2.1	5.4	..	11	..	10.9	9.3	85	..
Saravanh	256	325	2.4	5.5	..	13	..	10.2	8.5	94	..
Sekong	64	85	2.8	7.2	..	14	..	19.5	21.5	85	..
Champasak	501	604	1.9	4.9	..	13	..	14.5	14.3	87	..
Attapeu	87	112	2.5	5.4	..	14	..	13.6	10.8	95	..
Saysomboun SR	54	39	..	6.8	..	16	..	43.7	39.4	92	..

Sources:

Column 1, 4, 6, 8 and 10: CPI - NSC (1997) "Population Census 1995 Lao PDR" (Vientiane: 1997)

Column 2-3, 5, 7, 9 and 11: CPI - NSC (2005) "Population and Housing Census 2005: Preliminary Results" (Vientiane: 2005)

TABLE 6: EDUCATION AND HUMAN CAPITAL FORMATION PROFILE

	Adult Literacy Rate, 15+*	Adult Illiteracy Rate, 15+	MDG Youth Literacy Rate, 15-24	New MDG Primary Completion Rate	MDG Proportion of Pupils Starting Grade 1 Who Reach Grade 5*	MDG Net Enrolment Ratio in Primary Education	Gross Enrolment Ratio in Primary Education*
	%	%	%	Rate	%	%	%
	2001	2001	2001	2003	2003	2003	2003
	1	2	3	4	5	6	7
LAO PDR	69	31	78.5	55	61	82	113
Urban	..	..	..	..	..	..	..
Rural With Road Access	..	..	..	..	..	..	..
Rural Without Road Access	..	..	..	..	..	..	..
PROVINCES							
Vientiane Capital	90	10	94	77	81	87	107
Phongsaly	47	54	57	38	52	68	100
Luang Namtha	48	52	65	54	59	80	124
Oudomxay	55	45	69	55	40	76	122
Bokeo	60	40	74	45	57	84	120
Luang Prabang	58	42	69	43	58	74	109
Houaphanh	57	43	68	50	54	78	115
Xayaboury	74	26	83	72	82	88	122
Xieng Khouang	70	30	80	58	68	89	125
Vientiane Province	75	26	85	72	74	94	122
Bolikhamxay	76	24	85	71	76	97	133
Khammouane	67	33	78	62	61	90	120
Savannakhet	64	36	76	45	57	75	104
Saravanh	47	53	49	24	45	72	102
Sekong	67	33	77	41	50	62	112
Champasak	83	17	88	66	64	85	103
Attapeu	73	27	82	35	41	67	115
Saysomboun SR	66	34	79	58	67	98	135

Note: * See more in Annex: Table 9 (Gender)

Sources:

Column 1 and 3: MoE, Department of Non-Formal Education (2004) "Lao National Literacy Survey 2001" (Bangkok: 2004)

Column 2: Calculation based on the national data from MoE, Department of Non-Formal Education (2004) "Lao National Literacy Survey 2001" (Bangkok: 2004), (see more explanation in the appendix definition)

Gross Enrolment Ratio in Secondary Education*	Gross Enrolment Ratio in Combined Primary, Secondary and Tertiary (=0 for Provinces) Education*	Population Who Have Completed Lower Secondary Education, 6+	Average Number of Schooling Years*	Pupils per Primary School Teacher	Villages with Available Textbooks for Primary Students	Villages with Primary School in Village	Village with Lower Secondary School in Village
%	%	%	Years	Number	%	%	%
2003	2001-2002	2002/03	2002/03	2002/03	2002/03	2002/03	2002/03
8	9	10	11	12	13	14	15
44	50	7.4	5	22	77	79	8
..	..	12.8	7	24	81	80	19
..	..	6.8	5	21	78	81	11
..	..	2.4	4	23	75	76	0
..
82	55	..	8	19	89	88	26
23	34	..	4	15	95	95	0
42	45	..	5	18	75	75	4
29	39	..	4	14	76	78	16
40	48	..	4	31	56	56	5
33	44	..	5	29	78	78	4
34	47	..	5	16	88	88	3
44	50	..	5	15	94	94	10
54	58	..	5	18	88	88	9
59	59	..	6	23	73	73	14
50	58	..	5	37	88	88	6
46	51	..	4	25	84	84	7
33	44	..	5	25	70	75	9
23	39	..	4	27	58	63	7
29	42	..	4	15	65	65	7
45	47	..	5	32	69	77	5
32	41	..	4	22	87	89	22
47	42	..	5	24	91	91	6

Sources:

Column 4-9: MoE, Department of Planning (Annually) "Annual Reports" (Vientiane: Annually)

Column 10-15: CPI - NSC (2004) "The Household of Lao PDR: Social and Economic Indicators, Lao Expenditure and Consumption Survey 2002/2003 (LECS 3)" (Vientiane: 2004)

TABLE 7: LABOUR MARKET PROFILE

	Economic Activity Rate (Proportion of Population Over 10 Years of Age Working) * %	Main Economic Activity Last 7 Days (Percent of Total Hours Worked)		
		Paid Employee	Self Employed	
			Non farm activity	Own operated farm
	2002/03	2002/03	2002/03	2002/03
LAO PDR	82	6	24	71
Urban	75	17	49	34
Rural with road	85	3	16	81
Rural without road	87	1	11	88
PROVINCES				
Vientiane Capital	75	22	47	31
Phongsaly	90	0	7	92
Luang Namtha	83	3	15	82
Oudomxay	83	3	3	94
Bokeo	76	1	15	84
Luang Prabang	80	5	12	84
Houaphanh	88	1	18	81
Xayaboury	84	5	19	76
Xieng Khouang	72	2	16	82
Vientiane Province	76	5	26	69
Bolikhamxay	84	3	34	63
Khammouane	86	3	21	76
Savannakhet	81	5	22	73
Saravanh	98	0	11	88
Sekong	89	3	14	83
Champasak	85	5	32	63
Attapeu	82	2	30	68
Saysomboun SR	78	5	15	80

Note:

* See more about economic activity in Table 9 (Gender)

Sources:

All columns: CPI - NSC (2004) *The Household of Lao PDR: Social and Economic Indicators - LECS 3* (Vientiane: 2004)

TABLE 8: LABOUR FORCE IN LAO PDR - ECONOMIC ACTIVE POPULATION

	2001-2002	2002-2003	2003-2004 Estimates	Annual Growth Rate 2001/02 - 2002/03 (%)	Annual Growth Rate 2002/03 - 2003/04 Estimates (%)
Population Above 10 Years of Age	3,019,419	3,121,816	3,332,510	3.4	6.7
Total Labour Force	2,234,068	2,309,831	2,468,056	3.4	6.9
Urban	472,669	562,517	771,640	19.0	37.2
Rural	1,640,923	1,622,753	1,561,116	-1.1	-3.8
Agriculture Sector	1,634,535	1,693,672	1,811,240	3.6	6.9
Industry Sector	124,329	134,625	150,450	8.3	11.8
Services Sector	154,759	160,682	172,204	3.8	7.2
Other Sectors	199,970	196,292	198,862	-1.8	1.3
Unemployed Persons	120,475	124,560	135,299	3.4	8.6

Sources:

MoLSW, NCS data of the year 2001, 2002, 2003

TABLE 9: MARKETS, COMMUNICATIONS & TRANSPORT PROFILE

	Proportion of Villages				Average Distance from a Village to		
	With Electricity	Reachable in Dry Season	Reachable in Rainy Season	With Bus Stop in Village	Nearest Road	Public Transport	Post Office
	%	%	%	%	km	km	km
	2005	2002/03	2002/03	2002/03	2002/03	2002/03	2002/03
	1	2	3	4	5	6	7
Lao PDR	35.2	71	54	45	5	10	23
Urban	..	100	97	96	0	0	5
Rural							
Rural with road	..	84	65	54	2	6	22
Rural without road	..	35	17	11	12	22	32
PROVINCES							
Vientiane Capital	97.8	100	100	98	0	0	9
Phongsaly	5.9	32	27	19	16	19	38
Luang Namtha	20.3	47	34	34	16	23	30
Oudomxay	7.2	51	26	26	7	15	29
Bokeo	22.0	76	44	46	8	10	23
Luang Prabang	24.8	53	51	45	10	11	23
Houaphanh	16.7	41	28	23	9	19	31
Xayaboury	28.3	77	71	68	2	4	17
Xieng Khouang	10.4	83	41	18	8	18	26
Vientiane Province	72.7	93	92	74	2	4	18
Bolikhamxay	51.7	74	63	53	5	5	16
Khammouane	57.0	78	54	48	1	5	29
Savannakhet	40.2	96	64	44	1	7	22
Saravanh	35.9	83	65	52	1	8	22
Sekong	10.7	74	58	46	12	21	20
Champasak	46.8	64	52	50	2	3	16
Attapeu	14.0	85	53	38	3	25	16
Saysomboun SR	36.9	..	54	47	..	22	52

Sources:

Column 1: CPI - NSC (2005) "Population and Housing Census 2005: Preliminary Results" (Vientiane: 2005)

