



Mekong River Commission

Social Atlas of the Lower Mekong Basin

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Resource team: Penroong Bamrungrach, Ann Bishop, Ann Lund, Manithaphone Mahaxy,
Delia Paul, Pich Sambo, Sawaddh So.

Cover design: Sawaddh So.
Pictures: MRC archive, Christopher Barlow, Peter Degen, Jim Holmes, Mikkel Ostergaard,
Michael Wild.

 **Mekong River Commission**

P.O. Box 1112, 364 Preah Monivong Boulevard
Phnom Penh, Cambodia

Phone: (855-23) 720-979 Fax: (855-23) 720-972

Email: mrcs@mrcmekong.org

Website: www.mrcmekong.org

Foreword

It is my pleasure to present the first edition of the Social Atlas of the Lower Mekong Basin. The Atlas represents fruitful cooperation between the Mekong River Commission, the National Mekong Committees of Cambodia, Lao PDR, Thailand and Viet Nam, and government agencies in the four member countries. The product of this collaboration is a document that will prove useful to planners, policy makers and researchers within the Lower Mekong Basin (LMB) and beyond.

The impetus for producing the Atlas comes from the MRC's ongoing mission to ensure the sustainable management of the water and related resources of the LMB. An important component of this mission is increasing the breadth and depth of the existing body of knowledge about the river, its resources and its people. Only by properly understanding these key aspects of the LMB can we hope to make responsible decisions about the future use of its resources. The MRC has already made substantial contributions to the development of an understanding of the hydrology, geography, and other physical conditions of the basin through its technical databases. Increasingly, however, the Commission has recognised the demand for information on socio-economic aspects of development in the region. Improving the livelihoods of the people is one of the end goals of sustainable resource management, and there is therefore a critical need for authoritative information that addresses the social dimensions of river basin planning.

While there are many sources of data detailing social conditions in the four countries, it is rare that they are brought together to give a whole-of-basin perspective. The basin-wide perspective we present in this social atlas allows planners, policy makers and researchers to focus on cross-cutting issues that transcend national boundaries. The Social Atlas of the Lower Mekong Basin was conceived to map a variety of important social indicators at province level across the LMB to be of greater value in the analysis of geographic variations across countries.

The main users of the Atlas will be the National Mekong Committees and line agencies dealing with the many aspects of river basin management and social development in the four countries. It is also hoped that the Atlas will prove to be a useful resource for the wider community of government policy-makers, civil society organisations, and international agencies working in the LMB region.

This publication is to be accompanied by an interactive electronic version allowing users to access a greater range of information with more flexibility. Periodic updates to both the print and electronic versions of this atlas will be made as new data become available. The MRC views this Social Atlas as an invaluable reference document for all agencies involved in development in the Lower Mekong Basin. We look forward to the production of future editions and continued dialogue with all readers about ongoing improvements that can be made.

I hope you find this Social Atlas of the Lower Mekong Basin to be the valuable resource that it was planned to be.



Joern Kristensen
Chief Executive Officer
Mekong River Commission Secretariat

Phnom Penh, Cambodia
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The production of this Atlas involved gathering data from many varied sources. The document could never have become a reality without the kind and diligent cooperation of many organisations and individuals. First we would like to thank the National Mekong Committees of Cambodia, Lao PDR, Thailand, and Viet Nam for providing advice and guidance, as well as data from numerous government sources within their countries. We are also indebted to numerous other organisations that provided assistance in finding the data required for this Atlas. These include: the Ministry of Education of Cambodia; the National Institute of Statistics of Cambodia; the National Statistical Centre of Lao PDR; the Ministry of Labour and Social Welfare of Lao PDR; the National Economic and Social Development Board of Thailand; the National Statistical Office of Thailand; the Asian Development Bank; the United Nations Development Programme; the United Nations Environment Programme; and the United Nations World Food Programme. Special thanks are also due to the World Wide Fund for Nature's advice on the supplementary environmental maps of this Atlas.

The Social Atlas draws on data published by many other organisations. These sources are specified where appropriate in the body of the Atlas, as well as in the Reference List and Data Sources List in the Appendices.

Table of Contents

Foreword	
Acknowledgements	
Introduction	3
Social Issues in the Lower Mekong Basin	7
Country Overview: Cambodia	12
Country Overview: Lao PDR	14
Country Overview: Thailand	16
Country Overview: Viet Nam	18
Population Maps	21
Labour Force Maps	61
Living Standards Maps	75
Health Maps	89
Education Maps	105
Appendices	135

Introduction

Purpose of the Atlas

This Atlas has been published to increase understanding of social issues in the Lower Mekong Basin (LMB). The Atlas is a part of the Mekong River Commission's ongoing efforts to bring together and disseminate information and analysis about the environmental, social, and economic condition of the Mekong River Basin, its resources, and its people.



The Lower Mekong Basin is the area drained by the southern portion of the Mekong River and its tributaries. The basin cuts across four countries, including most of Cambodia and Lao PDR, and substantial portions of Thailand and Viet Nam. The territories that comprise the LMB, despite being separated by national boundaries, are linked by the river, its watersheds, and its drainage areas. The Mekong is a shared natural resource of great importance. It is widely agreed that there are important linkages between the use and condition of resources such as rivers, and the socio-economic development of the people who live close to them. In the

case of the Mekong River Basin, social issues such as poverty, education, and economic growth all affect the ways in which people exploit the resources of the river. The conditions of these resources in turn have implications for how successful people are in raising their standard of living and bringing about related social improvements. In a very real sense then, the social conditions of people living within the LMB are bound together by the river they share. Therefore a basin-wide perspective on social issues is useful for gaining a greater understanding of socio-economic development within each country, as well of the pressures upon the natural resources of the river system. A perspective on social issues that encompasses the entire basin is also important for the planning and management of the river and its resources, because social development is often a desired end result of such activities.

