Human Development Report of THAILAND 1999

United Nations Development Programme

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Foreword

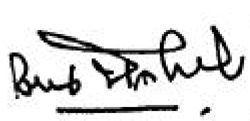
His Excellency Mr. Chuan Leekpai
Prime Minister of Thailand

It gives me great pleasure to introduce the first Human Development Report of Thailand. The global Human Development Report, published annually by UNDP since 1990, is a valuable reference widely used and quoted by the development community in Thailand. I expect that the National Human Development Report will soon come to occupy a similar position.

This Report comes at a particularly appropriate time. It documents our achievements in the field of human development as well as the challenges that we face. The analysis of our current predicament brings together various issues in a thought provoking but sympathetic manner. This Report, however, does not stop there. It also advances a policy reform agenda for human development beyond the crisis. Here, readers will value, I believe, the timeliness and relevance of the proposals as well as the constructive nature in which they are presented.

I am pleased that this Report is the product of close co-operation between UNDP and a number of government agencies, led by the NESDB. Although this is the first National Human Development Report, it will certainly not be the last, with future editions building upon the close co-operation currently existing between UNDP and the Thai Government.

I therefore have no hesitation in recommending this Report to a broad readership. Indeed, I hope that it will contribute to a further deepening and broadening of the debate on human development, particularly in our quest to achieve sustainable development at the dawn of a new century.



Chuan Leekpai
Prime Minister

Preface

Dr. Sippanondha Ketudat
Chairperson, National Economic and Social Development Board

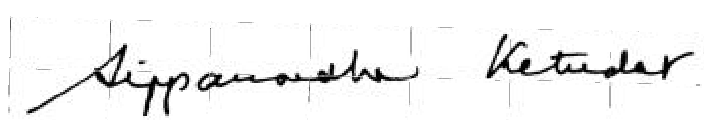
It gives me great pleasure to introduce the first Human Development Report of Thailand of which I had the privilege of being involved in the capacity of Chairperson of the Review Board, together with Mr. Michael Heyn, UNDP Resident Representative.

The Report is the first of its kind in terms of its comprehensive endeavor to present a broad perspective of the achievements and obstacles to human development in Thailand over the past few decades, and to highlight important issues that need to be addressed, especially to relaunch the country toward a people-centred sustainable development in the recovery from the economic crisis.

The message of the Report is clear. Overall, Thailand has achieved high and sustained economic expansion with an impressive record in poverty reduction and human development. But the growth and development have been inequitable. To rectify this, it is very important to recognize the need and intensify the effort to target the poor and the disadvantaged. For this, the Index of Human Deprivation (IHD) introduced by this Report for the purpose of policy planning and targeting the deprived and disadvantaged at the provincial level is very much welcome.

In addition, the Report also confirms that good governance is to be a high-priority in the national agenda, and that Thailand has proceeded steadily along this path, with the 1997 Constitution, the Eighth National Economic and Social Development Plan, and various initiatives that have emerged from the public, private and civil society sectors which contribute to good governance and a more equitable development.

I am confident that the Report will be very useful for government and non-government agencies as well as the academia, the media and the public.



Sippanondha Ketudat
Chairperson
National Economic and Social Development Board

Preface

Mr. J.K. Robert England
Resident Representative, United Nations Development Programme, Thailand

On behalf of UNDP, I am very honoured to present the first Human Development Report of Thailand.

The Report was drafted and finalized during 1998-1999 and went into printing when I started my tenure here in October 1999. Therefore, I would like to congratulate Dr. Sippanondha Ketudat, Chairperson of the Review Board and Mr. Michael Heyn, my predecessor who co-chaired the Review Board, members of the Review Board, and the drafting team, for the very remarkable work they have accomplished.

As a matter of fact, I am the first beneficiary of the Report as it presents an insightful and comprehensive illustration of the "development landscape" of Thailand and identifies crucial issues that deserve urgent and serious attention by all development partners including UNDP.

While the spirit and philosophy of the global Human Development Report provided an overall sustainable human development framework to this Report, the Review Board and the drafting team ensured that the substance and methodology were most relevant and useful in the context of Thailand. As a consequence, the Report depicts trends in human development, as well as critical issues that have emerged as a result of the economic crisis.

The reform agenda proposed in the Report is no less significant. In this regard, it is clear that this agenda reflects the progress that is already well on its way as well as some other initiatives that need to be addressed and supported by all development partners.

I hope the Report contributes to the advancement of sustainable and equitable development of Thailand.

J.K. Robert England
Resident Representative
UNDP Thailand

Acknowledgements

UNDP wishes to acknowledge the many contributions made by persons and institutions to the preparation of this report. Although published as a UNDP document, the report is very much the product of a lengthy period of cooperation with the National Economic and Social Development Board (NESDB), which has not only demonstrated a lively interest in the contents of the report but also actively supported its preparation in a variety of ways. UNDP is grateful for the support extended by NESDB and it owes a special debt of gratitude to Dr. Sippanondha Ketudat, Chairperson of NESDB, for his guidance and assistance.

The report benefited greatly from the guidance and comments received and information provided by the members of a Review Board composed of senior government officials and leading academics especially constituted to provide critical comments on the various drafts of the report. The Review Board met on four occasions from February to May 1999, with its members giving freely of their limited time to comment on a lengthy document. The interest and support of the Board's members has been much appreciated. The Review Board was composed of the following persons.

Dr. Sippanondha Ketudat	Chairperson, National Economic and Social Development Board (Chairperson)
Mr. Michael Heyn	Resident Representative, UNDP (Co-Chairperson)
Dr. Saisuree Chutikul	Advisor, Office of the Permanent Secretary, The Prime Minister's Office
Mr. Pairoj Suchinda	Deputy Secretary-General, Office of the National Economic and Social Development Board
Mr. Narong Nitayaphorn	Deputy Secretary-General, Office of the National Economic and Social Development Board
Mr. Pairoj Brosmhsarn	Director-General, Community Development Department, Ministry of Interior
Dr. Chuachan Chongsatityoo	Senior Advisor, Office of the National Education Commission
Dr. Viroj Tangcharoensathien	Project Director, Health Systems Research Institute, Ministry of Public Health
Dr. Medhi Krongkaew	Faculty of Economics, Thammasat University
Dr. Amara Pongsapich	Director, Social Research Institute, Chulalongkorn University
Dr. Pawadee Tonguthai	Faculty of Economics, Thammasat University
Dr. Wittayakorn Chiengkul	Director, Social Research Centre, Rangsit University

Throughout the course of the drafting, Dr. Chamnan Wattanasiri of the Community Development Department, Ministry of Interior and Ms. Waranya Teokul of the NESDB also provided very useful information and comments.

UNDP must also express its special thanks to Prof. Medhi Krongkaew of Thammasat University who prepared preliminary studies, especially on income poverty.

UNDP is grateful to Mr. Sansern Wongcha-um, Secretary-General and the staff of the National Economic and Social Development Board for the keen interest, information and advice, and to Ms. Eaimchan Premyothin, Secretary-General of the National Statistical Office, for the cooperation received from NSO in the provision of data and for the readiness of the staff to review the data contained in the report for accuracy and consistency.

Dr. Nay Htun, Associate Administrator and Director of UNDP Regional Bureau for Asia and the Pacific and Ms. Sakiko Fukuda-Parr of the Human Development Report Office have been ardent supporters of the project.

Last but not least, a team composed of international and national consultants and UNDP staff were responsible for drafting and finalizing the report. The main members of this team were Dr. Antony J. Dolman, Institute of Social Studies, The Hague, Parichart Siwaraksa and Maria Suokko (UNDP), who were assisted by Rishal Sawhney, Chaiwat Pattanapongsa, Kiratipong Naewmalee, and Chollanee Treephunprasiri in the areas of data collection and analysis and Pranee Threekul in the area of administrative and logistical support.

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Summary

Aims and Purposes of the Report

Since 1990, UNDP has published a global Human Development Report that compares the development situation in different countries. The publication of the global report has been complemented by the preparation of national human development reports. This volume is the first Human Development Report of Thailand.

The report has been prepared at a time that, in retrospect, will undoubtedly come to be regarded as a defining moment in Thailand's history. Its publication coincides with the most severe crisis ever experienced by the nation. It is a crisis that is being felt in almost all households, in all sectors, and in all corners in the nation. It is a crisis that has numerous and profound implications for human development and it necessarily provides the backdrop for the contents of this report. Against this backdrop, the report has a three-fold purpose: (i) to review the progress recorded by Thailand in the field of human development and to document both achievements and challenges; (ii) to identify the impacts of the crisis on human development; and (iii) to identify the main elements of a policy and reform agenda that can place the nation on the path of sustainable human development.

Human development reports often have a thematic orientation. Since this is the first Human Development Report of Thailand, it has been decided not to restrict the coverage to a particular theme but rather to cast the human development net wider to capture more of its many components and dimensions. However, it was also recognised that the value of the report in Thailand would be enhanced by the decision to devote additional attention to issues that are central to the policy and reform agenda. These issues are defined to include income and non-income poverty and strategies aimed at addressing human deprivation at a time of severe economic difficulties.

The report is composed of six chapters that are divided into two main parts. Part I, consisting of the first three chapters, provides an overview of human development achievements and challenges as well as a more detailed analysis of trends in income and non-income poverty. Part II, also composed of three chapters, focuses on the crisis, its impacts on human development, the relationships between the crisis and globalization, and the policy and reform agenda both during and after the crisis.

Human Development 1966-96: Three Decades of Progress (Chapter 1)

The report documents the very considerable progress recorded by Thailand in the field of human development in the three decades up to 1996. The progress has been broad-based and finds expression in virtually all of the indicators traditionally used to measure economic and social development. This is especially so in the area of incomes. In 1961, when planned development was first initiated, the per capita income of the Thai population was below that of several Sub-Saharan African countries. Since then it has increased 47 times in nominal terms. Since the mid-1980s, per capita incomes have grown in real terms by more than 7 per cent in every year, reaching double digits in the period 1988-90. Although income gains have not been shared equitably, there is overwhelming evidence that all socio-economic groups and all regions have recorded sharp increases in per capita and household incomes.

The past three decades have not only brought increased prosperity to the people of Thailand. They have also witnessed broad-based advances in the social fields, with progress closely matching overall growth performance. Marked improvements have been achieved in the field of health. The key to these improvements has been the progressive development of a national system of preventative and curative health care that today penetrates into the most inaccessible corners of the Kingdom. The development of this decentralised system has made it possible to achieve sharp reductions in infant mortality, child mortality and maternal mortality rates, all of which have been halved in the past decade, while 10 years have been added to life expectancy at birth since 1970, bringing it to around 70 years, one of the highest figures in the sub-region. Many of the diseases that once claimed the lives of the majority of Thais have been eradicated or brought under control, with transmission rates near zero, facilitated by near universal child immunisation. Third degree malnutrition among children has been eradicated and significant reductions have been achieved in first degree malnutrition in all regions, which in the mid-1990s affected less than one in ten children compared with one in three in the 1980s. In addition, far larger numbers of Thais today have access to potable water, safe sanitation and electricity, all of which have greatly added to overall levels of well-being. These developments have given Thailand a morbidity pattern that has more in common with that of an industrialised than a developing country.