Column 2-17: CPI - NSC (2004) "The Household of Lao PDR: Social and Economic Indicators, LECS 3" (Vientiane: 2004)

Proportion of Households which Possess

Car	Motorbike	Bike	TV	Radio/ Video	Mobile Phone	Refrigerator	Vacuum Cleaner	Washing Machine	Electric Rice Cooker
%	%	%	%	%	%	%	%	%	%
2002/03	2002/03	2002/03	2002/03	2002/03	2002/03	2002/03	2002/03	2002/03	2002/03
8	9	10	11	12	13	14	15	16	17
4	22	54	41	46	3	22	1	3	21
11	54	71	76	53	10	59	3	11	58
1	11	48	30	43	1	10	0	1	9
..
..
15	65	69	86	53	14	77	4	17	74
3	3	9	14	38	0	2	0	1	2
2	6	39	15	42	1	2	0	0	0
1	6	22	14	35	2	8	0	1	9
2	9	28	29	49	1	7	1	1	6
2	13	27	18	49	1	11	1	3	11
0	13	40	19	58	1	8	0	1	11
4	20	56	39	54	1	10	0	1	8
2	18	46	24	53	0	1	0	1	1
4	25	64	51	44	1	27	0	1	28
6	23	60	46	47	3	20	0	2	22
3	15	49	41	38	2	22	1	2	16
2	18	72	45	46	1	20	1	1	19
1	11	58	30	35	0	11	0	1	9
0	6	35	21	34	1	8	0	0	7
1	21	66	52	42	1	20	0	1	18
1	14	66	15	33	1	8	0	0	11
0	7	27	11	62	1	1	0	0	1

TABLE 10: GENDER SENSITIVE INDICATORS

	Population Size		Ratio of Women to Men	Gender Relate Development Index (GDI)
	Female	Male	Total	
	Number	Number	Ratio	Value
	2005	2005	2005	2002
	1	2	3	4
LAO PDR	2,813,589	2,796,408	100.6	0.550
Urban	..	..	..	..
Rural With Road Access	..	..	..	..
Rural Without Road Access	..	..	..	..
PROVINCES				
Vientiane Capital	349,194	346,279	100.8	..
Phongsaly	83,198	83,983	99.1	..
Luang Namtha	73,524	71,707	102.5	..
Oudomxay	132,328	132,502	99.9	..
Bokeo	73,606	72,313	101.8	..
Luang Prabang	202,662	203,287	99.7	..
Houaphanh	139,334	141,446	98.5	..
Xayaboury	167,087	170,957	97.7	..
Xieng Khouang	113,489	115,393	98.3	..
Vientiane Province	189,954	196,604	96.6	..
Bolikhmxy	111,092	114,075	97.4	..
Khammouane	171,130	165,805	103.2	..
Savannakhet	417,473	407,189	102.5	..
Saravanh	165,195	159,275	103.7	..
Sekong	43,025	42,291	101.7	..
Champasak	305,342	298,538	102.3	..
Attapeu	57,402	54,769	104.8	..
Saysomboun SR	18,554	19,995	92.8	..

Sources:

Column 1-3: CPI - NSC (2005) "Population and Housing Census 2005: Preliminary Results" (Vientiane: 2005)

Column 4: Calculated from national and international data (see technical note)

Column 5 and 7: CPI - NSC (1997) "Population Census 1995 Lao PDR" (Vientiane: 1997)

Column 6 and 8: National: Lao Reproductive Health Survey 2000; Provincial: Committee for Planning and Investment, Department of General Planning 2002

Column 9-11: Lao National Literacy Survey 2001

TABLE 10: GENDER SENSITIVE INDICATORS continued

	MDG		MDG	Gross Enrolment Ratio in Combined Primary, Secondary and Tertiary Education	
	Proportion of Pupils Starting Grade 1 who Reach Grade 5		Ratio for Girls to Boys Starting Grade 1 Who Reach Grade 5		
	Female	Male	Total	Female	Male
	%	%	Ratio	%	%
	2003-2004	2003-2004	2003-2004	2001-2002	2001-2002
	12	13	14	15	16
LAO PDR	60	62	97	45	55
Urban	..	..	..	..	..
Rural With Road Access	..	..	..	..	..
Rural Without Road Access	..	..	..	..	..
PROVINCES					
Vientiane Capital	82	80	102	..	..
Phongsaly	49	54	91	..	..
Luang Namtha	54	64	85	..	..
Oudomxay	40	40	99	..	..
Bokeo	51	62	82	..	..
Luang Prabang	54	61	87	..	..
Houaphanh	54	55	98	..	..
Xayaboury	83	81	103	..	..
Xieng Khouang	68	68	99	..	..
Vientiane Province	72	76	94	..	..
Bolikhamxay	88	91	96	..	..
Khammouane	62	60	104	..	..
Savannakhet	57	56	103	..	..
Saravanh	43	46	94	..	..
Sekong	46	55	84	..	..
Champasak	61	66	93	..	..
Attapeu	39	42	92	..	..
Saysomboun SR	69	65	106	..	..

Sources:

Column 12-16: MoE, Department of Planning (Annually) "Annual Reports" (Vientiane: Annually)

Column 17-22: CPI - NSC (2004) "The Household of Lao PDR: Social and Economic Indicators, LECS 3" (Vientiane: 2004)

Column 23-24: UNDP (2004), Global Human Development Report 2004

Average Number of Schooling Years		Population Who Have Completed Lower Secondary Education, 6+		Economic Activity Rate (Proportion of Population Over 10 Years of Age Working)		Estimated Earned Income	
Female	Male	Female	Male	Female	Male	Female	Male
Years	Years	%	%	%	%	(PPP US\$)	(PPP US\$)
2002/03	2002/03	2002/03	2002/03	2002/03	2002/03	2002	2002
17	18	19	20	21	22	23	24
5	5	6.1	8.8	81	83	1358	2082
..	..	12.1	13.4	73	76	..	..
..	..	5.0	8.6	83	86	..	..
..	..	1.4	3.3	86	87	..	..
7	8	..	..	74	91	..	..
4	4	..	..	90	84	..	..
4	5	..	..	82	84	..	..
3	4	..	..	81	80	..	..
4	4	..	..	72	82	..	..
4	5	..	..	78	88	..	..
4	5	..	..	88	84	..	..
5	6	..	..	83	76	..	..
4	5	..	..	71	72	..	..
5	6	..	..	73	79	..	..
5	5	..	..	85	82	..	..
4	5	..	..	85	88	..	..
5	5	..	..	79	83	..	..
4	4	..	..	98	99	..	..
3	4	..	..	89	90	..	..
5	5	..	..	83	88	..	..
4	5	..	..	81	83	..	..
4	5	..	..	77	78	..	..

TABLE 11: MACROECONOMIC PROFILE

Row No.	Indicators	Unit	1990	1991
1	Gross Domestic Product (GDP)			
2	Nominal GDP (current prices)	Billion LAK	613	722
3	Real GDP (constant prices 1990)		613	637
4	Real GDP average annual growth rate	Percent	..	4.0
5	GDP in US\$	Million US\$	840	1,028
6	GDP in US\$ per capita	US\$	207	242
7	GDP in US\$ per capita average annual growth rate	Percent	..	..
8	GDP by Sector			
9	Agriculture	Percent	61	..
10	Industry		14	..
11	Services		24	..
12	GDP Annual Growth Rates by Sector			
13	Agriculture	Percent	4.1	..
14	Industry		12.3	..
15	Services		6.8	..
16	Average Annual Change in Consumer Price Index			
17	Average annual change in consumer price Index (CPI)	Percent	35.9	13.2
18	Liquidity (M2)			
19	Liquidity (M2) at end of year	Billion LAK	..	..
20	Total liquidity growth rate (M2)	Percent	..	..
21	Average Exchange Rate			
22	Official Commercial Bank Rate	(LAK/US\$)		
23	Buying rate		703	702
24	Selling rate		736	703
25	Mid Rate		720	703
26	Parallel market rate	(LAK/US\$)		
27	Buying rate		725	714
28	Selling rate		735	721
29	Mid Rate		730	718
30	Interest Rate (end of year) US\$ Account			
31	One year deposit	Percent	..	7.5
32	Lending rates			
33	Agriculture & forestry		..	6.00-10.00
34	Industry & handicrafts		..	8.00-12.00
35	Construction & transport		..	8.00-15.00
36	Commerce & services		..	8.00-15.01
37	Short term loans (1 year)		..	..
38	Medium term loans (1 -3 years)		..	..
39	Long term loans (3 - 6 years)		..	..