There is currently a great deal of data available on socio-economic conditions in the four riparian countries. However, the data come from a variety of sources, and are often widely dispersed, making it difficult to bring them together for purposes of comparison and integrated analysis. Furthermore, such data are often presented aggregated at the national level, and are generally in the form of tables and graphs. As such it can be difficult to highlight spatial themes such as hotspots of socio-economic disadvantage, priority areas for intervention, and relationships between geographic features and social conditions. The Social Atlas of the Lower Mekong Basin was thus conceived to fill an important gap in our understanding of the region by presenting geographically disaggregated maps of major social indicators across the entire LMB. It is the only document of its kind to focus on social indicators at the province level in Cambodia, Lao PDR, Thailand, and Viet Nam.



The Atlas is designed to be a useful resource for policy-makers, development agencies, and researchers. Both in planning for development and in monitoring its impacts, decision-makers need accurate information about the status of populations that could be affected. Data on incomes, infant mortality, life expectancy, literacy, population structure, access to services such as education, transportation, health care and many other issues need to be considered with regard to development. The social maps in this Atlas will increase the usefulness of such data by allowing interested parties to introduce spatial analysis into the planning and prioritising of development activities. In particular, it is hoped that the Atlas will facilitate cross-border planning on a regional scale, especially in the context of the Basin Development Plan currently being developed by the Mekong River Commission.



Content of the Atlas

Following an introductory discussion setting the context of social issues in the LMB and outlining the general socio-economic conditions of each country, the main content of the Atlas consists of six thematic sections. These sections are: population, labour force, living standards, health, education, and finally supplementary and environmental maps. The first five themes, taken together, paint an illuminating picture of the social conditions and general state of well-being of the people of the LMB. The environmental and supplementary maps highlight relationships between social development and the physical conditions of the areas in which people live. These maps are intended to provide a context within which to understand social issues, rather than to present a comprehensive analysis of the state of the environment in the Lower Mekong Basin.

The Atlas contains 45 social maps and 6 supplementary maps. The choice of individual maps included was based on input from stakeholders, but was also driven by the availability of reliable, consistent data at the correct level of aggregation. A number of important and useful indicators have not been included because the data either did not exist in disaggregated form, or was not sufficiently comparable across the countries. However, some indicators were considered so important to the understanding of social issues in the LMB that maps were included even if data for one or more countries was only available at the national level. The use of national-level data for a country is indicated in the maps by showing that country without province labels or boundaries. It is hoped that provincial data for these indicators will be available for future editions of the Atlas.

Appendices to the Atlas contain references cited in the text, the complete datasets used to generate each map, and full descriptions of statistical data sources.

Format of the Atlas


The Atlas follows a standardised format so as to allow for maximum readability and ease of use. A single page is devoted to each indicator, with a colour-coded map and legend showing the value of the indicator in each province. For consistency, standardised colour coding has been adopted, with light greens representing lower values and dark blues representing higher values. The values represented by each colour vary from map to map, with the ranges of values chosen on a case-by-case basis so as to highlight important themes and differences for each indicator. Because the value ranges vary, the user is urged to check the values carefully when making comparisons between maps. To capture continuous data, the map legends employ overlapping data classes, for example “0-20”, “20-40”, and so on. In such a case, a value of “20” would fall into the first class while a value of 20.01 would fall into the second class. Each map is also accompanied by a concise commentary highlighting key features. A definitive analysis of the maps cannot be given in the space available, so the text aims to act as a guide and starting point for the reader’s analysis. A table at the bottom of each page presents the definition, source document, and reference table of the dataset used for each country. The environmental and other maps in the supplementary section do not take provinces as their primary unit of analysis, and therefore employ different formats depending upon the data being displayed. All maps are presented in Universal Transverse Mercator projection (Zone 48); Datum: Indian 1960; Spheroid: Everest 1830.



Atlas Data

The data employed in the production of the social maps are largely drawn from the reports of official censuses and socio-economic surveys conducted by the four riparian governments. The data for most of the environmental and supplementary maps are based on the Mekong River Commission’s collection of geographic datasets. Where necessary, the Atlas also draws upon data from secondary calculated sources (such as for poverty lines) or datasets collated by the United Nations and other agencies. Every effort has been made to use the most reliable data available. However, the reader is reminded that even the highest-quality datasets on social issues in developing countries are sometimes prone to inconsistencies and errors.

Gathering comparable data for socio-economic indicators across four countries with differing social conditions, levels of development, and systems for the gathering and processing of statistics is necessarily a very difficult task. Given that data has been collected in Cambodia, Lao PDR, Thailand, and Viet Nam at different times using differing definitions and methodologies, it is often impossible to generate a dataset for an indicator that is perfectly comparable across the four countries. One major problem comes from having to compare data values that come from different years. Indicators based on census data, for example, present the situation in each country as it was during the census year, which was 1998 for Cambodia, 1995 for Lao PDR, 2000 for Thailand, and 1999 for Viet Nam. This means that a map presenting, say, the proportion of the population aged less than 15 years will be comparing 1995 values for Lao PDR with 2000 values for Thailand. Any change that has taken place within the two countries during this five-year period that could make differences between them smaller or larger will not be reflected in the map.