Similarly in education, the past three decades have witnessed a significant broadening and deepening of the Kingdom's educational system. There has been sharp growth in enrolment ratios in all types of education. Primary education has become the inalienable right of virtually all Thai children, with nearly 98 per cent of the relevant age group attending primary school in 1996 compared with only two out of three in 1970. Particularly noteworthy has been the very rapid growth in pre-primary education that has not only enabled more women to pursue work outside the home in especially urban areas but also facilitated learning at an early age. Progress in the general field of education and human resources development finds expression in the adult literacy rate.

At 98 per cent, it is among the highest in the region, particularly in terms of female literacy.

Progress in the social fields has been paralleled by progress in the general area of governance. This reached its climax in 1997, which saw the promulgation of a new Constitution, which is destined to become a milestone in efforts to build a more open and democratic society in which the basic rights of the population are safeguarded and all Thais are provided with significant new opportunities to participate in processes of development at the national and local levels. This progress has been driven by a rich and varied civil society movement that gained strength in the 1990s when the need for political and social reforms became increasingly apparent. Civil society organisations have become a potent force for change that have played a decisive role in framing a reform agenda shaped by the principles of democracy, participation and respect for basic human rights. As both advocates and watchdogs, they are involved in activities that go beyond traditional concepts of participation and even empowerment. They are spearheading the search for a new social paradigm based upon a far-reaching process of political democratisation.

The key to the progress recorded by Thailand in the broad field of human development cannot be reduced to a single explanation. Rather, it is found in a combination of mutually reinforcing factors. They include high rates of economic growth, which have translated directly and indirectly into increases in disposable incomes, and the strong commitment to investments in the social sectors, especially health and education, which have been instrumental in reducing vulnerabilities, increasing personal and family security, and enlarging opportunities. Part of the explanation also resides in the readiness to periodically redefine the aims, scope and purposes of development, exemplified by the Eighth Plan with its people-centred approach to development, and by the determination to broaden and deepen the development process in ways that enlarge the basis for participation and representation, exemplified by the new Constitution. The change processes has been moulded and facilitated by unity and harmony, both of which are strongly rooted in Thai society, and by a profound commitment to democratic principles.

While Thailand can draw considerable satisfaction from its human development performance over the past three decades, it is widely recognised and accepted that much of the development has entailed high costs in several areas. The report draws particular attention to three such areas: (i) the unbalanced nature of much of the development that has taken place and the disparities existing between men and women and in access to social services and infrastructure; (ii) the disruption of social structures and relationships and the erosion of social and cultural capital; and (iii) unsustainable levels of natural resource depletion and environmental pollution.

Income Poverty: A Review and Assessment (Chapter 2)

The progress recorded in the field of human development finds tangible expression in the area of poverty reduction. The poverty incidence, defined as the percentage of the population living below a predetermined poverty line, fell from 33 per cent in 1988 to around 11 per cent in 1996. During this period the number of people living in income poverty more than halved, from 17.9 million to around 7 million.

The report takes a detailed look at income poverty. It examines three main questions related to the distribution of poverty, the identification of the poorest and most vulnerable groups, and trends in income distribution.

The report provides detailed evidence to show that Thailand's poorest are overwhelmingly found in rural areas. The poorest households will either have little or no agricultural land, being dependent upon a plot that is insufficient in size to meet the subsistence needs of the household or on the wages intermittently obtained through agricultural labour. The household will be a relatively large one, with additional mouths to feed. The heads of the poorest households will have little or no formal education and be without the skills that equip them for occupations outside their rural homes in all but the most menial of jobs. An increasing number of the heads will be women and older persons who are no longer able to work, adding to the vulnerabilities of the households. Many poor households will be required to borrow more just to meet their subsistence needs, locking them ever more tightly in a debt trap that systematically deprives them of their few material assets and makes it increasingly difficult for them to climb above the poverty line. Many rural households dependent on farming that have succeeded in climbing above the poverty line exist precariously just above it, figuring prominently among the poorest of the non-poor, and where unexpected developments - an illness in the family, drought-induced crop losses or failures, the loss of remittances received from a son or daughter working in Bangkok or another large city - will be sufficient to drive the household back down below the poverty line. Many of these most vulnerable households are to be found in the Northeast Region.

The report also provides evidence to show that the income gap between poor rural households and other households has widened considerably, providing justification for the younger and more enterprising young people to abandon, either permanently or temporarily, their rural homes. This is depriving the countryside of its most dynamic group and adding to the problems encountered by poor farming families in maximising returns on their meagre land holdings. However, while income inequalities between rural and urban populations continue to increase, there is evidence that the Gini coefficient of overall income inequality has improved since 1992 before it worsens after 1996.

The key to the sharp reduction in poverty appears to reside in the high rates of economic growth combined with rural development programmes that have specifically targetted rural populations. High rates of economic growth have translated directly into income gains, with Thailand appearing to provide evidence of 'trickle-down' effects in which the benefits of growth are transmitted through urban to rural areas. However, 'trickle-down' effects would be insufficient to explain the progress recorded in poverty reduction. No less important have been the measures that have specifically targetted poor and vulnerable households through a wide variety of programmes implemented by many government agencies and NGOs, which appear to be better co-ordinated today than was once the case.

However, the apparent existence of hardcore poverty provides a real cause for concern. Hardcore poverty is likely to be immune to the benefits of 'trickle-down' effects and it poses challenges for poverty targetting that have yet to be fully met. Moreover, the onset of crisis has meant that 'trickle-down' effects have effectively dried up and that challenges must be met in an environment of reduced government expenditures and reduced room for manoeuvre. Against this background, Thailand is called upon to open and write a new chapter in its ongoing efforts to reduce poverty and further raise the living standards of its 61 million people.

Non-Income Poverty: An Assessment of Human Deprivation (Chapter 3)

A special methodology is presented in the report that sets out to measure the extent of non-income poverty in Thailand. This methodology is based upon the compilation of eight different indices covering per capita and household incomes, employment, health, education and human resources development, housing and the environment, transport and communications, access to consumer durable, and the relative position of women. These eight indices are combined into a single index, referred to as the Composite Index of Human Deprivation (IHD). The Index measures human deprivation on the range of 0-1, with zero implying the absence of deprivation and 1.0 the maximum deprivation. The indices are based upon 48 different indicators that measure disparities existing at the provincial level. Inter-provincial disparities are shown by the report to range from less than 2:1 in the case of, for example, the average number of persons per sleeping room and the percentage of households with access to a bicycle, to more than 100:1 in the cases of the percentage of households without access to electricity, the percentage of the housing stock in non-permanent building materials, and the incidence of sexually-transmitted diseases, to more than 200:1 in the case of the percentage of the population without formal education and the incidence of malaria.

The Composite Index, which brings together the 48 indicators, reveals that, on a scale of 1-10, the majority of provinces are around 4 times more deprived and disadvantaged than the least affected province, with the 'gap' between the most and least deprived and disadvantaged provinces increasing to around 6:1. The Composite Index also reveals that the most deprived and disadvantaged provinces are fairly equally divided between the Northern, Northeast and Southern Regions. However, when the relative populations of the provinces are taken into account, the Northeast Region emerges as the most deprived region, with some 7.4 million persons, or 39 per cent of the total population, living in deprivation, followed by the Northern region with 4.7 million people (36 per cent) and the Southern Region with 2.7 million (35 per cent). Overall, 14,795,000 persons are to be found in provinces that emerge from the survey as the most deprived and disadvantaged. This accounts for one in 4 of all Thais.

The 10 highest IHD scores or the most deprived provinces are Tak (0.703), Mae Hong Son (0.669), Kamphaeng Phet (0.632), Nakhon Sawan (0.594) and Chiang Rai (0.571) in the Northern Region, Surin (0.681), Nong Khai (0.588), Buri Ram (0.582), Sisa Ket (0.580) and Sakhon Nakhon (0.574) in the Northeast Region, and Phattalung (0.571) in the Southern Region. The 10 least deprived provinces are all to be found in the Bangkok Vicinity, Central and Western Regions.

The number of persons estimated as living in a high degree of deprivation is far higher than the number estimated as living in income poverty (below the poverty line). If it is assumed that a score of 0.500 on the Composite Index of Human Deprivation equates with a 'human deprivation line', then more than twice as many persons live in deprivation than suggested by the measure of income poverty alone. While this comparison may not be entirely watertight, it is sufficient to suggest that the extent of human deprivation in Thailand is far more widespread than is suggested by the extent of income poverty. This deprivation is, moreover, to be found throughout the nation.

The variations existing in relative standards of well-being within Thailand are confirmed by the calculation of Human Development Indices (HDI) for each region using the methodology advocated by UNDP. The HDI is a synthetic index of a nation's overall level of development, being composed of three main indicators covering life expectancy at birth, educational attainment (measured by a combination of adult literacy and combined first, second and third level gross enrollment ratios) and the standard of living as measured by an adjusted measure of real GDP per capita. The index is expressed on a scale of zero to one, with 0 representing the worst possible case and 1 the best possible case.

Although based on only four indicators, the calculation of regional HDIs gives results that closely approximate those obtained for the regional indices on the Composite Index of Human Deprivation. Five regions - Bangkok, Bangkok Vicinity, and the Central, Eastern and Western Regions all have HDIs above 0.800, with Bangkok and the Bangkok Vicinity both scoring 0.912. The remaining three regions - the Northeast, Northern and Southern Regions - all have HDIs below 0.700, with the Northeast Region recording the lowest figure of 0.655.

The Crisis and its Impacts on Human Development (Chapter 4)

The report takes a detailed look at the crisis and its impacts on human development. It examines the causes of the crisis, government responses to the crisis as well as impacts on employment and wages, incomes, health, education and human resources development, social relations, women, children and the environment. The analysis reveals that the crisis has impacted severely on all these components of human development. In numerous areas, the crisis has not only brought an end to a sustained period of improvement but is also seriously eroding progress recorded over the past decade.

The negative impacts of the crisis are defined to include a sharp increase in unemployment, greater underemployment, reduced wages, an increase in poverty (including a sharp rise in the number of very poor people), reduced access to health services, a reduction in the quality of health services, distortions in the use of health infrastructure, increases in school dropouts, the reduction in access to overseas training, a deterioration in the quality of basic education, underutilized private educational infrastructure, increased graduate unemployment, growing evidence of family and community breakdown, increased crime rates, an increase in drugs trafficking, a deterioration in the position of women and a reinforcement of gender biases, an increase in the incidence of malnutrition among children, the growth of child labour and child prostitution, a higher incidence of child abandonment, and greater stresses and strains on the natural environment. Overall, livelihoods have become more uncertain and threatened, social capital is being eroded, vulnerable groups have become more vulnerable, and women have lost ground. All these consequences provide genuine cause for concern.