Sources:

Row 1-17: CPI - NSC (2005) "Statistics Book 1975-2005" (Vientiane: 2005)

Row 18-19, and 21-39: Bank of the Lao PDR (2005) "Balance of Payments" (Vientiane: 2005)

Row 20: Calculated based on data provided by the Research Department, Bank of Laos (2005)

1995	2000	2001	2002	2003	2004	2005
1430	13,669	15,702	18,401	22,503	26,530	..
836	1,127	1,192	1,263	1,335	1,425	..
7.1	5.8	5.8	5.9	5.7	6.7	..
1,747	1,742	1,770	1,830	2,129	2,492	..
379	335	329	331	375	427	..
11.4	14.8	-1.8	0.0	12.3	13.9	..
53.7	52.1	50.8	49.9	48.1	46.8	..
18.5	22.7	23.5	24.4	25.7	26.9	..
25.3	24.4	24.8	24.7	25.2	25.6	..
5.2	4.9	3.8	4.0	2.2	3.5	..
10.2	8.5	10.1	10.1	11.5	11.3	..
6.6	4.9	5.7	5.7	7.1	8.0	..
19.6	23.1	7.8	10.7	15.5	10.5	..
..	2,253	2705	3,435	4,095	5,000	..
..	..	20	27	19	22	..
816	7,811	8,838	10,000	10,515	10,580	10,620
821	7,885	8,904	10,112	10,622	10,644	10,687
819	7,848	8,871	10,056	10,569	10,612	10,656
841	7,979	8,960	10,114	10,598	10,630	10,649
858	8,065	9,049	10,219	10,702	10,720	10,731
850	8,022	9,004	10,166	10,650	10,676	10,690
3.30-6.00	2.00-6.00	1.00-4.00	1.00-3.00	0.75-2.00	0.25-1.00	0.125-1.5
8.00-14.00	6.00-10.00	5.50-6.00	3.50-5.00	..	..	..
9.00-14.00	7.00	6.00-7.00	5.50-5.50	..	..	..
9.00-14.00	8.00-14.00	6.50-6.50	6.50-6.50	..	..	..
10.00-14.00	7.00-14.00	7.00-9.00	6.50-7.50	..	..	..
..	..	..	..	6.00-14.00	6.00-14.00	6.00-14.00
..	..	..	..	7.00-13.00	7.00-10.00	7.00-10.00
..	..	..	..	5.25-14.00	7.85-16.50	7.85-16.50

TABLE 12: FINANCIAL RESOURCE FLOWS

No.	Indicators	Unit	1991	1995	2000	2001	2002	2003	2004
1	Current Account								
2	Current Account Balance	Million US\$	34	-133	-11	-73	3	-30	-183
3	Current Account Balance as a percentage of GDP	Percent	3.3	-7.6	-0.6	-4.3	0.2	-1.5	-7.8
4	Trade Balance								
5	Exports (fob)	Million US\$	97	308	330	320	301	322	363
6	Imports (cif)	Million US\$	165	589	535	510	447	456	713
7	Trade Balance	Million US\$	-68	-281	-205	-191	-146	-133	-349
8	Exports as a percentage of GDP	Percent	9.4	17.6	19.0	18.7	16.4	15.9	15.6
9	Imports as a percentage of GDP	Percent	16.1	33.7	30.7	29.9	24.3	22.5	30.6
10	Trade Balance as a percentage of GDP	Percent	-6.7	-16.1	-11.8	-11.2	-8.0	-6.6	-15.0
11	Openness Economy								
12	Exports plus Imports	Million US\$	262	896	866	830	748	778	1076
13	Openness economy as a percentage of GDP	Percent	30.4	87.2	49.6	47.6	42.2	42.5	50.5
14	Net Official Development Assistance								
15	ODA received		131	203	203	127	144	162	..
16	Grants	Million US\$	86	105	116	23	43	25	38
17	Long Term Loans		45	98	87	104	100	137	145
18	ODA received per capita	US\$	31	44	39	24	26	29	..
19	ODA received as a percentage of GDP	Percent	12.7	11.6	11.6	7.2	7.9	7.6	..
20	Capital and Financial Account								
21	Capital Account	Million US\$	..	..	..	..	..	..	..
22	Financial Account	Million US\$	74	212	115	131	69	119	94
23	Foreign Direct Investment (FDI)								
24	Net Foreign Direct Investment	Million US\$	7	88	34	24	4	20	17
25	Net Foreign Direct Investment as a percentage of GDP	Percent	0.7	5.1	1.9	1.4	0.2	0.9	0.7
26	Number of Projects approved	Number	..	63	68	63	102	74	162
27	Foreign Investments approved	Million US\$	..	534	190	1017	110	83	981
28	External Debt								
29	Total External Debt	Million US\$	338	663	1122	1205	1284	1390	1961
30	Debt service	Million US\$	13	15	30	38	42	31	
31	Debt service as a percentage of exports (Debt service ratio)	Percent	9.5	3.8	6	7.8	8.9	6.7	8.9
32	Debt service as a percentage of GDP	Percent	1.2	0.9	1.7	2.1	2.3	1.5	..
33	Reserves								
34	Gross Reserves (Central bank gross foreign assets)	Million US\$	29	93	141	133	196	216	228
35	Net Reserves (Central bank net foreign assets)	Million US\$	8	29	98	96	152	172	188

Sources:

Row 1-24 and 28-35: Bank of the Lao PDR (2005) "Balance of Payments" (Vientiane: 2005)

Row 25: Calculation based on the Balance of Payment (BOP 2005)

Row 26-27: CPI - NSC (2005) "Statistics Year Book 1975-2005" (Vientiane: 2005)

TABLE 13: PLANNED FOREIGN DIRECT INVESTMENT BY SECTORS FOR THE FY 2003-2004 (in US\$)

No.	Sector	Domestic Investment	Foreign Investment	Total Investment
1	Agriculture	82,500	75,621,517	75,704,017
2	Garment Manufacture	0	3,100,000	3,100,000
3	Industry-Handicraft	9,697,638	25,677,832	35,375,470
4	Wood Factory	0	8,838,669	8,838,669
5	Mining	8,405,854	303,703,880	312,109,734
6	Trade	2,735,000	16,265,000	19,000,000
7	Hotel-Restaurants	870,000	6,130,000	7,000,000
8	Consultancy Services	50,350	1,850,350	1,900,700
9	Services	1,219,132	7,409,855	8,628,987
10	Construction	5,835,699	4,155,423	9,991,122
11	Telecommunication	2,100,000	24,900,000	27,000,000
12	Banks	0	10,000,000	10,000,000
13	Energy	0	5,500,000	5,500,000
14	Representative Offices/Agents	0	9,437,865	9,437,865
	Grand Total	30,996,173	502,590,391	533,586,564

Sources: CPI (2004)

TABLE 14: ENERGY AND THE ENVIRONMENT

Row No.	Indicator	Unit	Year	Data
1	Electricity Production per Capita	Kilowatt/hour	2004	574
2	Electricity Consumption per Capita	Kilowatt/hour	2004	158
3	Proportion of Land Area Covered by Forest (MDG)	Percent	2002	41.5
4	Ratio of Area Protected to Maintain Biological Diversity to Surface Area (MDG)	Percent	2004	14.2

Sources:

Row 1-2: CPI - NSC (2005) "Statistics Book 1975-2005" (Vientiane: 2005)

Row 3: MoAF - Department of Forestry (2005) "Forestry Strategy to the Year 2020 of the Lao PDR" (Vientiane: 2005)

Row 4: National Biodiversity Strategy to 2020, Science, Technology and Environment Agency, Priminister's office (2004)

APPENDIX II

Trade

TABLE 15: IMPORTS BY COUNTRY OF ORIGIN Unit: Thousands of US\$

	2000	2001	2002	2003	2004
Asia	594,102	622,594	611,875	729,802	906,759
ASEAN	515,345	536,072	523,002	596,471	776,444
Thailand	406,489	435,351	421,751	483,328	616,108
Vietnam	73,150	68,199	68,564	86,780	113,971
Singapore	32,866	28,967	29,074	22,403	42,310
Other ASEAN	2,840	3,554	3,614	3,961	4,056
Japan	23,470	12,933	19,809	14,983	15,357
China (incl. HK)	39,076	60,589	60,816	109,073	102,778
Korea, Rep.	4,903	6,880	4,949	8,678	11,397
Taiwan	3,318	2,559	1,438	0	0
Other	7,990	3,559	1,862	596	783
EU (25)	36,720	29,650	35,631	47,815	77,460
EU (15)	36,319	29,417	35,508	47,693	75,832
Other EU	400	235	122	122	1,628
Other Countries	105,228	24,843	21,195	22,371	38,236
Australia	2,310	3,124	4,447	3,539	8,175
Canada	313	58	28	12	274
United States	4,463	2,806	4,505	5,262	7,016
Switzerland	444	367	786	599	722
Norway	392	2,225	1,505	172	265
Russian Federation	1,723	4,245	4,533	2,512	6,573
Other	95,481	12,017	5,391	10,275	15,211
Total	736,049	677,089	668,700	799,988	1,022,456

Source:
 Primary source of data: Comtrade, DOTS and Eurostat
 IMF (2005) "A Reconstruction of Lao trade data", table 2a. PCD: imports by country of origin (f.o.b.)