There are also important differences in the definitions of indicators. For example, the official age at which a person is considered a member of the labour force varies between the countries. This means that direct comparisons between the proportions of working-age people unemployed or economically inactive will be misleading. Such differences in definition have been minimised or eliminated by normalisation of data where possible. Where this has not been possible, maps have only been included where the differences in definition are small enough to ensure that cross-border comparisons are still meaningful. Furthermore, the Atlas has been formatted so as to make the definitions upon which the maps are based as obvious as possible. The reader is advised to bear these definitions in mind when analysing the maps and to exercise caution in making comparisons across countries when the data definitions are not identical.

Related and Future Publications

This Atlas is also available in CD-ROM format. The CD contains the Atlas maps and text, as well as an interactive application that allows users to generate maps for each indicator and for percentage and ratio based comparisons of multiple indicators. The Atlas is intended to be a recurrent publication, with future editions to be produced as new data becomes available. The MRC welcomes suggestions and feedback for improving future versions of the Atlas. Finally, readers interested in the latest data and analysis on the state of the Mekong River basin and its resources are referred to The State of the Basin Report, to be published by the MRC in 2003.

Social Issues in the Lower Mekong Basin

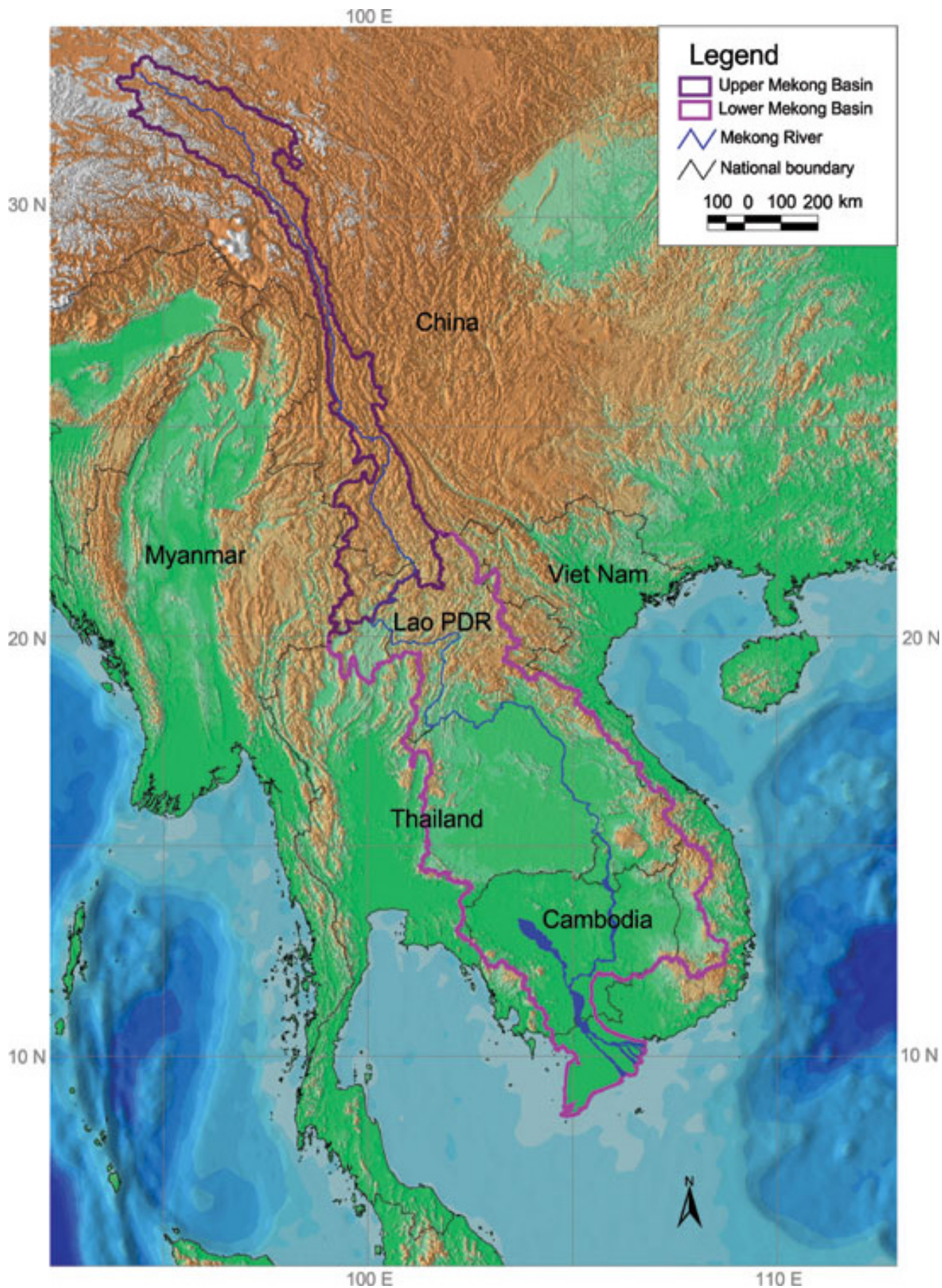
Geographic Overview

The geography of the Lower Mekong Basin encompasses a wide range of landforms and physical features that have important implications for the social conditions of the people who live within the region. A brief sketch of the geographic profile of the region thus provides a useful context within which to understand social issues. The Mekong River rises in Qing Hai province in western China. The river then flows east and south through the provinces of Tibet and Yunnan. In southern Yunnan, it leaves China to form the border of Myanmar and Lao PDR. This point defines the division between the Upper Mekong Basin, the parts of China and Myanmar drained by the river, and the Lower Mekong Basin. The Lower Mekong Basin can be viewed as five separate geographic components:

- Starting upriver, the first component is the mountainous region consisting of the northern Lao PDR and a small part of Thailand's North region. Here, remote and scattered settlements are found on the slopes and in the valleys of mountain ranges that stretch north into China's Yunnan Province.
- Moving southward, the terrain flattens out at the Mekong Corridor, a narrow strip of land between the mountains of northern Lao PDR and the Mekong River, which forms the border with Thailand. The flat land continues over the river into Northeast Thailand in a region known as Isan, or the Korat Plateau. This roughly rectangular region is bordered by mountain ranges to the west and south and the Mekong to the northeast and contains approximately 40 percent of the population of the LMB.
- The third geographic region consists of the Annam-Cordillera mountain range running through central and southern Lao PDR and bordering Viet Nam. Altitude gradually decreases as the range runs southwest and terminates in the Central Highlands of Viet Nam and the eastern uplands of Cambodia.
- To the south of the Korat Plateau is another major expanse of flat land, comprised of the Mekong lowlands and Tonle Sap Plain area of Cambodia. Between 10 and 20 percent of the basin's population live in this fertile rice growing area.
- Finally, the river terminates in the southernmost portion of the basin, the Mekong Delta, which is mostly within Viet Nam. Here rich soils and abundant water support intensive agriculture and a dense population base which comprises approximately 25 percent of the people of the LMB.

An overview of the geographic profile of the entire Mekong Basin is presented in the topographical map on the following page. For more details, please refer to Maps 49 and 50 in the Additional Maps section of this Atlas, which present elevation and land cover, respectively.

Topographical Map of the Mekong Basin (Upper and Lower)



Source: USGS Global GIS Database: Digital Atlas of South Asia

Social Differences and Similarities

The picture of social conditions in the LMB is marked both by great differences in people's levels of achievement in various indicators of social well-being and by important commonalities that give the region coherence as a unit of social analysis and ensure that its people are faced with shared challenges. As such, it is useful to explore the driving factors behind these commonalities and differences.

The varied geographies of the region provide a useful starting point for analysing the drivers of social difference. Whether communities live in remote mountainous regions or flat and lush lowlands, whether soils are fertile or arid, whether forest resources are abundant or scarce, all have impacts on people's abilities to grow food and generate income. In combination with national investments in infrastructure, geography also determines the remoteness or accessibility of communities and hence their access to markets, hospitals, schools and other social goods. Analysis of the maps in this Atlas shows broad correlations between geographical conditions, such as steep mountains that impose remoteness, and poor social outcomes, particularly in terms of health and education.

Mirroring the great differences in terrain and topography, the peoples of the LMB are also extremely diverse. They comprise over 70 distinct ethnic groups, speak many languages and dialects, and have a rich variety of histories, cultures and customs. A majority ethnic group dominates each country, but numerous minority groups also live within and across country borders. Minority groups tend to live in remote and marginal areas and are often less able to access health and education services than the national majorities.

Another important source of divergence in social outcomes is the differing political and economic systems within each state. Each of the four economies is at a different level of development, and there are large variations in wealth, productivity, and market efficiency. Thailand, for example, is firmly in the ranks of middle-income economies, while Cambodia and Lao PDR are classified by the UN as Least Developed Countries. The riparian governments also pursue different development policies and objectives. Emphasis on economic sectors prioritised for development varies, with Thailand and Viet Nam increasingly becoming industrialized economies, while Cambodia and Lao PDR focus more on intensification of agricultural production. It is likely that such economic divergence between the four riparian countries will increase in the future.



However, the people of the LMB also share much in common and broad generalizations can be made. Most of the basin's population live in rural areas. They are subsistence farmers, supplementing what they grow with the fish they catch and the food and other materials they gather from forests and wetlands. Livelihood systems are dictated by climate and available natural resources. While numerous forms of agriculture are employed, the most common is rice production fed by the floods and monsoon rains of the wet season. A general shared dependence on the seasonality of the Mekong River's highs and lows is also important because it creates a common vulnerability to flooding and drought. Because of shared traditions and a general lack of wealth available for investment in modern technology, agricultural techniques are similar also, generally involving the same low-value inputs and outputs. As a result, millions of people are producing a similar range of crops with similar levels of efficiency, leading to similar low levels of income. Therefore, unfortunately, poverty is something many share as well. As a result, levels of health, education, and other indicators of social well-being also tend to be low.

Another common factor contributing to continuing poverty and related social problems is the history of colonialism, war, and civil strife that the region shares, with the exception of Thailand. As a result of this tumultuous recent history, some parts of the LMB have suffered damage to their physical infrastructure and human resources that continues to impose constraints on social development.

The Social Indicators

The five broad categories of social indicators included in this Atlas (Population, Labour Force, Living Standards, Health, and Education) each cover an important aspect of the social condition of people in the LMB. Taken together, people's work, income, health, and educational status as well as their access to facilities such as safe water, sanitation and electricity define their personal resources and capacities to live full and productive lives. The make-up of the population as a whole, in terms of such factors as age, sex, and human resources, determines the social needs of the community as well as its ability to provide for these needs. The discussion below highlights the importance of the indicators chosen and broadly characterises the social conditions detailed in the maps in this Atlas.