However, the impacts of the crisis have not been entirely negative. At the aggregate level, the crisis has provided further tangible evidence of the cohesion, harmony and unity existing in Thai society, the strength of traditional family and community ties, and the robustness of coping mechanisms in times of stress. All this has ensured that the social impacts of the crisis have been far less pronounced than in some other countries in the region. While the crisis has brought centrifugal forces that are causing some countries to unravel at the seams, harmony and unity have propelled centripetal forces in Thailand that have enabled the country to far better weather the storm.

The report chooses to stress the positive effects of the crisis in three main areas:

First, the crisis has led many to question part of the orthodoxy that has underpinned mainstream development strategy, leading increasing numbers of experts and laypersons to search for alternatives outside the mainstream. It has certainly contributed to a reassessment of the role of agriculture and rural areas in national development strategy and their contribution to overall levels of well-being and welfare in a nation that is still predominantly rural. Rural development issues are today receiving far greater attention and the tradition of self-reliance and self-sufficiency that has long been practised by villages in many parts of Thailand is being subjected to detailed examination to distil relevant lessons for the future.

Second, the crisis has not only demonstrated the robustness of traditional coping mechanisms, it has also fostered greater self-reliance and self-sufficiency among local communities in both urban and rural areas. Communities that are well-managed and self-regulating have been particularly successful in coping with the crisis. Their success in responding to the challenges posed by economic difficulties has helped to instil in them a new sense of confidence and entrepreneurship, which is reflected in a wide range of initiatives. These new initiatives are not only making local communities less dependent but also more assertive, giving new meanings to the traditional understanding of social capital.

Third, the crisis did not bring an unconstitutional political change as it might once have done, but it has brought a silent revolution that may prove even more significant in the long run. The civil society movement has gained strength from the crisis and this strength is reflected in the vigorous pursuit of the reform agenda established by the new Constitution. These forces appear irreversible and will no doubt accelerate trends already in evidence prior to the crisis towards the further democratisation of development. In this context the crisis has created a fertile breeding ground for many civil society initiatives. These initiatives would have been far less numerous without the crisis. The seeds planted will flower in the years ahead and their benefits may prove to be far greater and even more significant in the longer term than any reorientation of economic development strategy.

Human Development, the Crisis and the Challenges of Globalization (Chapter 5)

The report examines the relationships existing between human development, the crisis and globalization. It takes the view that it is impossible to explain progress in the field of human development without reference to globalization. But because globalization is a double-edged sword, it is also impossible to explain both the speed at which the crisis struck and the severity of its impacts without similar reference to globalization. Globalization is thus an important factor in understanding the past as well as options for the future. Globalization must be seen in its proper context of both potentials and threats and as a means for advancing human welfare and development and not as an end in itself. Seen in this context, the challenge is one of maximising its positive effects for human development and minimising its negative impacts.

Thailand's experience with globalization is examined under five main headings covering the economic, labour and employment, gender, social and cultural, and environmental dimensions. Three conclusions are regarded as particularly disturbing.

First, the benefits of globalization have been unequally shared. Globalization can be shown to be without inbuilt mechanisms that make it sensitive to such principles as social justice, equality and redistribution. If left to its own devices it confers the greatest benefits on richer, better educated and urban groups, while marginalising the disadvantaged, which must be defined to include women. Corrective measures are required and the formulation and implementation of such measures imposes an obligation on governments in an age of globalization.

Second, Thailand's experience shows that the forces that drive the process of globalization can contribute directly and very tangibly to crisis as well as ensure that when it occurs the crisis can be sudden and severe, eroding almost overnight progress in the field of human development painstakingly built up over decades. Such a crisis is much more than a statistical aberration. It has very deep long term social and psychological consequences. Globalization poses great challenges to informed decision-making which, given the many dimensions, must go well beyond traditional concepts of prudent macroeconomic management.

Third, the terms and conditions of integration are likely to shift in directions that will be less favourable to countries like Thailand, reducing rather than enlarging the nation's room for manoeuvre in the years ahead. New multilateral agreements, such as the rule-based system of international trade with WTO at its core, are demonstrably more responsive to the priorities and interests of nations with large MNCs than smaller trading nations. These agreements will not only work to the advantage of large trading nations but also impose restrictions on the domestic policy options open to countries like Thailand. This will impact on prospects for human development.

Beyond the Crisis: The Policy and Reform Agenda (Chapter 6)

UNDP is not alone in seeing in the crisis a defining moment in Thailand's history and a watershed opportunity for reflection, new initiatives and reform. Times of crisis establish an opportunity as well as the need to address structural impediments to sustainable human development and to develop and streamline the institutions and instruments that are required to underpin it. Thailand's past achievements provide testimony to its capacity to periodically reinvent itself in ways that mobilise its assets and resources and take advantage of opportunities. The crisis provides another - and the most important - test of this capacity.

The process of reinvention is able to draw upon some very tangible assets. These are much broader - and ultimately more important - than economic ones. They include an understanding of development, firmly embodied in the Eighth Plan, that puts people first. They include a vigorous and active civil society that facilities the democratisation of development and promotes social justice. They include a new Constitution that has the power to change the relationship existing between the state and the people and which establishes a new framework for co-operation, participation and empowerment. These assets are not mutually exclusive. They are self-reinforcing, together creating new opportunities to build development that is people-centred, broadly based, and founded on the rule of law. The review of human development, the crisis and the forces of globalization lead to the identification of strategic priorities for the policy and reform agenda. These priorities can appropriately be grouped under three main headings covering overall directions for human development, development strategy, and policy instruments.

Future Directions

Overall directions for development are pre-eminently concerned with the principles that underpin development strategy and give expression to national aspirations in the field of human development. The analyses contained in this report underscore the importance of commitments in respect of democratisation, decentralisation, participation, social and cultural capital, and the challenges posed by globalization.

Priority 1: **Maintaining the commitment to democratisation.** The new Constitution establishes an enormous opportunity for further progress in restructuring the relationships between the state and civil society, in further democratising the development process, and in creating new institutions and mechanisms that provide for greater accountability, transparency, representation and participation. Initiatives in these areas can be rooted in law and guided by far-reaching principles pertaining to basic human rights. It is of the utmost importance that these opportunities be seized to the full and remain central issues in the policy and reform agenda. Their full and effective utilisation will allow civil society organisations to further flourish and to serve as a positive force for change as well as enable them to serve still more effectively as a countervailing force against the negative impacts of globalization.

Priority 2: **Maintaining the commitment to decentralisation and empowerment.** The crisis has demonstrated the importance of initiatives that are able to expand opportunities for individuals and communities to directly influence the decisions that have a powerful bearing on their lives and livelihoods as well as decisions on development choices for the Kingdom as a whole. Such initiatives are wholly consistent with the further democratisation of development and should be vigorously pursued. They significantly expand opportunities for the formulation and implementation of local level and location-specific responses to the crisis, ensuring that they are rooted in the lives, problems, perceptions and priorities of people, and enabling them to exercise responsibilities that were formerly in the hands of others. Decentralisation initiatives not only empower local communities, they also establish a countervailing power at the grassroots level that is able to resist some of the negative forces of globalization.

Priority 3: Building social and cultural capital. The policy and reform agenda must include a re-examination of the nation's approach to social development, with the need to think as much in terms of social capital as financial capital. The development of social capital must seek to consolidate the ties that have traditionally bound together families and communities, the strength and importance of which have been demonstrated by the crisis. Emphasis on social capital must include still more determined efforts to develop social safety nets and systems of social security, the importance of which have also been highlighted by the crisis. They must also be reflected in still greater determination to safeguard and actively promote the Kingdom's rich cultural heritage and the value systems upon which it is built and to which it gives expression. The articulation of a cultural imperative is essential for the maintenance of a distinct identity in an age of globalization and for resisting the powerful forces that contribute to both cultural alienation and cultural homogenisation.

Priority 4: Responding to the challenges of globalization. Strategies that seek to promote human development cannot be indifferent to globalization. They must take more fully into account the forces that are driving it as well as their consequences. Thailand has used a variety of policy instruments to create the conditions for integration in a globalizing world economy and there are few developing countries that are today as fully and effectively integrated. This integration has brought both blessings and burdens - global 'goods' as well as global 'bads'. The key issues concern the terms and conditions of integration and the importance of measures that maximise the benefits of integration and minimise the negative impacts. The terms and conditions of integration are in future likely to work increasingly to the disadvantage of Thailand as new multilateral agreements take effect that will limit rather than expand Thailand's room for manoeuvre. Because they will impose restrictions on domestic policy choices, including choices that impact on human development, it is of the utmost importance that the changing terms and conditions be continuously appraised and evaluated.

Strategies for Promoting Human Development

This report has identified a number of key areas in which development strategy is in need of review if human development is to be placed on a more sustainable path. These areas include growth strategy, gender biases, human resources development, and the environment.

Priority 5: Fostering pro-poor growth. In the area of economic policy, the first priority must be the reactivation of growth in general and exports in particular since these have provided the motor that has driven improvements in incomes, welfare and well-being. They are able to do so in the future. However, experience shows that the understanding of growth and its place in development must be further refined to make development strategy even more sensitive to issues of equity and distribution and to the negative impacts of globalization, which include forces that, without corrective measures, are able to marginalize the poor and disadvantaged. Growth that promotes human development is pro-poor growth. Pro-poor growth calls for a rediscovery and revitalisation of agriculture, especially smallholder agriculture, and the correction of a bias in development strategy that has tended to favour urban-based, export-oriented manufacturing. It is only recently that efforts have been made to repair this neglect and already there is evidence that the efforts are contributing to improvements in income distribution. These efforts must be intensified as a matter of deliberate policy and they are able to draw upon the inspiration provided by His Majesty The King.

Priority 6: Correcting gender biases. The policy reform agenda must address other biases. Of these, gender biases deserve special attention. In periods of high economic growth these biases often remain hidden, only coming to the surface when recession strikes and the forces endemic in globalization expose unequal opportunity, the disadvantages, vulnerabilities and insecurities of women, and the many impediments to their full emancipation. One of the misconceptions potentially most damaging for human development prospects after the crisis is that Thailand is without a 'gender problem'. While less pronounced than in many other developing countries, it is taking on new and more virulent forms as a consequence of globalization, while the crisis itself has tended to reinforce traditional perceptions of the division of labour between men and women. It is an iceberg, most visible in bad rather than good weather, on which sustainable human development could run aground.