TABLE 16: SHARES OF IMPORTS BY COUNTRY OF ORIGIN Unit: Percent of Total Imports

	2000	2001	2002	2003	2004
Asia	80.7	92.0	91.5	91.2	88.7
ASEAN	70.0	79.2	78.2	74.6	75.9
Thailand	55.2	64.3	63.1	60.4	60.3
Vietnam	9.9	10.1	10.3	10.8	11.1
Singapore	4.5	4.3	4.3	2.8	4.1
Other ASEAN	0.4	0.5	0.5	0.5	0.4
Japan	3.2	1.9	3.0	1.9	1.5
China (incl. HK)	5.3	8.9	9.1	13.6	10.1
Korea, Rep.	0.7	1.0	0.7	1.1	1.1
Taiwan	0.5	0.4	0.2	0.0	0.0
Other	1.1	0.5	0.3	0.1	0.1
EU (25)	5.0	4.4	5.3	6.0	7.6
EU (15)	4.9	4.3	5.3	6.0	7.4
Other EU	0.1	0.0	0.0	0.0	0.2
Other Countries	14.3	3.7	3.2	2.8	3.7
Australia	0.3	0.5	0.7	0.4	0.8
Canada	0.0	0.0	0.0	0.0	0.0
United States	0.6	0.4	0.7	0.7	0.7
Switzerland	0.1	0.1	0.1	0.1	0.1
Norway	0.1	0.3	0.2	0.0	0.0
Russian Federation	0.2	0.6	0.7	0.3	0.6
Other	13.0	1.8	0.8	1.3	1.5

Source:

Primary source of data: Comtrade, DOTS and Eurostat
 IMF (2005) "A Reconstruction of Lao trade data", table 1a. PCD: Exports by country of destination (f.o.b.)

TABLE 17: EXPORTS BY COUNTRY OF DESTINATION Unit: Thousands of US\$

	2000	2001	2002	2003	2004
Asia	261,071	273,014	270,076	284,509	336,724
ASEAN	240,712	255,452	251,724	266,891	315,986
Thailand	183,079	190,413	191,689	188,714	213,142
Vietnam	55,729	64,177	59,040	74,725	98,139
Singapore	805	388	461	232	582
Other ASEAN	1,099	474	535	3,220	4,122
Japan	10,871	6,147	5,948	6,560	7,127
China (incl. HK)	6,251	6,892	8,837	10,317	12,678
Korea, Rep.	520	436	100	137	179
Taiwan	2,621	3,790	3,129	0	0
Other	96	130	176	426	560
EU (25)	106,191	115,472	120,879	137,023	164,422
EU (15)	103,538	112,643	117,917	131,464	158,127
Other EU	2,652	2,829	2,962	5,559	6,296
Other Countries	20,679	13,268	11,691	78,664	85,479
Australia	474	797	278	58,988	61,069
Canada	1,289	1,640	1,911	3,840	5,922
United States	9,159	3,583	2,435	3,938	3,311
Switzerland	3,995	2,187	1,488	2,546	2,886
Norway	2,380	2,637	2,387	1,512	2,187
Russian Federation	37	29	144	138	150
Other	3,345	2,394	3,049	7,702	9,954
Total	387,941	401,754	402,646	500,196	586,626

Source:

Primary source of data: Comtrade, DOTS and Eurostat
 IMF (2005) "A Reconstruction of Lao trade data", table 1a. PCD: Exports by country of destination (f.o.b.)

TABLE 18: SHARES OF EXPORTS BY COUNTRY OF DESTINATION Unit: Percent of the Exports

	2000	2001	2002	2003	2004
Asia	67.3	68.0	67.1	56.9	57.4
ASEAN	62.0	63.6	62.5	53.4	53.9
Thailand	47.2	47.4	47.6	37.7	36.3
Vietnam	14.4	16.0	14.7	14.9	16.7
Singapore	0.2	0.1	0.1	0.0	0.1
Other ASEAN	0.3	0.1	0.1	0.6	0.7
Japan	2.8	1.5	1.5	1.3	1.2
China (incl. HK)	1.6	1.7	2.2	2.1	2.2
Korea, Rep.	0.1	0.1	0.0	0.0	0.0
Taiwan	0.7	0.9	0.8	0.0	0.0
Other	0.0	0.0	0.0	0.1	0.1
EU (25)	27.4	28.7	30.0	27.4	28.0
EU (15)	26.7	28.0	29.3	26.3	27.0
Other EU	0.7	0.7	0.7	1.1	1.1
Other Countries	5.3	3.3	2.9	15.7	14.6
Australia	0.1	0.2	0.1	11.8	10.4
Canada	0.3	0.4	0.5	0.8	1.0
United States	2.4	0.9	0.6	0.8	0.6
Switzerland	1.0	0.5	0.4	0.5	0.5
Norway	0.6	0.7	0.6	0.3	0.4
Russian Federation	0.0	0.0	0.0	0.0	0.0
Other	0.9	0.6	0.8	1.5	1.7

Source:

Primary source of data: Comtrade, DOTS and Eurostat
 IMF (2005) "A Reconstruction of Lao trade data", table 1a. PCD: Exports by country of destination (f.o.b.)

TABLE 19: EXPORTS BY MAJOR COMMODITY Unit: Thousands of US\$

	2000	2001	2002	2003	2004
Electricity	112,200	106,400	103,600	91,000	105,000
Gold	0	0	0	58,700	60,700
Garments	105,979	112,923	113,948	129,968	154,736
Timber	70,142	106,773	114,250	128,387	144,856
Coffee	16,801	10,248	10,870	11,163	14,403
Other Agriculture	7,649	6,915	9,635	6,950	11,590
Minerals	1,937	2,926	1,524	2,614	3,982
Manufactured Goods (Excl. Garments)	63,700	39,476	36,139	55,114	71,950
Other	9,532	16,093	12,680	16,300	19,408
Total	387,941	401,754	402,646	500,196	586,626

Note:

"Other" includes handicraft, NTFPs, rubber and other intermediate products.

Source:

IMF (2005) "Lao PDR: A Reconstruction of Recent Trade Patterns Based on Partner Country Data", estimates are based on Comtrade, DOTS and Eurostat.

TABLE 20: IMPORTS BY MAJOR COMMODITY (C.I.F) Unit: Thousands of US\$

	2000	2001	2002	2003	2004
Petroleum	159,931	87,216	100,588	117,311	146,007
Capital	236,013	226,872	197,061	253,776	297,172
Materials for Garments	62,542	82,291	79,926	86,645	115,554
Consumption Goods	163,410	182,687	180,088	219,481	311,980
Other	121,586	103,644	114,850	125,588	155,313
Total	736,049	677,089	668,700	799,988	1,022,456

Note:

Note: "Other" includes chemical products, electrical products, plastic and rubber products, base metals and their products, etc.

Source:

IMF (2005) "Lao PDR: A Reconstruction of Recent Trade Patterns Based on Partner Country Data", estimates are based on Comtrade, DOTS and Eurostat.

TABLE 21: LAO EXPORTS IN 2003 (F.O.B - Millions of US\$)

HS Code	Description	Lao exports 2003 (FOB, millions of US\$)
01-05	Animals and animal products	2.6
06-14	Vegetable products	22.5
15	Animal fat and vegetable oil	0.0
16-24	Processed food, beverage and tobacco	2.4
25-27	Oil and mineral products	5.8
28-38	Chemical products and industrial related	1.8
39-40	Plastic and rubber products	3.9
41-43	Skins and furs and their products	2.2
44-46	Wood and wood products	148.0
47-49	Pulp of wood and paper	0.1
50-63	Textiles and apparel	134.2
64-67	Shoes, hats, umbrellas, etc.	5.8
68-70	Stone, ceramic and glass products	0.0
71	Jewellery and precious metal products	59.1
72-83	Base metals and their products	5.8
84-85	Electrical and mechanical machines	5.7
86-89	Transport equipment	2.0
90-92	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus, clocks and watches, musical instruments, parts and accessories of such articles and parts thereof	0.2
93	Weapons and ammunition and parts thereof	0.0
94-96	Miscellaneous articles	0.8
97	Art, antique	0.0
98-99	Other	3.5
	Electricity (not included)	93.7
	Total Trade in Commodities	500.2

Source:

NHDR team's estimate based on COMTRADE, with adjustments using national data and other sources.

DOTS database presents figures on the value of merchandise exports and imports by trade partners as well as areas and world aggregates showing flows between major areas of the world. Time series of annual, quarterly, and monthly from 1980 are available for approximately 186 countries, although there are missing data in the dataset.

COMTRADE database contains detailed import and export statistics reported by statistical authorities of close to 200 countries or areas. Records are in terms of value (US\$), weight and supplementary quantity and organized by year, by country, by direction of trade (imports, exports, or re-exports) and by commodity. Commodities are classified according to HS which is based on the nature of the commodity (from 1988 with revisions in 1996 and 2002), and the Standard International Trade Classification (SITC) which classifies commodities according to their stage of production (Rev. 1 from 1962, Rev. 2 from 1976 and Rev. 3 from 1988). The availability of data depends on country and year. Currently most data are reported according to HS, version 2002. Every year over 130 countries provide the United Nations Statistics Division with their annual international trade statistics, detailed by commodity and partner country. These data are processed into a standard format with consistent coding and valuation.