Population Indicators: Demographic factors are important to social analysis because wealth and other social goods are generated by and shared among diverse groups in the population. Thus the size and rate of growth of the population, as well as balances between genders, age groups, ethnic groups, and urban and rural residents are all important. The population of the LMB, as with many developing countries and regions, is predominantly rural and young. This is due primarily to high fertility rates (the average number of children a woman bears), although these have decreased dramatically in Thailand and to a lesser extent in Viet Nam. The proportion of the population under 15 years old is high, especially in Cambodia and Lao PDR. This burgeoning young population is currently placing great demands on youth-oriented social services, such as education, and will probably continue to do so for the next 15 to 25 years. After that, with lower birth rates, youth will start to comprise a smaller proportion of the population. Across the basin, gender balances are uneven, with more males than females at younger ages, and greater numbers of females in the adult and elderly population. For other population indicators, it is harder to make generalizations. Provincial population densities vary greatly, from lows of less than 10 persons per km² to a high of almost 3,500 persons per km². Population growth rates are similarly variable, ranging from less than one percent to more than five percent per annum.

Labour Indicators: Indicators of labour force composition show how people make their livelihoods, what proportion of the labour force finds it necessary or desirable to work, and how many job seekers are unable to find work. These indicators have implications for income, poverty, and vulnerability to economic shocks.

In the LMB, most adults and many young people are economically active. Economic activity rates are lower for women than men, but the official data mask significant levels of participation in informal economic activity. In most provinces in the region more than 70 percent of the labour force is employed in the agriculture sector. Employment in the industry and service sectors is growing in importance, especially in the urban areas. Generally, females are more likely to work in services, and males are more likely to work in industry. Very few people in rural areas are unemployed, but in



urban areas, unemployment is much higher, and unemployment rates are often significantly higher for females than for males. Underemployment is also a major problem, but data on the issue are scarce. Problems related to unemployment and underemployment will intensify in the near future as large numbers of young people reach working age.

Living Standards Indicators: Measures of living standards such as income and poverty are very important indicators of people's abilities to sustain themselves and lead full and productive lives. Incomes are highest in Thailand, substantially lower in Viet Nam, and lower still in Cambodia and Lao PDR. Key standard-of-living indicators (access to safe water, sanitation, and electricity) reflect these relative differences in income. Access to improved sources of water and adequate sanitation enhances the living conditions of people, particularly their health. Electricity also contributes to improved living conditions, as well as to opportunities for income-generation activities. Access to these services varies widely across the LMB - from very low in parts of Cambodia and Lao PDR to 90-100 percent of the population in Thailand. Patterns in the geographic distribution of poverty are less clear than for income or standard-of-living indicators, with each country having provinces with high and low rates of poverty. It is also difficult to compare poverty across the countries because different methods for calculating poverty lines are used in each. However, it is apparent that the poor make up a considerable proportion of the population in each of the four countries.



Health Indicators: Life expectancy, and the health of children, are important measures of quality of life and have significant impacts on economic productivity and output. Progress in improving such health conditions is a good indication that the benefits of economic development are reaching more than just the affluent. Fertility rates are also very important in the context of social development as they partially determine the rate of population growth, and are themselves correlated with levels of education and economic opportunities for women. Indeed, there is a marked difference between Thailand and Viet Nam, where fertility rates have dropped to near or below replacement levels (2.1 children per woman), and Cambodia and Lao PDR, where they remain very high. The same discrepancy can be witnessed in the measures of life expectancy, infant mortality, and malnutrition. All of these public health indicators are worse in Cambodia and Lao PDR than in their two larger neighbours. The situation is worse still in the remoter parts of these two countries, and also tends to be bad in the Central Highlands of Viet Nam. These areas also tend to suffer from malaria to a much greater extent than other parts of the basin. Malaria is very rare in the urban centres and the whole of Northeast Thailand. The HIV/AIDS epidemic, however, follows a different pattern, with the largest number of sufferers in urban Cambodia and Thailand. While HIV prevalence rates in these two countries have declined in recent years, the disease continues to be a major social problem.

Education Indicators: Monitoring and improving levels of literacy and educational achievement is essential for economic and social development in the LMB. Economic growth and development require a skilled work force, including both men and women. Higher literacy and education levels among women are closely associated with lower fertility rates, as well as improvements to their own health and the health of their children. While gender gaps in access to basic education have almost been eliminated in Viet Nam, and are very small in Thailand, they remain substantial in Cambodia and Lao PDR, especially in areas predominantly inhabited by ethnic minorities. In general, enrolment rates and educational attainment rates are much lower in the two smaller countries than in Thailand or Viet Nam. This difference is particularly marked above the primary level, with Cambodia and Lao PDR having secondary school enrolment ratios that are among the lowest in Asia.

Country Overview: Cambodia



Cambodia is working to overcome a legacy of war and civil strife. The country is now at peace and is enjoying much greater political stability than in the past. Yet there are lingering effects from the decimation of the country's human and physical resources before, during, and after the rule of the Khmer Rouge between 1975 and 1979. By the time peace was restored in the early 1990s, much of the nation's economic infrastructure was in ruins. A decade of reconstruction and rehabilitation followed, during which Cambodia made impressive strides along the path to development. Economic growth during the period was strong, within the range of 4 to 7 percent since the early 1990s, aside from the

financial crisis years of 1997 and 1998. However, growth began from a very small base. The public sector remains poorly resourced, and has particular difficulties providing adequate health and education services. The education system was almost completely dismantled under the Khmer Rouge. While extensive efforts have since been made to rectify the situation, the stock of school facilities and teachers falls far short of the needs of the population. As a result, enrolment rates for secondary school, for instance, are the lowest in all of Asia (MOP-Cambodia 1999). There is also an entire generation who missed out on basic education during the 1970s. Likewise, many health facilities were destroyed, and the medical profession was greatly weakened. The impact of this damage to the Cambodian health system can be seen in poor outcomes for many of the health indicators mapped in this Atlas.