Priority 7: Improving the quality of human resources. The crisis has highlighted structural weaknesses in the nation's human resources. If Thailand is to compete in international markets and the opportunities of Thais are to be expanded, priority must continue to be given to upgrading the nation's human resources and to deepening and broadening the knowledge and skills base. Fully recognised by the government, the new Education Bill would restructure the nation's educational system and should make it possible to achieve qualitative improvements in basic education. These improvements will impact positively on all aspects of development. It will greatly facilitate the technological upgrading of the nation's industrial base, helping to unlock the creativity, imagination, ambitions and entrepreneurship of the Thai population, thereby enlarging the basis for sustainable increases in prosperity and well-being. No less importantly, it will be instrumental in enabling all Thais to achieve their full and innate potentials as human beings, which is and will remain the keystone of human development.

Priority 8: Addressing the environmental crisis. The natural environment is under sustained attack and rates of natural resource depletion are in some areas unsustainable. The economic crisis is paralleled by an environmental crisis that is undermining the basis for sustainable development and having measurable impacts on the health of men, women and children in both urban and rural areas. Although a silent and in some respects an invisible emergency it nevertheless forms an integral part of the nation's development predicament. Efforts to address the emergency must be broadened and deepened and supported by legal instruments that exist in practice as well as theory as well as by educational and awareness campaigns that highlight the importance of the environment for the well-being and welfare of the Thai population. No less important, these efforts must recognise that environmental degradation has part of its origins in poverty and inequality, with some of the agents of environmental destruction the last link a long chain of exploitative relations who have nothing left to exploit but themselves and nature. This has major implications for pro-poor growth and welfare and redistribution policies.

Policy Instruments

Strategy development must be supported by the development and application of improved policy instruments. This report has identified numerous priorities in this area. Principal among them are: (i) the strengthening of capacities for the management of development and of a process of economic and social transformation that is becoming substantively more complex; (ii) the development of well-being indicators that enlarge the basis for the monitoring of progress towards sustainable human development; and (iii) improved methodologies and procedures for resource allocation aimed at addressing poverty and deprivation and expanding opportunities.

Priority 9: The more effective management of the transformation process. One of the main challenges confronting Thailand in the years ahead is the management of a development and transformation process that is becoming substantively more complex. The drives towards decentralisation, participation and empowerment as well as the imperatives of more balanced and equitable development have only served to highlight weaknesses in the nation's capacity to manage the development process. The extent to which this challenge is met can be expected to determine the extent to which many other challenges are successfully addressed. The crisis has also underscored the importance of a range of resource-related issues. They include access to resources, the use and management of resources, and the mobilisation of resources. There is sufficient evidence to support the view that available resources have in the past not always been used efficiently, especially in the social sectors, and that it is possible to achieve more with less. Strengthened capacities for the management of development also call for the development of the information systems required to support informed analysis and decision-making. The crisis has highlighted deficiencies in the information systems required for purposeful and timely policy analysis and for monitoring the impacts and effects of corrective and remedial measures.

Priority 10: The development of well-being indicators. The development of information systems must be accompanied by the further development of policy-relevant development indicators. Human development is a concept that has many dimensions. Globalization and the crisis have impacted on many of them, sometimes in counter-intuitive ways. The active promotion of human development requires the development of monitoring systems that make it possible to assess the impacts of interventions, the effectiveness of targetting strategies and, more generally, the measurement of progress in the direction of sustainable human development.

Priority 11: Improved methodologies and processes of resource allocation. Revised methodologies are required for the allocation of resources to provinces and other sub-national authorities on the basis of more integrated assessments of needs, disadvantage and deprivation. As shown in Chapter 3, there appears to be considerable scope for further innovation in this area, with the analyses undertaken supporting the contention that human deprivation is far more widespread in Thailand than might be assumed from poverty data and this is inadequately reflected in resource allocation procedures. A first priority is to develop a new methodology that is comprehensive in scope and orientation and which is able to capture more of the dimensions of human development. This methodology should also establish a strategic framework for integrating data available from a wide range of sources as well as establish the basis for future data collection and processing initiatives. The indicators used should also be 'crisis responsive' and make it possible to assess not only the impacts of the crisis but also the effects of policy measures aimed at ameliorating negative impacts.

Together, the above constitute a formidable policy and reform agenda. UNDP has no doubt that Thailand is able to respond to it. Although the last few years have been difficult ones that have witnessed erosion of confidence in the future, the nation has both the assets and determination to recover lost ground and to rebuild and reinvent itself. The process of rediscovery and reinvention is able to draw upon assets that, like a commitment to democracy, an active civil society, and the stability and unity that contribute to the formation of a broad-based consensus on the purposes and directions of development, are not always found in developing societies. If Thailand is able to make full use of these assets, the next few years may see more than the nation's re-emergence. It may mark a turning point that today's children will learn to recognise as one of the Kingdom's finest hours.

Introduction

Aims and Scope of the Human Development Report of Thailand 1999

This is the first Human Development Report of Thailand. It is being prepared at a time that, in retrospect, will undoubtedly come to be regarded as a defining moment in Thailand's history. Drafting coincides with the most severe crisis ever experienced by the nation. It is a crisis that is being felt in almost all households, in all sectors, and in all corners in the nation. It is a crisis that has numerous and profound implications for human development and it necessarily provides the backdrop for the contents of this report. Against this backdrop, the report has a three-fold purpose:

- First, to review the progress recorded by Thailand in the field of human development and to document both achievements and challenges;

- Second, to identify the impacts of the crisis on human development and prospects for human development on the threshold of a new millennium;

- Third, to identify the main elements of a policy and reform agenda that can place the nation on the path of sustainable human development.

The leitmotif for the report is thus human development. It provides the lens for the analysis of crisis and for recommendations on the way ahead. Human development, strongly advocated by UNDP, is a concept of development that places human beings at the centre of all development efforts and defines development as a process that enables them to achieve their full and innate potentials as sentient human beings. It is a multi-dimensional concept that distinguishes between ends and means, with such notions as economic growth regarded not as an end in itself but as a means for achieving higher ends that are derived from an understanding of the well-being and welfare of people and the quality of their lives. It is a concept of development that is closely allied to the concept elaborated for Thailand in the Eighth National Economic and Social Development Plan.

The National Human Development Report fits into a tradition of independent analysis that can be traced to the first Human Development Report that was published by UNDP in 1990. A Human Development Report has been published annually since then, with each report having a thematic orientation.[1] The publication of these global reports has been followed by the publication of national reports that also take human development as their starting points and which are often thematic in character.

[1] The themes have been the measurement of human development (1990), the financing of human development (1991), the global dimensions of human development (1992), popular participation (1993), human security (1994), gender and human development (1995), economic growth and human development (1996), human development to eradicate poverty (1997), consumption and human development (1998), globalization with a human face (1999).

Since this is the first Human Development Report of Thailand, it has been decided not to restrict coverage to a particular theme but rather to cast the human development net wider to capture more of its many components and dimensions. However, it was also recognized that the value of the report in Thailand would be enhanced by the decision to devote additional attention to issues that are central to the policy and reform agenda. These issues are defined to include poverty and strategies aimed at addressing deprivation and disadvantage at a time of severe economic difficulties.

Structure of the Report

The report is composed of six chapters that are divided into two main parts. Part I, consisting of the first three chapters, provides an overview of human development achievements and challenges as well as a more detailed analysis of patterns of income poverty, deprivation and disadvantage. Chapter 1 reviews three decades of development from the particular vantagepoint of human development, noting progress as well as problems that have yet to be fully addressed. Chapter 2 is devoted to a review of income poverty, being principally concerned with three main questions: what is the extent of poverty and the main trends in poverty reduction; which groups are the poorest and where are they to be found; and what is the extent of and trends in income inequality. This chapter draws extensively upon published data, especially the data available in the Socio-Economic Surveys. Chapter 3 looks in detail at other aspects of deprivation and disadvantage. It presents an approach for the systematic analysis of deprivation and disadvantage based upon a integration of individual indices covering income, employment, health, education, housing and environment, transport and communications, access to consumer goods, and gender into a single composite index of deprivation and disadvantage based upon 48 different indicators that is calculated at the level of individual provinces.

Part II focuses on the crisis and the policy and reform agenda. Chapter 4 is devoted entirely to the crisis. It includes a review of its causes, policy responses to the crisis, and a review of its impacts on employment and wages, poverty, health, education, social relations, women, children, and the environment, drawing upon a wide range of sources of data and information. Chapter 5 examines the relationships between human development, the crisis and globalization, with the latter topic providing the theme of the 1999 Global Human Development Report. The review focuses on the economic dimensions, labour and employment dimensions, gender dimensions, social and cultural dimensions, and the environmental dimensions of globalization in Thailand. Chapter 6, the final chapter, is devoted to the human development policy and reform agenda after the crisis, providing a framework for bringing together the findings and positions of individual chapters.

The report is supported by a Statistical Annex that presents in tabular form the data used for the calculation of the indices.

Human Development 1966-96: Three Decades of Progress

I. INTRODUCTION

Until the advent of the financial and economic crisis that erupted in July 1997, Thailand appeared well set on a path that would enable it to cross the threshold of a new century with confidence and high expectations. The crisis has eroded this confidence and, as this report is written, the Kingdom is seeking to find ways out of its predicament. However, the difficulties that currently beset the nation should not be allowed to detract from three decades of progress that have witnessed the economic transformation of the nation and significant increases in the levels of well-being and welfare of the vast majority of Thailand's 61 million people. This chapter briefly reviews this progress as well as some of the costs it has entailed.