TABLE 22: IMPORTS OF LAO PDR IN 2003 (C.I.F - Millions of US\$)

HS Code	Description	Imports 2003
01-05	Animals and animal products	9.4
06-14	Vegetable products	22.5
15	Animal fat and vegetable oil	2.5
16-24	Processed food, beverage and tobacco	82.7
25-27	Oil and mineral products	119.8
28-38	Chemical products and industrial related	44.5
39-40	Plastic and rubber products	26.9
41-43	Skins and furs and their products	0.9
44-46	Wood and wood products	0.9
47-49	Pulp of wood and paper	9.7
50-63	Textiles and apparel	86.8
64-67	Shoes, hats, umbrellas, etc.	3.1
68-70	Stone, ceramic and glass products	21.9
71	Jewellery and precious metal products	6.7
72-83	Base metals and their products	54.6
84-85	Electrical and mechanical machines	164.9
86-89	Transport equipment	101.6
90-92	Optical, photographic, cinematographic, measuring, checking, precision, medical or surgical instruments and apparatus, clocks and watches, musical instruments, parts and accessories of such articles and parts thereof	7.3
93	weapons and ammunition and parts thereof	0.0
94-96	Miscellaneous articles	6.1
97	Art, antique	0.0
98-99	Other	27.1
	Total	799.9

Source:

NHDR team's estimate based on COMTRADE, with adjustments using national data and other sources.

DOTS database presents figures on the value of merchandise exports and imports by trade partners as well as areas and world aggregates showing flows between major areas of the world. Time series of annual, quarterly, and monthly from 1980 are available for approximately 186 countries, although there are missing data in the dataset.

COMTRADE database contains detailed import and export statistics reported by statistical authorities of close to 200 countries or areas. Records are in terms of value (US\$), weight and supplementary quantity and organized by year, by country, by direction of trade (imports, exports, or re-exports) and by commodity. Commodities are classified according to HS which is based on the nature of the commodity (from 1988 with revisions in 1996 and 2002), and the Standard International Trade Classification (SITC) which classifies commodities according to their stage of production (Rev. 1 from 1962, Rev. 2 from 1976 and Rev. 3 from 1988). The availability of data depends on country and year. Currently most data are reported according to HS, version 2002. Every year over 130 countries provide the United Nations Statistics Division with their annual international trade statistics, detailed by commodity and partner country. These data are processed into a standard format with consistent coding and valuation.

APPENDIX III

Trade Preferences

TABLE 23: COMMON EFFECTIVE PREFERENTIAL TARIFF (CEPT) LIST FOR 2001

Country	Inclusion List	Temporary Exclusion List	General Exception List	Sensitive List	Total
ASEAN-6 Total	43,675	245	377	150	44,447
Percentage	98.26	0.55	0.85	0.34	100
Lao PDR	1,673	1,716	74	88	3,551
Percentage	47.11	48.32	2.08	2.48	100
CLMV Total	12,005	8,415	452	210	21,082
Percentage	56.94	39.92	2.14	1	100
ASEAN Total	55,680	8,660	829	360	65,529
Percentage	84.74	13.4	1.28	0.55	100

Source:
www.us-asean.org/afta.asp

TABLE 24: COMMON EFFECTIVE PREFERENTIAL TARIFF (CEPT) LIST FOR 2005

Country	Inclusion List	Temporary Exclusion List	General Exception List	Sensitive List	Total
Lao PDR	8556	1467	203	461	10687
Percentage	80.06	13.73	1.90	4.31	100
Average tariff rate (%)	4.05	6.80	27.49	33.36	6.16

Source:
 Calculation by the author based on the data provided by the Lao Customs Department, MoF.

TABLE 25: SUMMARY OF AGRICULTURAL PRODUCTS GIVEN PREFERENTIAL TARIFF BY CHINA AND THOSE EXCLUDED FROM THE EARLY HARVEST PROGRAM, IMPLEMENTED FROM 1 JULY 2005

HS Code	Products Included		Products Excluded	
01. Live Animal	101	Live horses, asses, mules and hinnies.	0101.90.20	Horses, other than pure-bred breeding and race horses
	102	Live bovine animals		
	103	Live swine	103.92	Live swine - weighting 50 kg or more
	0104	Live sheep and goats		
	0105	Live poultry	0105.19.20 0105.19.30 0105.19.40 0105.19.50 1015.92 1015.93 1015.99	Ducklings (not breeding), goslings, guinea fowls. Others, weighting more than 185 g
			0106	Other live animals: mammals, reptiles, birds, and others.
02. Meat and Edible Meat Offal	0201	Meat of bovine, <i>fresh or chilled</i>	0202	Meat of bovine, <i>frozen</i>
	0204	Meat of sheep, goats <i>fresh, chilled or frozen</i>	0203	Meat of swine, <i>fresh, chilled or frozen</i>
	0205	Meat of horse	0207	Meat and edible offal of poultry, <i>fresh, chilled or frozen</i>
	0206	Edible offal	0210	Meat & edible offal, salted, dried or smoked, edible flours & meals of meat or offal
	0208	Other meat & edible offal, <i>fresh, chilled or frozen</i>		
	0209	Pig fat and poultry fat		
03. Fish	03	All, except 0301.91.90	0301.91.90	Live fish: trout (other than ornamental fish, eels, carp, other
04. Dairy Products; Bird's Eggs; Honey; Edible Products of Animal Origin	04	All, except 0407	0407	Bird's eggs, in <i>shell, fresh, preserved or cooked.</i>
05. Products of Animal Origin Not Elsewhere Specified	05	All, except 0504 Include: hair, bones, ivory, corals	0504.	Guts, bladders and stomachs of animals (other than fish)
06. Live Trees & Plants; Bulbs, Roots; Cut Flowers and Ornamental Foliage	06	All		None
07. Edible Vegetables and Certain Roots and Tubers	701	Potatoes, <i>fresh or chilled</i>		
			0702.	Tomatoes, <i>fresh or chilled</i>
	703	Onions, shallots, garlic, leeks and other alliaceous vegetables, <i>fresh or chilled.</i>		
	704	Cabbages, cauliflowers, and similar edible brassicas, <i>fresh or chilled</i>		
	705	Lettuce & chicory, <i>fresh or chilled</i>		
	706.9	Similar edible roots of carrots and turnips, <i>fresh or chilled</i>	0706. 10	Carrots and turnips <i>fresh or chilled</i>
	708	Leguminous vegetables, shelled or unshelled, <i>fresh or chilled</i> Peas & other, except 0708.20	0708.20	Beans, shelled or unshelled, <i>fresh or chilled</i>
	709	Other vegetables, <i>fresh or chilled</i> Globe artichokes, asparagus, celery, truffles, spinach Except 0709.30/51/60/90	0709.30 0709.51 0709.60 0709.90	Aubergines (egg-plants) Mushrooms of the genus <i>Agaricus</i> Fruits of the genus (chillies, other giant chillies) Other
07. Edible Vegetables and Certain Roots and Tubers	710	Vegetables (uncooked or cooked by steaming or boiling in water), <i>frozen</i> 0710.10 Potatoes 0710.21 Peas 0710.30 Spinach	0710.22 0710.29 0710.40 0710.80 0710.90	Beans Other leguminous vegetables Sweet corn Other vegetables Mixture of vegetables
	711	Vegetables provisionally preserved, not for immediate consumption 0711.20 Olives 0711.30 Capers 0711.51/59 Mushrooms and truffles	0711.40 0711.90	Other vegetables and mixture of vegetables Include: sweet corn, chillies, onions
			0712.	Dried vegetable (whole, cut, sliced, in powder), but not for further preparation Onions, Mushrooms, Wood ears, Jelly fungi, Bamboo shoots, Garlic

TABLE 25: SUMMARY OF AGRICULTURAL PRODUCTS GIVEN PREFERENTIAL TARIFF BY CHINA AND THOSE EXCLUDED FROM THE EARLY HARVEST PROGRAM, IMPLEMENTED FROM 1 JULY 2005 (continued)