The legacy of war can also be seen in the composition of the Cambodian population. The end of the Khmer Rouge regime led to a baby boom in the early 1980s. As a result, 43 percent of Cambodia's population was below the age of 15 at the time of the 1998 Census. This large youthful population has implications for levels of demand for social services such as child health and education, and will result in large numbers of new entrants to the labour market seeking jobs in future years. These same young people will also begin starting their own families over the next decade, thus helping maintain population growth rates that are currently running at around 2.5 percent. Furthermore, high numbers of male fatalities during the 1970s and 1980s mean that females greatly outnumber males in the adult population. Females often head households, and members of such households are more likely to live in poverty than male-headed households (MOP-Cambodia 1997). There are also many disabled persons and displaced persons, who experience poverty and other forms of social deprivation to a greater extent than the rest of the population.

The national rate of poverty in Cambodia for 1997 was 36 percent, which means that approximately one out of every three Cambodians was living in poverty. Poverty has critical links to nearly all other measures of social well-being. In Cambodia, data show that the poorest people have the worst outcomes for a wide range of social indicators including gender equality, literacy, educational attainment, life expectancy, malnutrition, and disease. Rates of poverty vary widely across the country, from a low of 12 percent in Phnom Penh to a high of over 50 percent in Siem Reap Province. These variations reflect a high level of income inequality in general, but also important differences between rural and urban areas, and between the various regions of the country.

The majority of Cambodia's population lives in rural areas, and faces greater burdens of poverty and social disadvantage than urban dwellers. People in rural areas are heavily dependent upon agriculture, often conducted on a subsistence basis. They are very vulnerable to the floods and droughts that frequently plague the country. Landlessness, resulting partly from mass displacement during the period of civil strife, is also a major contributor to poverty and other social problems in rural areas.

In terms of regional differences, Phnom Penh and the rice growing provinces surrounding it on the Mekong-Bassac floodplain are the wealthiest areas, and in many cases enjoy the best social conditions. In contrast, the remote northeastern provinces of Ratanakiri and Mondulhiri often exhibit higher levels of social disadvantage, illiteracy, disease and early death than other parts of the country. The provinces around the Tonle Sap Lake are also relatively deprived, and have high levels of poverty and other poor social conditions.



Country Overview: Lao PDR

Much of the social and economic character of Lao PDR stems from its topography. The country is extremely mountainous. Arable land is in short supply, and many farmers must make do on marginal terrain. This has kept national agricultural productivity low and prevented agricultural surpluses from becoming a driver of development as they have in other parts of the basin. The steep mountains and deep val-leys also make transportation within the country very difficult. As a result, many communities are extremely remote.



An estimated 30 percent of villages are not accessible during the wet season, and only 20 percent can be reached by truck at any time of the year (NSC-Lao PDR 1999). Historically, this remoteness has contributed to the development of a country comprised of a very large number of diverse ethnic groups. In 1995, the national census distinguished 47 main ethnic groups and a total of 149 sub-groups (Chazée 1999). The dominant ethnic group is ethnic Lao, who make up just over 50 percent of the national population. Other groups, referred to as ethnic minorities, comprise 40 to 60 percent the population in many southern and central provinces, and around 85 percent in the north (RTI 2001). Minority groups generally live in the more remote upland areas, and are more likely to suffer from poverty and related problems than ethnic Lao. While ethnic Lao dominate the national population, they make up only 7 percent of the poor (UNDP-Lao PDR 2001).

The country consists of three regions, North, Central, and South. There are important social differences between the regions. The Central region is the most prosperous area, containing the capital Vientiane as well as the surrounding Vientiane Plain. The Mekong Corridor, a strip of flat and fertile land between the river and the foothills of the mountains, also runs through this region. Ethnic Lao predominate in this region, as in other lowland areas. Proximity to Thailand has increased economic prosperity through trade and investment, and many people in this part of the country can speak some Thai. A series of market-oriented economic reforms beginning in 1986 have had more success in increasing growth in the Central region than in the North or the South. The people of this region have been better able to take advantage of new economic opportunities than those elsewhere because of their greater proximity to markets and transport infrastructure. As a result, the Central region contains a smaller proportion of people living below the poverty line than the rest of the country. Health and education indicators also tend to be highest in the Central region.

The provinces of the North region are almost entirely mountainous and are dominated by ethnic minorities. The southern provinces are also comparatively rugged and remote and are less populous than the rest of the country, constituting only 20 percent of the national population. However, the southern portion of the Mekong Corridor forms a strip of productive arable land down the length of this region, contributing to regional incomes that are higher than in the North. Often the northern provinces come out the worst for poverty and related indicators, although there are also scattered southern and central provinces that tend to fare poorly.

Despite these regional generalisations, there is, in much of the country, a discernible gradient of disadvantage running from west to east. In general, social problems are much more pronounced in the remote and mountainous eastern districts than in the comparatively flat and affluent western districts along the Mekong Corridor. Unfortunately, these differences cannot be seen on the province-level maps in this Atlas. Many provinces in Lao PDR run right across the width of the country and provincial averages thus mask the differences between the western and eastern districts. This means that there are comparatively poor and remote districts to the east of the Central region, and comparatively prosperous and accessible districts at the western extent of the southern provinces.