II. THE MACRO FRAMEWORK

The motor that has propelled the nation forward has been a prolonged and sustained period of private sector-led economic growth, fuelled by high levels of foreign investment, with GDP increasing at an annual average rate of 7.6 per cent in the period 1977-96, more than five times the rate of population growth. Interrupted only in the mid-1980s due mainly to an oil price 'shock', the rate of growth peaked at an exceptionally high 12 per cent in 1989, falling back to a more sustainable 7-8 per cent per annum, a growth rate that persisted until the advent of the crisis. The strong growth performance, matched by few other developing countries, was, until well into the 1990s, facilitated by prudent macroeconomic management that kept inflation below 5 per cent per annum, rewarded entrepreneurship, and enlarged the attraction of Thailand as a centre for foreign investment.[1]

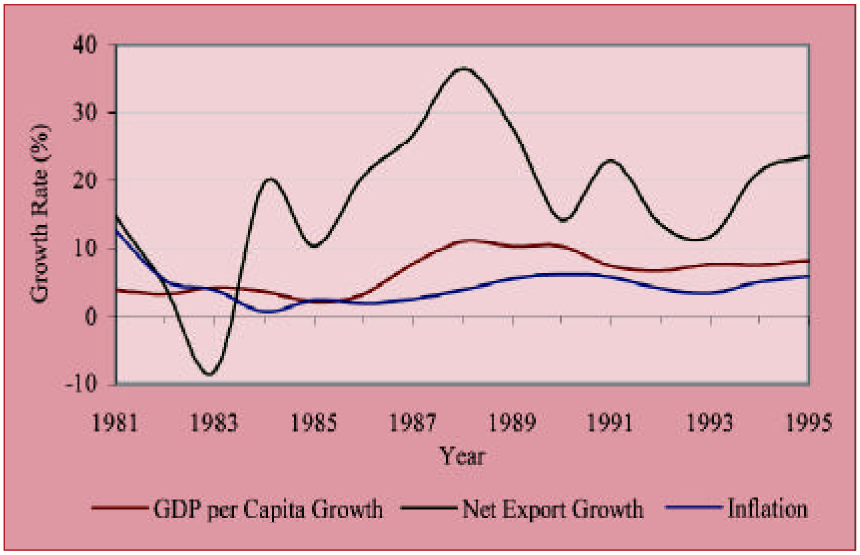
The past three decades have witnessed a profound change in the structure of Thailand's economy. The change process has been driven by an evolving understanding of the Kingdom's place in the region and the world and of its comparative advantage. In the 1960s and 1970s, a period in which infrastructure development benefitted from the Vietnam War, this advantage was seen to reside in the field of agriculture in general and export-oriented cash crop production in particular, with expansion made possible by the nation's considerable land reserves, the main feature of its natural

[1] See A. Siamwalla and O. Sobchokchai, Responding to the Thai Economic Crisis, UNDP Working Paper, UNDP, Bangkok, 1998.

resource endowment. Although Thailand remains a major agricultural producer - it is the world's largest exporter of rice and rubber - the advantages enjoyed in the field of agriculture were gradually eroded by the rapid occupation of available land by farmers, which made the land surplus much less abundant, and by a deterioration in its export performance.

Figure 1.1

Indicators of Macroeconomic Performance, 1981-95

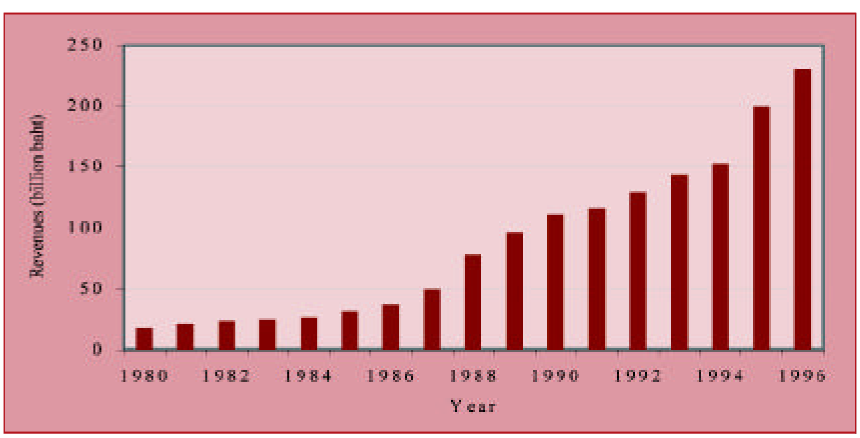


Source: NSO, National Income Accounts
Bank of Thailand, Monthly Bulletins

By the mid-1980s, it had become necessary for Thailand to redefine its comparative advantage and reexamine its place in the world economy. The advantage was understood to reside in export-oriented manufacturing, with labour to be drawn predominantly from rural areas which, during part of the 1980s, were experiencing an agricultural depression. Macroeconomic policies were skillfully used to foster the conditions required for export-led growth, paving the way for the boom in manufacturing exports that was to last from the mid-1980s to 1996. These policies took clear advantage of the location of industries in East and Southeast Asia that followed the appreciation of the yen. As shown in Figure 1.1, from the mid-1980s onwards exports grew at an annual average rate consistently above 10 per cent, reaching extraordinary levels at the height of the economic boom in the late 1980s and early '90s. Figure 1.1 provides evidence of the correlation existing between export growth and per capita GDP growth.

Figure 1.2

Growth in Revenues From Foreign Tourism



Source: Bank of Thailand, Monthly Bulletins

To this positive export growth performance must be added the positive stimulus to growth provided by the rapid expansion of service industries. This was especially the case with tourism that also 'took off' in the mid-1980s. The number of foreign tourists more than doubled in the period 1985-1993, from 2.4 million to 5.8 million. As shown in Figure 1.2, the growth in revenues from tourism has been even stronger, jumping from Bt 31.8 billion in 1985 to Bt 142.8 billion in 1993, since when they continued to climb to reach more than

Bt 230 billion in 1996, a nine-fold nominal increase in a period of little more than a decade. The 1996 figure was, by way of comparison, equivalent to 10 times the amount devoted by the government to urban development in the same year.

The high growth rates in manufacturing and services placed mounting pressure on available infrastructure. Investments in physical infrastructure - telecommunications, power, roads and civil aviation - further contributed to sharp increases in the Kingdom's gross capital formation. Poised to join the 'tiger economies' of East Asia, Thailand was increasingly heralded as an example for other developing countries to emulate.

III. REVIEW OF HUMAN DEVELOPMENT PERFORMANCE AND ACHIEVEMENTS

1. Incomes and Poverty

Thailand's approach to development has provided evidence of the benefits of rapid economic growth and its positive impacts on incomes. Annual GDP per capita growth rates increased sharply from the mid-1980s, reaching double digits in the three-year period 1988-90, after which they remained at between 6-8 percent until 1997. Overall, per capita GNP increased from Bt 1,600 at the time of the launching of the First National Economic Development Plan in 1961 - a figure that at the time was below the level of several Sub-Saharan African countries - to reach Bt 76,435 at the end of the Seventh National Economic and Social Development Plan, an increase of 47 times in nominal terms in the space of 35 years.

This growth translated into sharp reductions in the level of poverty. NESDB figures based on the headcount ratio reveal that, with the exception of a brief pause in the mid-1980s, the incidence of poverty has progressively declined, falling from 32.6 per cent in 1988 to 11.4 per cent in 1996. During this period the number of people living below the poverty line was more than halved, from 17.9 million to 6.8 million. Other analyses have conclusively shown that the recorded decline cannot be attributed to the redefinition or manipulation of poverty lines. The decline is measurable regardless of the poverty line used; it has been both real and sustained.[2] Although reductions in poverty have been achieved throughout the Kingdom, they appear to have been particularly marked in well-organized communities (see box 1.1).

2. Human Capital Formation

This growth has not only brought increased prosperity to the people of Thailand; it has also been accompanied by considerable progress in the social fields. Virtually all of the indicators traditionally used to measure social development have recorded marked improvements in the past three decades, with the pace of improvement closely matching overall growth performance. The reduction in population growth rates and fertility levels has greatly facilitated the progress. A

[2] For a review of trends in income poverty, see Chapter 2.

Box 1.1

Confronting Poverty

Experience in Thailand has shown that some poor and disadvantaged communities have been more successful than others in overcoming the economic and other constraints associated with poverty. It also indicates that success is closely correlated with the following:

- The existence of high degree of participation by villagers in community organisations.
- The existence of active women's organizations and strong participation of women in community organizations.
- The existence of community-managed savings and loan groups as an alternative source of community capital.
- The sharing of knowledge and experience through activity groups and livelihood networks.
- The existence of a diligent attitude to livelihood activities.
- Concrete activities that protect the local environment through conservation measures and less harmful occupational practices.
- Less capital intensive forms of agriculture.
- High priority to crop production for direct consumption.

Source: United Nations Resident Coordinator System, Common Country Assessment, Bangkok, 1999

National Population Policy was adopted as early as 1970, a time at which the total fertility rate stood at around 5. It set out to achieve a rapid reduction in the rate of population growth. From the Third Plan onwards, qualitative targets were added to quantitative ones, with programmes that stressed not only family planning but also reproductive health, food and nutrition, public health and human resources development. Such concerns as migration and the position of women and children were later included as integral concerns of population policies. The rate of population growth has now fallen to 1.1 per cent per annum, less than a third of the 1960 figure, and fertility to 1.98, giving Thailand a growth rate that is below the replacement level. Married couples make conscious decisions on family size, reflected in a contraceptive prevalence rate above 70 per cent, compared with around 50 per cent in 1980, although such decisions are not yet within the realm of sexually active adolescents and young people.

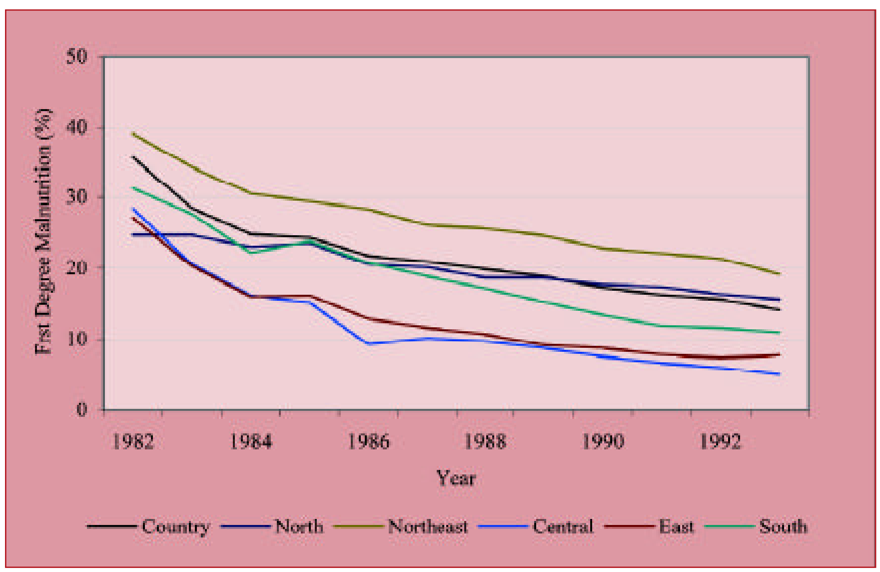
The declining rate of population growth has positively impacted on Thailand's employment situation. In the 1990s the labour force grew by only 1.5 per cent per annum - half the rate of the early 1980s - while employment has grown at a far faster pace. This has made it possible for Thais, even with low levels of educational attainment, to find productive employment. The open unemployment rate (defined as those without a job and actively looking for work) has remained below 1 per cent since 1988, while the total unemployment rate (defined as those without work but not actively seeking it) has been below 2 per cent since 1992. Although these levels of employment disguise low levels of productivity and underemployment especially in the agricultural sector, they indicate that Thailand achieved a situation of virtually full employment in the mid-1990s. This created labour shortages in both high and low skill occupations, making Thailand a focal point within the sub-region for international migration. Estimates of the number of foreign workers in Thailand vary considerably, ranging from 760,000 to 1,260,000, although it is widely accepted that the number of foreign workers has doubled in the past few years. The overwhelming majority of these foreign workers, drawn mainly from Myanmar followed by Lao PDR, Cambodia and even China, are illegal.