HS Code	Products Included	Products Excluded		
07. Edible Vegetables and Certain Roots and Tubers	713	Dried leguminous vegetables, shelled, whether not skinned or split Peas, chickpeas, lentils, broad beans, and others	0713.31 0713.32 0713.33 0713.39	Beans, <i>dried</i>
			0714.	Manioc (cassava); sweet potatoes; water chestnut
08. Edible Fruit and Nuts; Peels of Citrus Fruit or Melons	801	Coconuts, Brazil nuts and cashew nuts, <i>fresh or dried</i> , whether or not shelled or peeled	0802.	Other nuts, <i>fresh or dried</i> , whether or not shelled or peeled
	803	Bananas <i>fresh or dried</i>		
	0804.10 0804.20 0804.40	Dates, figs, avocados, <i>fresh or dried</i>	0804.30 0804.50	Pineapples, guavas, mangoes and mangosteens, <i>fresh or dried</i>
	0805.20 0805.40	Citrus fruit, <i>fresh or dried</i> Mandarins, clementines, wilkings and similar citrus hybrids; grapefruit	0805.10 0805.50 0805.90	Oranges, lemons and limes, others, <i>fresh or dried</i>
	0806.	Grapes, <i>fresh or dried</i>		
			0807.	Melons (incl. watermelons) and papaws (papayas), <i>fresh</i>
	0808.	Apples, pears and quinces, <i>fresh</i>		
	0809.	Apricots, cherries, peaches (include nectarines), plums and sloes, <i>fresh</i>		
	0810.	Other fruit, <i>fresh</i>		
	0811.	Fruit and nuts, frozen, uncooked or cooked by steaming or boiling in water, whether or not containing added sugar or other sweetening matter		
	0812.	Fruit and nuts, provisionally preserved, but unsuitable for immediate consumption		
	0813.10 0813.20 0813.30 0813.50	Fruit, dried, other than that of headings 0801 to 0806: Apricots, Prunes, Apples	0813.40 0813.50	Fruit, <i>dried</i> , other than that of headings 0801 to 0806: Other fruit; Mixtures of nuts or dried fruits of this Chapter
	0814.	Peels of citrus fruit or melons, <i>fresh, frozen, dried, or provisionally preserved.</i>		

Source:

Accumulated by authors from the Agreement's document and Annexes of the ASEAN-China Free Trade Agreement. ASEAN Secretariat website

APPENDIX IV

Major Trading Sectors

TABLE 26: AGRICULTURAL EXPORTS, US\$

Agriculture Exports	2001/02	2002/03	2003/04	2004/05
Live animals	N/A	N/A	4,062,409	3,107,908
Coffee	9,773,937	10,915,964	13,021,172	9,599,327
Other Agricultural Products*	7,661,796	2,258,278	13,156,006	19,645,326
Rattan & Bamboo	3,074,349	2,896,835	970,656	1,970,591
Other NTFPs	8,223,654	5,722,816	3,368,684	3,907,743
Total	28,733,736	21,793,893	34,578,927	38,230,895

Note: * is the total Agro-Animal exports in 2001/02 and 2002/03. Unit: US\$

Source: MOC reports in different years

TABLE 27: SOME AGRICULTURE EXPORTS TO THAILAND (ELIGIBLE FOR ZERO-TARIFF UNDER AISP AND ONE-WAY FREE TRADE)

HS Code				Description
2 digits	4 digits	6 digits	more...	
7				EDIBLE VEGETABLE
	7.01			Potatoes, <i>fresh or chilled</i>
			0701.900...more	- Other
08				EDIBLE FRUIT AND NUT
	08.03		08.03...more	Bananas, including plantains, <i>fresh or dried</i>
	08.13			Fruit, dried, other than that of headings 08.01 to 08.06; mixtures of nuts or dried fruits of this Chapter
			0813.400...more	- Other fruit
10				CEREAL
	10.05		10.05...more	Maize (corn)
	10.08			Buckwheat, millet and canary seed; other cereals
			1008.900...more	- Other cereals
12				OIL SEED OLEAGINOUS FRUIT
	12.02			Ground-nuts, not roasted or otherwise cooked, whether or not shelled or broken
		12.02.10		In shell
		12.02.20		Shelled
	12.07			Other oil seeds and oleaginous fruits, whether or not broken
		12.07.20		- Cotton seeds
		12.07.30		- Castor oil seeds
		12.07.40		- Sesamum seeds
14				VEGETABLE PLAITING MATERIAL
	14.03		14.03.000...more	Vegetable materials of a kind used primarily in brooms or in brushes (for example, broomcorn, piassava, couch-grass and istle), whether or not in hanks or bundles
	14.04			Vegetable products not elsewhere specified or included
			1404.90...more	- Other
20				PREP OF VEG FRUIT PLANT
	20.08			Fruit, nuts and other edible parts of plants, otherwise prepared or preserved, whether or not containing added sugar or other sweetening matter or spirit, not elsewhere specified or included
			2008.990...more	- Other

Source:
Thai customs, January 2006

JAN - NOV 2005	JAN - DEC 2004	JAN - DEC 2003	JAN - DEC 2002	JAN - DEC 2001
CIF Value (Baht)	CIF Value (Baht)	CIF Value (Baht)	CIF Value (Baht)	CIF Value (Baht)
27,744,000	13,974,000	13,860,000	11,034,940	0
8,642,952	1,751,460	160	0	0
8,026,580	1,061,444	341,158	96,987	0
89,874,127	100,093,376	18,833,644	2,234,000	5,210,000
82,167,881	86,763,324	53,699,084	16,327,101	1,183,262
38,907,712	18,148,683	12,623,336	46,659,359	7,207,068
9,266,505	2,141,015	1,003,892	1,169,285	4,592,490
29,641,207	16,007,668	11,619,444	45,490,074	2,614,578
52,977	0	0	268,982	0
1,441,503	812,550	653,515	407,042	62,020
21,572,330	25,971,431	13,526,812	741,885	964,662
9,955,785	11,454,618	5,922,099	589,711	861,352
7,854,663	4,452,978	6,472,726	616,444	238,492
6,752,248	1,316,960	21,600	174,400	198,800

TABLE 28: EXPORTS AND WORKERS IN THE GARMENT INDUSTRY

Year	Number of Export Company	Sub-Contractors	Number of Workers	Relative Change of Workforce (%)	Quantity (Pieces)	Export Value (in '000 US\$)	Relative Growth Rate (%)
1998	58	10	17,200	..	27,064	76,146	..
1999	55	18	18,000	4.65	25,934	100,026	31.36
2000	53	26	19,000	5.56	25,560	108,087	8.06
2001	52	26	20,000	5.26	26,955	103,486	-4.26
2002	53	27	21,462	7.31	23,114	103,380	-0.1
2003	55	31	23,846	11.11	28,120	115,134	11.37
2004	57	43	26,000	9.03	31,909	131,728	14.41
2005	55	43	..	..	..	..	..

Source:
Association of Lao Garment Industry

TABLE 29: CASES OF REMITTANCES BY GARMENT WORKERS

Remittances within Lao PDR	Number of Remitters	Percentage
100,000 - 300,000 kip	48	42.48
300,000 - 500,000 kip	19	16.81
500,000 - 700,000 kip	10	8.85
Others	0	0
Unknown	36	31.86
Total	113	100

Note:
Interviews with 113 garment workers

Source:
Source: Major garment factories in Vientiane Capital, Lao PDR (2005)

TABLE 30: SUMMARY OF THE MINERAL PRODUCTION IN 2001/04

No	Minerals	Unit	2001		2002		2003		2004	
			Quantity	Cost (US\$)	Quantity	Cost (US\$)	Quantity	Cost (US\$)	Quantity	Cost (US\$)
1	Antracite	tons	13,853.29	164,564.30	31,417.38	465,334.80	11,413.00	94,833.20	19,052.00	171,035.50
2	Barite	tons	1,470.00	23,197.90	16,640.00	96,308.60	18,550.00	129,142.80	8,600.00	50,308.20
3	Clay	m ³	74,105.52	329,883.00	63,099.30	408,157.01	51,866.04	596,582.70	58,718.50	26,698.60
4	Granodiorite	m ³	3,550.00	9,056.10	5,639.00	15,026.60	1,500.00	4,191.60	3,340.00	9,974.20
5	Lignite	tons	165,065.96	134,606.50	259,720.00	2,203,891.50	275,250.81	2,811,864.70	298,584.39	3,401,178.80
6	Limestone	m ³	58,390.55	109,810.50	84,355.19	203,640.20	75,604.00	94,437.10	190,440.00	241,359.80
7	Dolomite	m ³	96,582.00	222,848.70	176,836.00	488,249.20	169,137.50	948,871.70	299,895.50	816,296.50
8	Salt	tons	3,619.45	10,697.20	5,791.63	20,070.30	19,023.07	79,702.90		
9	Sand	m ³	201,461.00	180,806.50	295,739.40	596,762.30	180,404.50	332,022.20	161,981.50	430,937.50
10	Sapphires	g	52,490.70	241,564.50	256,054.41	1,528,718.80	370,327.60	2,158,118.50	142,463.91	825,610.90
11	Zinc	tons	18,000.00	1,740,489.90	2,034.12	225,386.60	2,034.94	222,777.20	2,000.00	215,009.90