In line with the general remoteness of most communities and very low overall population densities, the population of Lao PDR live predominantly in rural areas. More so than any other country of the basin, the majority of the national population depend upon traditional agricultural systems for their livelihoods. Shifting cultivation, whereby upland communities farm marginal lands until their productivity is exhausted and then move on to clear and plant new areas, is common. This form of agriculture can be particularly damaging to the environment and makes it very difficult for people to pull themselves out of poverty or subsistence lifestyles. Whether rural Lao are engaged in shifting cultivation or sedentary agriculture, they tend to share a lack of access to basic health and education services, as well as clean water, sanitation and electricity. In contrast, residents of Vientiane Municipality, as well as other urban centres, can access such services more easily. As a result, Vientiane stands out from most of the rest of Lao PDR in the achievement of positive social indicators. When assessing the maps in this Atlas, it is important to remember that the administrative unit called Vientiane Municipality (not to be confused with Vientiane Province) is only 63 percent comprised of urban residents. This means that almost 40 percent of the population are rural people, and the values for many indicators would be higher if the data covered city dwellers only.

Disparities in social outcomes between men and women are also a distinctive feature of the social situation in Lao PDR. This is the case particularly in terms of education-related and economic indicators. As with other social problems in the country, these discrepancies are larger in remote rural areas and among minority groups. Despite improvements in the 1990s, levels of literacy for adult women are still



significantly lower than for men. In many ethnic minority groups, female literacy rates are often well below half those for males (RTI 2001). Net primary enrolment rates are much lower for girls than boys, and young girls generally attend primary school for only 2 to 3 years. Parents are reluctant to send their daughters to school because of the important roles girls play in the domestic and economic activities of the household. Families also prefer to educate sons for cultural reasons and because it is considered safer to send sons to schools which are often some distance from villages.

Low levels of education and economic opportunity for women, along with high levels of infant and child

mortality, contribute to a very high national fertility rate of 4.9 births per woman, with provincial rates as high as 7.3. As a result, population growth rates are high, and there are disproportionately large numbers of young people. Low life expectancies - the result of poor health conditions - ensure that few people survive past the age of 60, further skewing the distribution of the population towards the young. As in Cambodia, this large population of young people puts great strains on limited national health and education resources.

Country Overview: Thailand

Thailand has experienced dramatic economic change over the last half century, moving rapidly from being a poor agrarian nation in the 1960s to a middle-income industrialized economy in the 1990s. GDP increased an average of 7.6 percent per year between 1977 and 1996, with most of the growth coming from a rapidly-expanding manufacturing sector fuelled by foreign investment and supportive government policy (UNDP-Thailand 1999). Along with economic expansion, Thailand has also experienced far-reaching social change. The country has become more urbanized, with many people moving to the cities to take newly-created jobs in the industrial and service sectors. Incomes have increased, and the poverty rate dropped from 33 percent in 1988 to 11 percent in 1996 (UNDP-Thailand 1999). As a result, health, education, and other aspects of social well-being have all improved greatly. In the health sector, child, infant, and maternal mortality rates have all halved over the 1990s and life expectancy has increased by 10 years since 1970 (UNDP-Thailand 1999). The prevalence of malaria and other tropical diseases has been drastically reduced. Increasing investment in education resulted in a national primary net enrolment rate of about 98 percent in 1996, up from around 70 percent in 1970 (UNDP-Thailand 1999). The traditional gap between the educational attainments of men and women has been nearly eliminated, with literacy and primary school enrolment rates for women now almost as high as for men.

The explanation for improvements in individual incomes and access to social services lies only partly in economic growth and expanding government revenues. The other side of the story is a dramatic decrease in the total fertility rate, which has slowed down the population growth rate. The fertility rate has plummeted from around 5 children per woman in the early 1970s to 1.98 in the late 1990s, mostly as a result of increasing levels of education and economic opportunity for women (UNDP-Thailand 1999). A slower growing population means that each person can enjoy a greater slice of the expanding economic pie than would otherwise be possible.





These impressive improvements to the social conditions of the Thai people were interrupted in 1997 when the Asian financial crisis rocked the country. As a result of the crisis incomes dropped, and some of the gains in living standards were eroded. Economic growth dropped to negative rates and the national poverty rate increased from 11 percent to 16 percent (ADB 2002). The Thai economy has since recovered from the crisis and annual GDP growth rates have returned to around 4 percent, but the momentum of social change is slower now than in the 1990s.

The rapid social and economic developments discussed above have not been evenly distributed across the country. The Northeast region, which comprises most of Thailand's share of the LMB, has remained the poorest part of the country. Also known as Isan, the Northeast consists largely of the Korat Plateau, a flat and dry region running from mountain ranges in the west and the south, to the Mekong River. The area suffers from poor soils and a lack of rainfall, constraining agricultural productivity. Markets are poorly developed, and traditional, low-efficiency agriculture is widely employed. The Northeast, which makes up 35 percent of the national population, contains approximately 62 percent of the country's poor (NESDB

2001). The regional poverty problem was exacerbated during the financial crisis and accompanying economic contraction. Many migrant workers in Bangkok and other cities were laid off and moved back to their home provinces in the Northeast, resulting in greater pressure on the resources of the region.