Marked improvements have been achieved in the field of health.[3] The key to this reduction has been the progressive development of a national system of preventative and curative health care that today penetrates into the most inaccessible corners of the Kingdom. Health infrastructure is composed of 92 secondary and tertiary care hospitals, each with up to 1,000 beds and staffed with a range of specialists, 679 district hospitals each with 2-5 general practitioners and up to 100 beds, 8,000 health centres - one in every tambon - and Village Health Posts in almost every village, with Village Health Communicators who report on the health problems encountered within the village. To this must be added the specialized national hospitals and institutions concentrated in Bangkok as well as more than 1,500 private hospitals and clinics.

The development of this decentralized system has made it possible to achieve remarkable improvements in the health of the Thai population. These improvements are reflected in sharply reduced infant mortality, child mortality and maternal mortality rates, all of which have been halved in the past decade, and in life expectancy, which has increased by 10 years since 1970, bringing it to around 70 years, one of the highest figures in the sub-region. Many of the communicable diseases that once claimed the lives of the majority of Thais have been eradicated or brought under control, with transmission rates near zero, facilitated by near universal child immunization. Today, mean caloric consumption equals caloric requirements. Third degree malnutrition, the most severe form of undernourishment, among children has been eradicated and, as shown in Figure 1.3, significant reductions have been achieved in first degree malnutrition in all regions and which today affects less than one in ten children compared with one in three in the 1980s. In addition, far larger numbers of Thais today have access to potable water, safe sanitation and electricity, all of which have greatly added to overall levels of welfare and well-being. These developments have given Thailand a morbidity pattern that has more in common with that of an industrialized rather than a developing country (see box 1.2).

Figure 1.3

Incidence of First Degree Malnutrition in Children Under Five Years of Age by Region, 1982-93



Source: NSO, Social Indicators

Similarly in education, the past three decades have witnessed a significant broadening and deepening of the Kingdom's educational system, building on a recognition of the importance of education that dates back

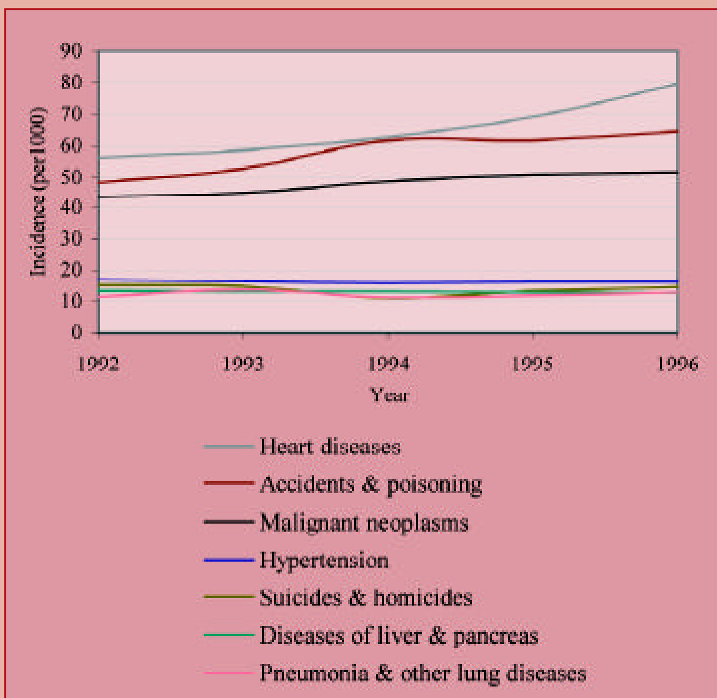
[3] The following sections on health and education draw upon Sirilaksana Khoman, 'Education and Health', paper presented to the Fifth Convention of the East Asian Economic Association, Bangkok, 26-27 October 1996.

100 years and to the reign of His Majesty King Rama V. As shown in Figure 1.4, there has been sharp growth in enrollment ratios in all types of education. Primary education has become the basic right of virtually all Thai children, with nearly 98 per cent of the relevant age group attending primary school in 1996 compared with only two out of three in 1970. Particularly noteworthy has been the very rapid growth in pre-primary education, impossible without the required infrastructure, that has not only enabled more women to pursue work outside the home

Box 1.2

Changing Morbidity Pattern

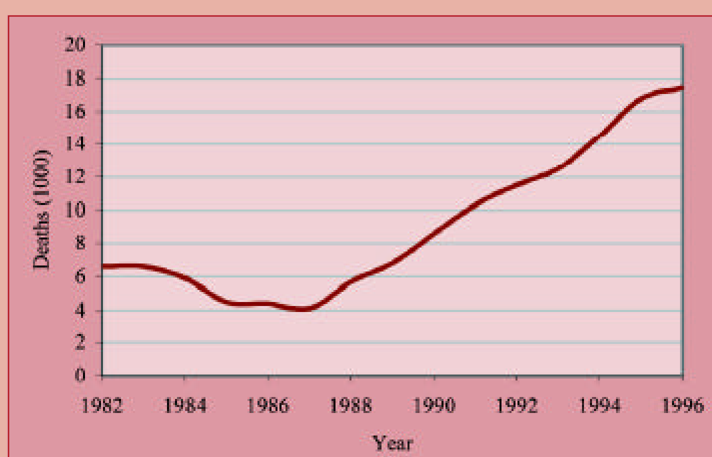
Leading Causes of Death, 1992-96



Thailand no longer has the morbidity pattern of a developing country. The leading causes of death approximate those of an industrial-ized country. Heart disease, cancers, hyper-tension and diseases of the liver and pancreas figure most prominently among the leading causes of death. As shown here, the incidence of heart disease has grown most rapidly, with the incidence rate increasing from 56 per thousand to 80 per thousand in the five-year period 1992-96.

A particularly striking feature of Thailand's morbidity pattern is the prominent place occupied by accidents, accidental poisonings, suicides and homicides. Accidents and poisonings are the second most important cause of death, while suicides and homicides occupy the fifth place.

Deaths from Traffic Accidents, 1982-96



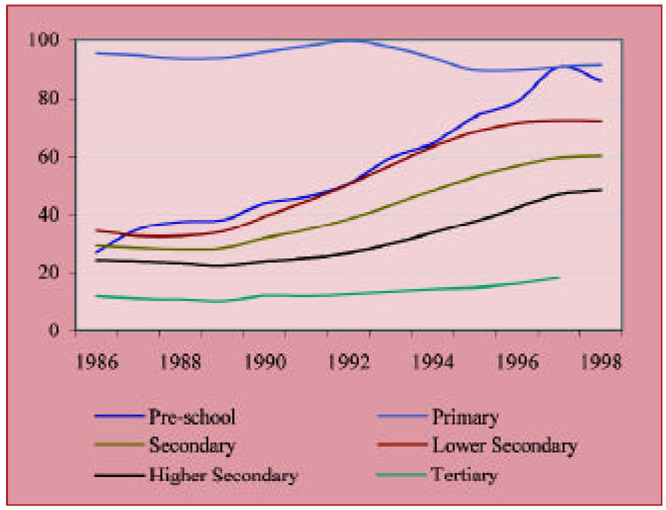
Deaths from traffic accidents have grown particularly rapidly and this growth seems inextricably linked to the speed of the nation's economic trans formation. The 'take off' date for deaths from traffic accidents is the same as the take off date for the Thai economy. The same applies to industrial accidents, with the number of reported cases reaching more than 230,000 in 1997 compared with around 55,000 a decade earlier.

in especially urban areas but also facilitated learning at a early age. Noteworthy also has been the increase achieved in recent years in the transition rates from primary to lower secondary school (see box 1.3). Progress in the general field of education and human resources development finds expression in the adult literacy rate. At 98 per cent, it is among the highest in the region, particularly in terms of female literacy.

The sharp growth in its revenue base has enabled the government to make major financial commitments to the social sectors. These commitments have extended far beyond the health and education sectors. They also cover the progressive development of a system of social security and the provision of social safety nets. Initiatives in this area have been particularly numerous. They have

Figure 1.4

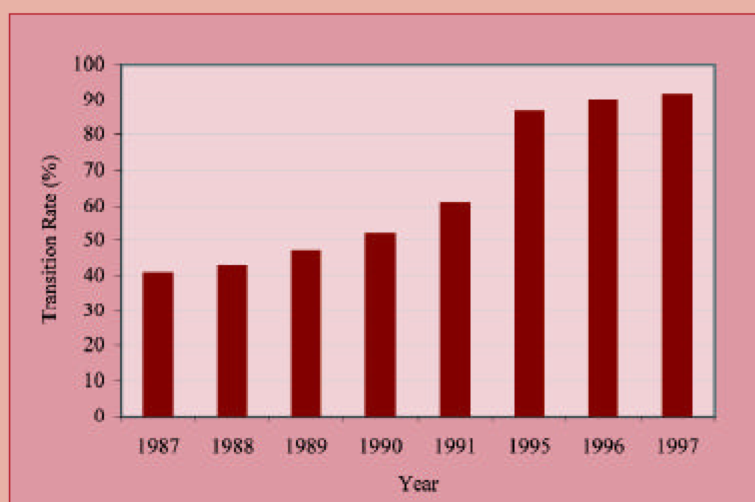
Enrollment Rates in Education, 1986-98



Box 1.3

Transition Rate to Lower Secondary Education

A particular area of concern in Thailand has been the transition rate from primary to lower secondary education. This rate has traditionally been lower than in several neighbouring countries, suggesting that Thailand is failing to equip itself with the human resources required for future growth. There is evidence that the transition rate improved considerably in the 1990s. As indicated below, it increased from around 50 percent in 1990-91 to reach around 90 per cent in 1996-97.



While this increase can in part be explained by increases in household incomes, it has also been facilitated by initiatives on the part of the government aimed at reducing the financial burdens of education in especially poor provinces, including free schooling, free school lunches, free uniforms and free school textbooks.

The improvement in transition rates has also been accompanied by increases in the enrollment rates at educational institutions of all types. However, enrollment rates continue to lag behind those of many of the nation's competitors, indicating that human resources development remains a legitimate area of concern. The government is seeking to address these concerns through the new National Education Act which has been in force since August 1999.

included grant programmes for the elderly, national health insurance schemes for the poor and needy, the establishment of a workmen's compensation fund, the introduction of minimum wage rates, the promulgation of health and safety standards in the workplace, national student loan programmes for secondary school students, targeted school lunch programmes for primary school children, and a range of short-term vocational training programmes. Particularly noteworthy has been the rapid growth of public programmes in support of child and youth development, with expenditures in the this area having grown to reach Bt 1.8 billion annually, 36 times the 1984 level in nominal terms (see box 1.4). The combination of increased prosperity, higher standards of living and a growing system of social security has reduced the need for children to work, with working children overwhelmingly concentrated in the agricultural sector.