Source:
Source: Department of Geology and Mining 29/08/2005

TABLE 31: VISITOR ARRIVALS INTO THE LAO PDR IN THE FIRST 6 MONTHS OF 2005

Country of Origin	1998	1999	2000	2001	2002	2003	2004	6 Months 2004	6 Months 2005	Change 03/02 (%)	Change 04/03 (%)	Change 05/04 (%)
	Number	Number	Number	Number	Number	Number	Number					
Grand Total	500,200	614,278	737,208	673,823	735,662	636,361	894,806	431,312	553,095	-14	41	28
Asia and Pacific	421,196	510,703	604,254	553,249	579,031	498,185	730,107	347,808	455,933	-14	47	31
ASEAN	365,054	446,295	528,353	472,137	508,783	432,720	638,747	305,894	405,949	-15	48	33
Brunei	232	704	531	855	582	357	385	215	188	-39	8	-13
Indonesia	1,317	2,384	2,403	2,082	1,903	1,443	1,770	942	1,437	-24	23	53
Malaysia	2,464	4,485	4,211	2,544	3,543	3,072	4,563	2,248	3,024	-13	49	35
Myanmar	4,768	3,186	2,086	1,459	1,365	744	939	490	703	-45	26	43
Philippines	1,943	3,091	3,452	2,240	2,549	2,618	3,317	1,471	2,356	3	27	60
Singapore	2,192	2,690	2,514	2,055	2,454	2,442	3,409	1,589	1,989	0	40	25
Thailand	273,095	356,105	442,564	376,685	422,766	377,748	489,677	240,336	314,250	-11	30	31
Vietnam	78,216	71,748	68,751	82,411	71,001	41,594	130,816	57,053	79,092	-41	215	39
Cambodia	827	1,902	1,841	1,806	2,620	2,702	3,871	1,550	2,910	3	43	88
Non-ASEAN	56,142	64,408	75,901	81,112	70,248	65,465	91,360	41,914	49,984	-7	40	19
Australia	9,579	10,789	10,168	9,547	12,611	11,697	15,149	7,409	9,848	-7	30	33
China	15,802	20,269	28,215	40,644	21,724	21,232	33,019	16,119	17,747	-2	56	10
India	8,814	6,533	3,309	2,693	2,319	1,590	1,845	939	1,025	-31	16	9
Japan	12,936	14,860	20,687	15,547	19,801	17,766	20,319	10,019	10,488	-10	14	5
Korea	1,475	3,786	4,944	4,051	4,891	5,442	7,098	3,635	4,381	11	30	21
New Zealand	1,987	2,117	3,385	2,521	2,271	1,977	3,021	1,365	1,760	-13	53	29
Taiwan Province of China	2,098	2,801	2,940	2,461	3,918	3,316	2,160	993	3,037	-15	(35)	206
Others	3,451	3,253	2,253	3,648	2,713	2,445	8,749	1,435	1,698	-10	258	18
Europe	52,076	68,564	86,462	80,736	101,924	93,960	112,092	56,141	64,893	-8	19	16
Austria	226	478	1,375	1,405	890	938	1,394	746	816	5	49	9
Belgium	1,611	3,157	3,363	3,301	4,111	3,762	3,921	1,788	2,002	-8	4	12
Denmark	925	2,015	2,855	2,874	3,345	2,414	2,563	1,445	1,481	-28	6	2
Finland	442	1,434	1,772	704	1,072	982	1,293	717	650	-8	32	-9
France	17,863	19,960	24,534	21,662	26,748	23,958	27,806	12,679	16,445	-10	16	30
Germany	7,529	9,262	11,580	10,322	12,777	12,146	14,009	7,673	8,585	-5	15	12
Greece	68	149	139	216	489	179	324	89	162	-63	81	82
Italy	2,348	3,258	4,061	3,128	3,517	3,241	4,103	1,889	2,276	-8	27	20
Netherlands	2,488	3,686	5,035	4,498	6,656	6,638	6,957	3,541	3,788	-0	5	7
Norway	1,017	1,168	1,506	1,380	2,110	1,652	1,823	1,103	1,189	-22	10	8
Russia	2,047	2,258	2,415	1,533	1,371	1,031	1,315	713	773	-25	28	8
Spain	282	435	753	908	1,450	893	2,017	673	738	-38	126	10
Sweden	2,791	3,888	3,986	3,710	4,507	4,244	4,994	2,893	3,599	-6	18	24
Switzerland	1,795	2,974	3,305	3,597	4,480	3,844	4,310	2,151	2,737	-14	12	27
United Kingdom	8,902	12,298	15,204	15,722	21,749	22,541	27,402	14,238	15,651	4	22	10
Others	1,742	2,144	4,579	5,776	6,652	5,497	7,861	3,803	4,001	-17	43	5
The Americas	25,326	31,780	42,111	34,370	46,704	39,453	47,153	24,448	30,481	-16	20	25
Canada	4,737	6,355	8,330	7,174	9,060	8,006	9,048	4,994	6,297	-12	13	26
USA	20,174	24,672	32,869	25,779	35,734	30,133	37,181	19,013	23,646	-16	23	24
Others	415	753	912	1,417	1,910	1,314	924	441	538	-31	(30)	22
Africa and Middle East	1,602	3,231	4,381	5,468	8,003	4,763	5,454	2,915	1,788	-40	15	-39
Israel	673	2,191	3,241	3,417	5,515	3,354	4,088	2,228	1,058	-39	22	-53
Others	929	1,040	1,140	2,051	2,488	1,409	1,366	687	730	-43	(3)	6

Source:
Lao National Tourism Administration

TABLE 32: LIST OF INVESTMENTS ON MINING SECTOR IN THE LAO PDR

No.	Company	Local /Foreign	Province	Area (Ha)	Minerals	Activity	Investments (US\$)	Employment
1 - FOREIGN COMPANIES								
1	Hongsa Lignite Co.,LTD	Joint Venture (Lao-Thai)	Sayabouly	6,000	Coal	Exploration	3,200,000	50
2	Wengphoukha Coal Mine Co., LTD	Wholly foreign (Thailand)	Luang Namtha	800	Coal	Production	3,125,000	230
3	Luthing Co., LTD	Wholly foreign (China)	Phongsaly	3,000	Coal	Exploration	446,495	
4	Lane Xang Mineral Co., LTD (Oxiana Mineral Resources)	Wholly foreign (Australia)	Savannakhet	191,843	Au,Ag,Cu	Feasibility study	300,000,000	2826
5	Phubia Mining (Pan Mekong Exploration PTY, LTD)	Wholly foreign (Australia)	Special zone	263,700	Au,Ag,Cu	Feasibility study	5,000,000	1200
6	Lao-China Gold Mining Industry Corporation LTD	Joint Venture (Lao-China)	Bolikhamxay	797.20	Alluvial Au	Exploration	1,857,000	80
7	Hanoi Construction Co., LTD	Wholly foreign (Vietnam)	Bolikhamxay	299.10	Alluvial Au	Production		
8	Huajing Mining Co., LTD	Wholly foreign (China)	Special zone	250	Alluvial Au	Exploration	74,200	
9	Dao Lao	Wholly foreign (China)	Luang Prabang	500	Au	Exploration	307,501	240
		Joint Venture (Lao-Russia)	Vientiane	504	Au	Exploration	62,500	
			Vientiane	1,121	Au	Prospection	62,500	
			Vientiane	581	Au	Prospection	62,500	
			Vientiane	1,211	Au	Prospection	62,500	
10	Lao Chien Xinhua	Wholly foreign (China)	Vient. Municip.	300	Au	Exploration	129,000	
11	Akonote Oversea	Wholly foreign (Australia)	Vient. Municip.	30,020	Au	Prospection	200,000	82
12	Prospect Exploration & Mineral	Joint Venture (Lao-Australia)	Sekong	77,700	Au	Prospection	200,000	
13	Xanmu Udomxay	Wholly foreign (China)	Luang Namtha	1,800	Sb	Prospection	500,000	130
			Oudomxay	200	Cu	Exploration	324,000	
			Oudomxay	1,750	Cu	Prospection	260,966	
			Oudomxay	8,950	Cu	Prospection	1,120,188	
			Phongsaly	14,000	Cu	Prospection	450,356	
14	Lao-China Oriental Minerals Development Co, LTD	Joint Venture (Lao-China)	Luang Namtha	7,900	Cu	Production	6,489,100	
			Luang Namtha	800	Sb	Prospection	391,000	
			Xaysomboun	1,200	Cu	Prospection	506,514	
			Champasak	59,000	Cu	Prospection		
15	Yuxi Xuanglong Co., LTD	Wholly foreign (China)	Phongsaly	2,000	Cu	Exploration	20,000	
16	Phou Gnouang Mining Co., LTD	Wholly foreign (Canada)	Xengkouang	2,200	Fe	Prospection	782,973	
17	Lao COMICO	Wholly foreign (Vietnam)	Xamnoua	3,600	Fe	Prospection	1,000,000	
18	Singhongdao zinher Co., LTD	Wholly foreign (China)	Special zone	2,000	Fe	Prospection	4,950,000	
19	Lao-Korea Tin Mine Co., LTD	Joint Venture (Lao-Korea)	Khammouane	1856.50	Tin	Exploration	6,600,000	340
			Khammouane	143.50	Tin	Production		
20	Lao-Russian Joint Venture	Joint Venture (Lao-Russia)	Khammouane	5,800	Tin	Exploration	22,000	75
21	Lao-China Tin Development	Joint Venture (Lao-China)	Bolikhamxay	4,800	Tin	Prospection	42,300	
22	Padeng Industry Public Co., LTD	Wholly foreign (Thailand)	Vientiane	200	Pb,Zn	Production	299,310	210
23	Lao yonzin Development Mineral	Wholly foreign (China)	Oudomxay	2,000	Zn	Prospection	30,000	
			Phongsaly	2,000	Zn	Prospection	35,030	
24	Lao Mining Industry Aluminem		Sekong	2,500	Al	Prospection	2,000,000	145
25	Buhae Industrial Corporation	Wholly foreign (Korea)	Bokeo	27.59	Sapphire	Production	487,951	
26	Mining Development Co., LTD	Wholly foreign (Vietnam)	Khammouane	18.83	Gypsum	Production	1,262,490	
27	Viet-Lao Cooperation Co., LTD	Wholly foreign (Vietnam)	Khammouane	700	Gypsum	Production	3,576,000	
28	Lao Cement co., LTD	Joint Venture (Lao-China)	Vientiane	4.50	Limestone	Production	855,000	860
			Vientiane	5.25	white clay	Production	2,718,262	1400
			Vientiane	9	Sandstone	Production	143,005	87
			Vientiane	175	Coal	Prospection	114,278	150
29	Chong Ya Exi Cement Lao, LTD	Wholly foreign (China)	Saravanh	500	Limestone	Exploration	16,000,000	350
			Saravanh	100	clay	Exploration		
			Saravanh	1,000	Coal	Exploration		
30	Yunnan Exploration Engineering Co, LTD	Wholly foreign (China)	Vient. Municip.	7,800	Potash	Feasibility study	15,600,000	
31	V.S.K Co. LTD	Wholly foreign (Thailand)	Khammouane	15	Limestone	Production	826,200	60
32	Silakhammouan Joint Venture Co., LTD	Joint Venture (Lao-Thai)	Khammouane	50	Limestone	Exploration	1,691,000	
2 - LOCAL COMPANIES								
1	Phialat Gold Panning	Local	Vient. Municip.	16	Au	Production	148,000	
2	Vientiane Trade Co., LTD	Local	Vient. Municip.	385	Au	Exploration	246,861	
3	Lao Army Mining Co., LTD	Local	Bolikhamxay	9,800	Au	Prospection	140,000	70
			Vientiane	27,600	Au	Prospection		
4	Lao Service Incorporation Co., LTD	Local	Attapeu	15,000	Au	Prospection	5,000,000	
			Champasak	13,800	Al	Prospection	5,000,000	
5	Khamkeut Mining Co., LTD	Local	Bolikhamxay	600	Alluvial Au	Exploration	18,080	
6	Sithixay	Local	Sekong	27	Alluvial Au	Exploration		