The situation is somewhat different in the cities of the Northeast. The urban centres have industrialized relatively rapidly and have invested considerable resources in regional development. Therefore the provision of public services such as transport infrastructure, electricity, water supply, education and health, while lagging behind other parts of Thailand, still compares favourably to the rest of the LMB.

Along with the Northeast, a small portion of Thailand's North region also lies within the Mekong Basin. The North Region is very different from Isan. The terrain is much more mountainous, and home to remote communities of ethnic minorities known collectively as hill tribes. Tourism is an important part of the economy, and the provinces of the region are generally richer than those of the Northeast. The region also contains Chiang Mai, Thailand's second-largest city. The city itself lies outside the LMB, although part of Chiang Mai Province extends into the basin.

Country Overview: Viet Nam



Social and economic development in Viet Nam must be seen in the context of the Doi Moi reforms that began in 1986. Doi Moi translates to "renovation" and is a process of economic liberalization that has greatly increased national income and productivity with a resulting increase in living standards across the country. Real GDP doubled during the 1990s, and the proportion of the population living in poverty dropped from just under 60 percent to about 35 percent. Viet Nam has gone from being unable to produce enough food to feed its people to being the world's second-largest exporter of rice. Social conditions have also improved greatly, with near universal primary education achieved for both boys and girls and substantial declines in fertility rates and child, infant and maternal mortality rates.

However, the benefits of these developments have not been spread evenly across the country. Income inequality has increased over the

period, with big differences between the poorest provinces (which are generally located in the north of the country, although several are within the LMB) and the richer provinces around Hanoi and Ho Chi Minh City (UNDP-Viet Nam 2001). Many people in Viet Nam remain poor, particularly those who are members of minority ethnic groups and those who are geographically isolated or on the margins of society. There are particular problems in rural areas, where unemployment and underemployment are often high and large numbers of young people are joining the labour force every year. Development in many rural areas is also constrained by declining agricultural land per capita, a lack of investment and modern agricultural technology, and weak markets and physical infrastructure. Furthermore, in such places many people have only a tenuous grasp on prosperity and could easily be thrown back into poverty by such shocks as natural disasters or economic crises.

The regions of Viet Nam within the LMB (the Mekong Delta and the Central Highlands), while not the most impoverished parts of the country, lag behind national averages for many indicators. Incomes in the Mekong Delta and the Central Highlands are, respectively, 7 and 17 percent below the national average. These two regions differ greatly from each other in their physical, demographic, and economic composition and these differences can be seen in many of the maps in this Atlas. However, one reason why they lag behind other parts of Viet Nam in terms of incomes is that they have industrialised more slowly than the major urban centres of Hanoi and Ho Chi Minh City. In 1995, for example, industrial production comprised 27.6 percent of national GDP, but in the Mekong Delta and the Central Highlands it made up only 14.3 and 11.7 percent respectively (UNDP-Viet Nam 2001).

The Mekong Delta is the rice bowl of Viet Nam. It is one of the most productive and intensively worked agricultural areas in all of Asia. While the Delta constitutes only 12 percent of Viet Nam's land area and 20 percent of its population, it is the source of more than 35 percent of the country's total agricultural output (GSO-Viet Nam 2001). In the Delta, the Mekong splits into nine main distributaries that run through fertile soils, making for very attractive agricultural conditions. These waterways are interlinked by a dense network of dikes and canals, providing the region with excellent infrastructure for waterborne transport. As a result of the Delta's comparative accessibility and its intense productivity, it is also very densely populated. The overcrowding of the region means that its agricultural bounty must be shared between many people. Per capita incomes thus remain comparatively low. Furthermore, several of the provinces of the Delta (specifically Dong Thap, Soc Trang, An Giang, Tra Vinh, and Bac Lieu) that do have relatively high incomes have not managed to translate these economic gains into improvements in social development (UNDP-Viet Nam 2001). While incomes are high and underemployment is low in such provinces, social indicators such as health, education, and access to essential services are lagging. Unskilled workers predominate in the workforce, and they are very vulnerable to market fluctuations and other shocks. One shock that the Delta provinces are particularly vulnerable to is flooding. A major portion of the land area of the Mekong Delta (including the Cambodian part) is inundated at some point during the rainy season every year. Floods destroy crops and take lives, but they are also an integral part of the normal agricultural patterns of the region, restoring soil fertility and feeding irrigation reservoirs that are used to water crops throughout the year.



The Central Highlands are very different from the Mekong Delta. This region is mountainous, has extensive forest cover, and has traditionally been one of the remotest parts of Viet Nam. As in other remote places within the LMB, many ethnic minority groups make their homes in the Central Highlands. Major groups include the Ba-Na, Gie-Tieng, Ra Giai, Xo-Dang and E-De groups. In Kon Tum Province, ethnic minorities account for over 50 percent of the population. As in Lao PDR, many of these groups practice shifting cultivation. Productivity is low and many people live on a subsistence basis. This situation is beginning to change as the government encourages the immigration of lowlanders to exploit the potential of expanding cash-crop industries such as coffee and sugar cane. The population of the region is thus a mix of new immigrants, who tend to be young and male and employed in low-skill occupations, and the resident minority groups. The Central Highland provinces generally fare worse than those in the Mekong Delta for most social indicators. Health indicators such as infant mortality and child malnutrition are particularly bad for this region

because of a lack of medical facilities and practitioners in the remote rural communities. Education rates and gender parity in accessing education are also lower than in the Delta. However, social conditions still tend to be better than in most parts of Cambodia and Lao PDR.