Box 1.4

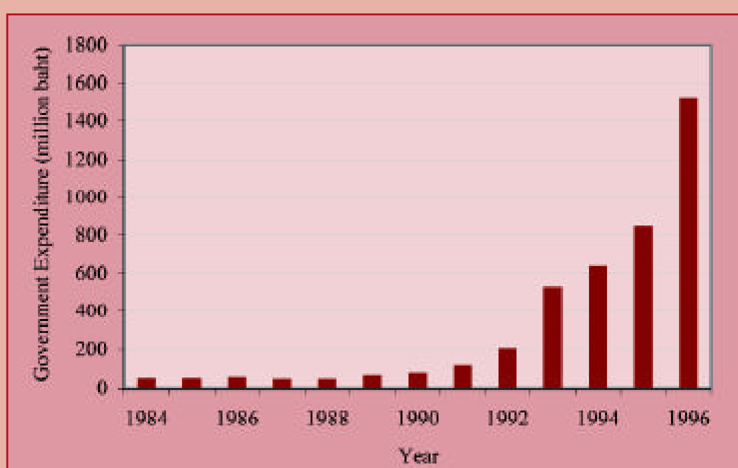
Investing in the Future

Although Thailand's rate of population growth is now at replacement level, the Kingdom's population is still a young one. Around one-third of Thailand's 61 million people are under 18 years or younger and 27 per cent are 15 or younger. Around one in twelve of the population' - some 5 million people' - are youth between the ages of 10 and 18.

In addition to making major commitments to investments in education, the Government has also allocated ever-larger sums to special child and youth development programmes. As shown below, government expenditure on such programmes increased from Bt 51 million in 1984 to Bt 1,850 million in 1996. This represents a 36-fold increase in nominal terms in the space of little more than a decade. These are investments in the Kingdom's future.

Child and youth development programmes, implemented in cooperation with a wide range of NGOs coordinated by the Council of Youth and Child Development, have sought to safeguard the interests and to reduce the vulnerabilities of especially young children, offering protection against various forms of exploitation and abuse both within and outside the family. Many of the programmes have yielded very tangible results. The number of children under 13 years of age engaged in full-time work, for example, fell by around one-half in the four-year period 1990-93.

Government Expenditure on Child and Youth Development



3. Governance

Thailand has made enormous strides in the general area of governance in the past three decades. This progress reached its climax in 1997, which is destined to become a milestone in efforts to build a more open and democratic society in which the basic rights of the Thai population are safeguarded and it is provided with significant new opportunities to participate in processes of development at the national and local levels. 1997 is the year that marks the start of the Eighth Economic and Social Development Plan and the promulgation of a new Constitution.

The Eighth Plan, which covers the period up to 2001, is unlike any of its predecessors, both in terms of the process used for its formulation and the policies it advocates. It has been heralded, not without justification, as a paradigm shift in the Kingdom's approach to and understanding of development (see box 1.5). Based upon a nation-wide process of consultation that involved hundreds of meetings and inputs from all sections of society, the Eighth Plan defines development as a people-centered process that must seek to ensure that all individuals, irrespective of their socio-economic background, are able to achieve their full and innate potentials as human beings. It is a plan that focuses on the needs of poor and disadvantaged groups, with an array of new initiatives designed to empower local communities through the decentralization of government, enlarged public participation, increased transparency and improved systems of governance, and the building of local capacities for greater self reliance.

Box 1.5

The Eighth National Economic and Social Development Plan: A Paradigm Shift in Thinking on Development

The Eighth Plan represents a paradigm shift in Thailand's approach to and understanding of development. The Plan states that 'rapid economic growth has had negative effects on Thai culture, traditional ways of life, family, community, and social values. 'Development based on economic growth without due consideration of human, family, community, social and environmental dimensions cannot be sustained in the long run'.

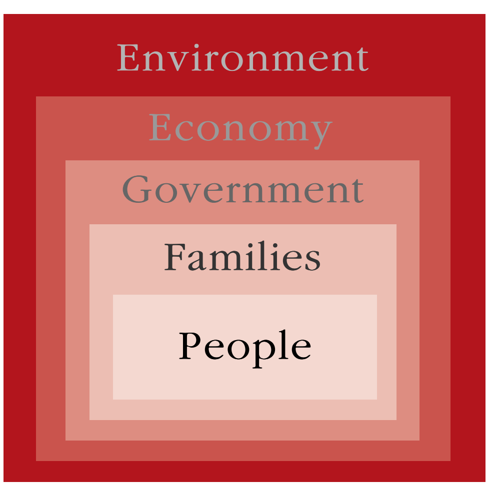
The Plan envisages a shift away from 'top down' approaches practised by the public sector in the past to 'people-centered development'. Priority is given to the development of human resources through education, health care and social welfare, more equitable sharing through regionalization, decentralization, participation and community rights, and the rehabilitation of the environment through improved management and greater local participation.

The approach to development is one in which Thailand would be integrated in the world economy while remaining a society where 'all people learn to live together in an enlightened way, with mutual care for each other, in harmony, peace, justice and freedom; in other words, as Thais'.

Source: P. Phongpaichit and C. Baker, Thailand's Boom and Bust, Silkworm Books, Chiang Mai, 1998

Figure 1.5

Central Concept of the Eighth National Economic and Social Development Plan



Box 1.6

The Eighth National Economic and Social Development Plan: Main Objectives, Targets and Strategies

Objectives

The Eighth Plan has five main objectives:

- Objective 1: To increase people's potentials in terms of physical well-being, intellectual development, health, vocational skills, and ability to adapt to changes in the economy, society and politics;
- Objective 2: To develop a stable society, strengthen family and community, support human development, increase the quality of life, and increase community participation in national development;
- Objective 3: To achieve balanced economic growth with stability and create opportunities for people to participate in decision-making and enable them to receive a fair share of the benefits of growth;
- Objective 4: To utilize, preserve and rehabilitate natural resources and the environment such that they can advance economic and social development and the quality of life;
- Objective 5: To reform the administrative system in order to increase opportunities for non-governmental organizations, the private sector, local communities and individuals to participate in national development.

Targets

The 8^{th} Plan identifies 12 specific targets that are derived from the main objectives. For example, to help a Thai citizen improve his or her own potentials, everyone must be able to attain at least 9 years of compulsory schooling (later to be extended to 12 years). To help sustain the rate of growth of the economy, households must be encouraged to save more, at least 10 per cent of GDP during the last year of the Plan. To help preserve, maintain and rehabilitate the environment, at least 25 per cent of the total land area must be maintained as forests.

Main Strategies

The objectives and targets set for the Plan period are to be pursued through seven main strategies:

- Strategy 1: The Thai people must be the focus of attention for all concerned in the development process with efforts aimed at increasing well-being and the quality of life through enlarged physical and intellectual capabilities (health, education, etc.).
- Strategy 2: The families of the Thai people must be supported and promoted through the creation of a social environment that is conducive to harmonious life with fewer conflicts and uncertainties.
- Strategy 3: The places where the Thai people and their families live must be given a more equal opportunity to develop on their own, with full participation from all parties.
- Strategy 4: The economy must be strengthened so that it can provide necessary and sufficient support to the Thai people, to be achieved through improvements in competitiveness so as to make the best use of scarce resources for the best outcomes.
- Strategy 5: Natural resources and the environment must be managed in such a way that they are to sustain the pace of development, both now and in the future.
- Strategy 6: The relationships between the Thai government and the Thai people must be redefined such that the people are given greater and more efficient opportunities to participate in policy making and in the implementation of policies.
- Strategy 7: Given the redefinition of the state-people relationship, governance systems must be reformed to enable them to function more equitably and efficiently.

The concept of development embodied by the Eighth Plan is shown schematically in Figure 1.5. It is a concept that can be conceived in terms of five layers. At the centre is the Thai population, the focal point for all development efforts. The second layer consists of their families, and beyond them are layers that distinguish between the role of the government, the economy in which they work, and the natural environment in which they live. For the first time in the past three decades, economic growth is defined, not as an end in itself, but rather as a means for achieving higher levels of well-being, with well-being defined in its broadest sense to include not only economic security but also social, political, cultural and spiritual well-being.

The new Constitution was promulgated in October 1997. It creates the framework for the restructuring of national representative institutions and reform of the electoral process. The new Constitution introduces a range of new measures aimed at empowering civil society and safe-guarding individual liberties. In addition to the promotion of greater transparency and account-ability, the Constitution emphasizes gender equality, environmental conservation, local resource management, community empowerment, and basic rights to education and health.

The framework established by the new Constitution will not be complete until more than 20 additional supporting laws have been drafted and enacted. Three main organic laws were mandated within 240 days of its promulgation. These three laws - the National Election Commis-sion Act, The Election of Members of Parliament (House of Representatives and Senators) Act, and the Political Party Act - were enacted on schedule in June 1998 following numerous public hearings to assess different proposals before final agreements could be reached. Five other organic laws are required before the end of 1999. These cover the establishment or upgrading of the office of the Ombudsman, National Counter Corruption Commission, criminal investigation of political appointees, State Auditor, and referendum.

Of particular importance for the area of governance are the Constitution's articles on local government. The Constitution provides support for new legislation on decentralization Act and the Tambon Council and Tambon Administrative Organization (TAO) Act of 1994 that set out to promote the creation of autonomous, self-managed and self-regulating communities. When the TAO Act was promulgated, existing tambon councils became legal entities, and those assessed as being capable of sound financial management were designated TAOs. Since the promulgation of the Act, all tambon councils are gradually being upgraded to TAOs.[4]

Both the Eighth Plan and new Constitution are the culmination of a process of reform that is in part born out of frustration and dissatisfaction, articulated by civil society, with an unresponsive government, unaccountable bureaucracies, and widespread problems of public and private sector corruption. That these problems are being addressed within the framework of a broad-based process of political and administrative reform in which government and civil society have chosen

[4] See Amara Pongsapich, 'Politics of Civil Society in Thailand', Southeast Asian Affairs, Institute of Southeast Asian Studies, Singapore, 1999.

to join hands in advancing the process of democratization is one of the most remarkable achievements recorded by Thailand. It is a process that has few parallels in the developing world and one that augurs well not only for future systems of governance but also for human development.

4. Civil Society[5]

Civil society organizations have their origins firmly planted in a tradition that extends some 700 years and the role of Buddhist and other religious orders that catered not only to the spiritual but also the physical needs of Thai society. Civil organizations have traditionally been a force for change. They have been intimately involved in the defining moments of Thailand's political history: the 1932 coup that changed Thailand from an absolute monarchy to a representative democracy; the student-led coup of 1973; and the May 1992 uprising that agitated for political reform.

Although civil society organizations have a long history, they were subject to controls during part of this century when the activities of some of them, especially those denominated along ethnic lines, were held in suspicion and regarded as a potential threat to the security of the state. However, they flourished after the 'communist threat' in Southeast Asia receded and the Communist Party of Thailand was formally dismantled and the government's announcement of an amnesty for its former members. From the 1980s onwards, many established organizations operating at the grassroots level revived their activities and many new ones were established, with very little government interference.