TABLE 32: LIST OF INVESTMENTS ON MINING SECTOR IN THE LAO PDR (continued)

No:	Company	Local /Foreign	Province	Area (Ha)	Minerals	Activity	Investments (US\$)	Employment
7	Xaysombun Gold Mining Development	Local	Special zone	564	Alluvial Au	Exploration	97,085	
8	Bolikhamsay Gold Mining Joint venture	Local	Bolikhamsay	5,860	Alluvial Au	Exploration	4,250	
			Bolikhamsay	2,808	Alluvial Au	Exploration		
9	C M P trade export-import	Local	Oudomxay	1,600	Cu	Prospection	22,000	
			Oudomxay	1,600	Cu	Prospection	22,000	
10	First Pacific Mining Lao Co., LTD	Local	Vientiane	80,000	Pb, Zn, Barite	Exploration	2,000,000	
			Vientiane	2,000	Pb, Zn, Barite	Production	760,000	
			Vientiane	8,400	Coal	Exploration	137,000	
			Vientiane	29,400	Coal	Exploration		
11	Keoboalapha Tin Mining Co., LTD	Local	Khammouane	325	Tin	Exploration	45,500	65
12	S.V.Mining Co., LTD	Local	Khammouane	250	Tin	Production		
13	Nongxun Chaleun Phathana	Local	Khammouane	950	Tin	Exploration	22,675	48
14	Kosang and xukngukanphalith Agriculture	Joint Venture (Lao-China)	Bolikhamsay	1,340	Tin	Prospection	150,000	
15	Chanthakhon Tin Mining	Local	Bolikhamsay	1,496	Tin	Exploration	253,750	
16	Xayyavong construction	Local	Khammouane	500	Tin	Prospection	20,500	
17	Ongkham Mining	Local	Houaphan	6,400	Tin	Prospection	100,680	
18	Lao International Trade and Service	Local	Bokeo	633	Sapphire	Exploration	25,877	57
			Bokeo	70	Sapphire	Exploration	7,082,850	245
			Bokeo	75	Sapphire	Exploration	17,656	
			Bokeo	35	Sapphire	Exploration	65,548	
			Bokeo	39.27	Sapphire	Production		
			attapeu	8480	Sapphire	Exploration		
			attapeu	161.79	Sapphire	Exploration		
			attapeu	36.65	Sapphire	Exploration		
19	Bokeo Mining Co., LTD	Local	Bokeo	36	Sapphire	Exploration	17,847	36
			Bokeo	86	Sapphire	Exploration	42,635	
			Bokeo	28	Sapphire	Exploration	328,497	
			Bokeo	11.38	Sapphire	Exploration	5,642	
			Bokeo	12.73	Sapphire	Exploration	6,311	
			Bokeo	11.32	Sapphire	Exploration	328,497	
			Bokeo	8	Sapphire	Production		
20	Gypsum Mining Co., LTD	Local	Savannakhet	188	Gypsum	Production	560,000	315
			Savannakhet	460	Gypsum	Exploration		
21	Savan Gypsum Mining Co., LTD	Local	Savannakhet	436	Gypsum	Production	2,400,000	650
22	Sengchan Mining	Local	Savannakhet	500	Gypsum	Prospection	500,000	
23	Phethongkham	Local	Vientiane	21	Barite	Production	135,944	320
24	Oravan Barite	Local	Vientiane	21	Barite	Production	298,477	250
25	Inthavong Mining	Local	Vientiane	25	Barite	Production		
26	Lao Development Construction	Local	Vientiane	25	Barite	Production	80,253	
27	Barite Mining Co., LTD	Local	Vientiane	10	Barite	Production		
			Vientiane	10	Barite	Production		
			Vientiane	10	Barite	Production		
28	Singphoufar	Local	Vientiane	350	Barite	Exploration	4,275	
			Vientiane	100	Barite	Production	250,000	
29	VeunKham Salt Product		Vient. Municip.	10	Salt	Production		
30	Bolikhamsay Salt Product		Bolikhamsay	20	Salt	Exploration		
31	Agriculture Industry Development Enterprises Imp-Exp & General Services	Local	Vientiane	20	Coal	Production	650,741	450
			Vientiane	10	Coal	Exploration	31,343	
			Vientiane	9	Limestone	Production	1,131,597	
			Vientiane	18	Limestone	Production	3,784,200	
			Vientiane	1.50	Red clay	Production	675	
			Vientiane	1.50	White clay	Production	1,325	
32	Industry Cement Co., LTD	Local	Sekong	2,000	Coal	Prospection	58,500	
			Khammouane	1,200	Coal	Prospection		
			Khammouane	1,667	Limestone	Prospection	17,603	
			Khammouane	140	Clay	Prospection	200,000	
			Khammouane	240	Sandstone	Prospection	14,478	
33	Magnam Fertilizer Factory	Local	Khammouane	50	Limestone	Exploration		45
65	TOTAL			944,570			416,116,271	

Source:
SKDC (2006) "Mining and Mineral Exports of the Lao PDR"

TABLE 33: SOME MAJOR EXISTING AND POTENTIAL HYDROPOWER PLANTS IN THE LAO PDR

	Hydropower Plant	Location	Install Capacity	Completed Year
1	Nam Ngum	Vientiane	150	1970s
2	Xeset	Saravanh	45	1991
3	Theun-Hinboun	Khammoune	210	1998
4	Houay Ho	Attapeu	150	1999
5	Nam Leuk	Vientiane	60	2000
6	Nam Mang 3	Vientiane	60	Jan-05
7	Nam Theun 2	Khammoune	1070/1088	2009
8	Nam Ngum 2	Vientiane	615	2009
9	Nam Ngum 3	Vientiane	460	2009
10	Nam Ngum 5	Xiengkhuang	100	2010-2020
11	Xekaman 1	Attapeu	468	2011
12	Xe Pain-Xe Nam Noy	Attapeu	390	2010
13	Nam Theun 1	Bolikhambay	400	2011-2020
14	Xe Kong 4	Xekong	440	2011-2020
15	Xe Kong 5	Xekong	253	2011-2020
16	Nam Kong 1	Attapeu	240	2011-2020
17	Nam Tha 1	Bokeo	263	2011-2020
18	Nam Ou 2	Phongsaly	630	2011-2020
19	Nam Mo	Xiengkhouang	105/125	2006-2010
20	Xekaman 3	Xekong	250	2006-2010
21	Theun-Hinboun Phase II	Bolikhambay	210	2006-2010
22	Nam Ngieup I	Bolikhambay	368	2006-2010
23	Nam Theun III	Bolikhambay	237	2006-2010

Source: MEM and Maunsell & Lahmeyer International

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