The universe of civil society organizations has grown to become both large and varied. Some 11,800 foundations and associations are registered with the government and there are many others that work without interference that are unregistered. Some of the associations and organizations are members of umbrella organizations that bring together NGOs sharing common interests and concerns. One of the first such umbrella organizations was the National Coordinating Committee of Non-Government Organizations for Rural Development (NGO-COD) which is composed of regional sub-committees and had 220 member organizations at the time of its establishment in 1985. Other important umbrella organizations include the National Council of Women of Thailand (NCWT), the Council of Children and Youth Development Organizations, the National Council of Social Welfare of Thailand, the Thai Volunteer Service Foundation (TVS). There are also coordinating bodies active in environmental protection and conservation, primary health care, HIV/AIDS and political and civil rights.

The civil society movement became stronger in the 1990s when the need for political and social reforms became increasingly apparent, especially after the February 1991 coup d'etat. It has become a potent force for change that has played a decisive role in framing a reform agenda

[5] This section draws upon Amara Pongsapich and Nitaya Kataleeradabhan, Thailand Non-Profit Sector and Social Development, Chulalongkorn University, Bangkok, 1997; and Amara Pongsapich, 'Politics of Civil Society in Thailand', Southeast Asian Affairs, Institute of Southeast Asian Studies, Singapore, 1999.

shaped by the principles of democracy, participation and respect for basic human rights (see box 1.7). It has exposed corruption, led the drive against 'money politics', and demanded open government with greater accountability and transparency. As both advocate and watchdog, the civil society movement was actively involved in the drafting of the new Constitution (see box 1.8).

Since 1992, activities of many organizations have gone beyond traditional concepts of participation to include empowerment of their constituencies.

Box 1.7

Thailand's Human Rights Record

Thailand is regarded as one of the most open and democratic societies in Asia. It has a free and high quality press that is subject to neither censorship to suppress 'bad news' nor manipulation in the interests of 'national security'.

Basic human rights is no longer a central development issue. Cases of outright political oppression and flagrant violation of basic human rights are very few and far between. However, the institutional framework for the protection of basic human rights as well as for law enforcement requires further development since deficiencies allow for widespread low-level infringement in people's daily lives. This situation is expected to improve continuously as many sections of the new Constitution, especially those in the chapter 'Rights and Liberties of the Thai People', become operational.

Human rights advocates are increasingly turning their attention to other aspects of human rights, such as the rights to development, the mainstreaming of human rights in development, and advocacy of the rights of particular groups, such as children, women, and hilltribe peoples.

The new Constitution will provide a powerful stimulus to a further strengthening of the human rights situation. It mandates the establishment of an independent National Human Rights Commission. A National Committee has also been established to draft a National Policy and Master Plan of Action. Thailand is also making preparation to become a signatory to the International Convention on Economic, Social and Cultural Rights.

Source: United Nations Resident Coordinator System, Common Country Assessment, Bangkok, 1999

Box 1.8

The Drafting of the New Constitution: Participatory Democracy at Work

The drafting of the new Constitution was very much a case of participatory democracy at work, with civil society organizations both insisting upon and provided with the opportunity to make substantive inputs into the Constitution Drafting Assembly (CDA). The CDA itself was a participatory body, composed of 99 persons, 76 of whom represented the different provinces.

Civil society organizations provided recommendations and suggestions to the CDA on two separate occasions. Twenty-eight organizations active in the area of democracy met every two weeks during January-March 1997 and together formulated a draft Resolutions on the New Constitution that was published in April. Another 50-page booklet entitled Recommendations to the Constitution was published jointly by the 11 main networks of NGOs, private organizations, NGO-CORD with 300 members, 28 democratic organizations, the Political Reform and Civil Society Group, the Women and Constitution Network, the Labour Organization of Thailand, and the Regional People's Forum for the Constitution. Both the Resolutions and the Recommendations included detailed proposals on what should be included in the new Constitution.

These initiatives were complemented by others that sought to broaden the debate through various mass media campaigns. Public hearings on the Constitution were also organized in Bangkok and all of the Kingdom's provinces.

Source: Amara Pongsapich, 'Thailand Politics of Civil Society', Southeast Asian Affairs, Institute of Southeast Asian Studies, Singapore, 1999.

They play an important monitoring role in Thai society, monitoring political activities, including election watches, government policies and cases of corruption. In a real sense, civil society organizations are spearheading the search for a new social paradigm based upon a far-reaching process of political democratization.

IV. IMBALANCES AND DISPARITIES

While Thailand can draw considerable satisfaction from its human development performance over the past three decades, it is widely recognized and accepted that much of the development that has taken place has been unbalanced development that has brought high costs in several areas. These include unbalanced development, with widening disparities in income and access to social services and infrastructure, disruption of social structures and relationships, and unsustainable levels of natural resource depletion and environmental pollution.

1. Unbalanced Development and Disparities in Income and Opportunities

Because Bangkok and its surrounding areas have been the focal point for investments in manufacturing and services, they have also been the locus for the economic benefits that have followed in their wake. In the past two decades, Bangkok has strengthened its position not only as the centre of government and administration but also of opportunity and accumulation. Although Bangkok and its surrounding five provinces - Samut Prakhan, Nonthaburi, Pathumthani, Samut Sakhon and Nakhon Pathom - are home to approximately 16 per cent of the Thai population, they account for approximately 75 per cent of the Kingdom's manufacturing output and one-half of GDP.

Economic growth has been accompanied by the growth of disparities in income, opportunity and access to social services and infrastructure. In the past three decades, the 'gaps' between the richest and poorest segments of the population have measurably widened. This has been particularly the case with the rural population that has lagged ever further behind the population of urban areas. In 1960 , for example, the average income of agricultural households was estimated to be around one-sixth of the average income in other sectors. By the 1990s the difference had grown to one-twelfth, implying that 60 percent of the population has been disadvantaged by income trends.

The trends have resulted in a worsening Gini coefficient, one of the most important indicators of income inequality. In the three decades up to 1992 the Gini coefficient increased, with the share of the national income of the richest decile increasing to 28 times that of the poorest decile in the period 1988-92. Since 1992 there is evidence of an improvement in the Gini coefficient for reasons that are still far from clear.[6] The Gini coefficient appears to have reached a high point of 0.499 in 1992, since when it has progressively fallen to reach 0.481 in 1996. This is a positive development that may signal the ending of a trend that has prevented even more rapid progress in the area of poverty reduction.

[6] See Chapter 2.

2. Gender Inequalities

Disparities exist not only between socio-economic groups but also between men and women. At the aggregate level, women in modern Thai society stand as equals with men before the law. Article 30 of the new Constitution specifically guarantees the equality of men and women under the laws of Thailand, and there is other legislation which calls for special treatment or protection of women, such as labour legislation prohibiting sexual harassment.

The position of women in Thailand finds clear expression in UNDP's Gender Development Index (GDI). Thailand's ranking in 1997 of 0.751 compares with an average for all developing countries of 0.630 and a world average of 0.700. Thailand's GDI ranking is comparable to the ranking of many countries in Eastern Europe, once noted for their egalitarian development path, and considerably higher than the majority of neighbouring countries. In Southeast Asia, only Malaysia and Singapore score higher than Thailand.[7]

Although the position of women in Thailand compares well with that in many other developing countries both within and outside the region, the high aggregate ranking disguises the subservient positions occupied by women in many sections of the Thai economy and Thai society.[8] As in many other countries, much of women's work - in the workplace, the community, the family and the home - remains unrecognized and unrecorded, failing to find a place in official social and economic statistics. At the formal level, women can be shown to have shouldered a disproportionate share of the burden in the nation's economic transformation, accounting for 60-80 per cent of workers in such export-oriented industries as electronics, textiles, processed foods and leather goods. However, they are the lowest paid within these industries, receiving lower rates than men for similar work.

As shown in Figure 1.6, women receive less than men almost everywhere. On average, women are paid less than men in all sectors in all locations with the single exception of government service. Outside of agriculture, more women than men are to be found in low income groups in all economic sectors, and women are more likely to be unemployed than men. Women are required to work harder and longer if they are to secure an income comparable to that of men, and they must do so in ways that make it possible for them to exercise their multiple responsibilities and obligations within the home and family.

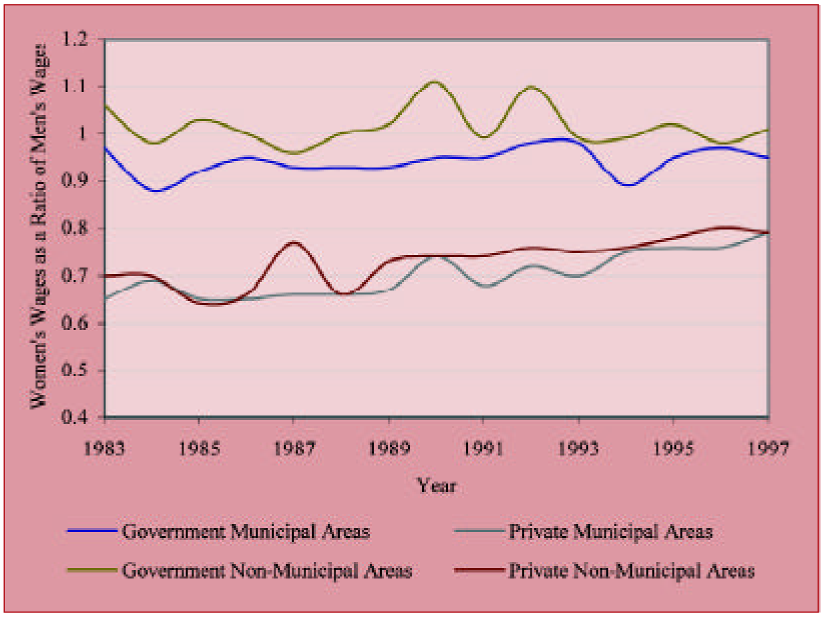
Possibilities for women to influence decisions within the mainstream of the nation's economic life are also far more limited. Although slightly more than half of all government employees are women, women occupy only around one in ten of all senior positions within the civil service. They are also greatly under-represented in the nation's judicial system, with women accounting for only twelve per cent of the Kingdom's judges.

[7] GDIs for other countries in the region include 0.483 for the Lao Democratic Republic, 0.576 for Myanmar, 0.675 for Indonesia, 0.736 for Philippines, 0.763 for Malaysia, and 0.883 for Singapore. See UNDP, Human Development Report 1999.

[8] See Suteera Thompson and Maytinee Bhongsvej, Profile of Women in Thailand, Gender and Development Research Institute, Bangkok, January 1995.

Figure 1.6

Women's Wages as a Ratio of Men's Wages, 1983-97



Source: Labour Force Survey, July-September Round, 1997

Women trail men not only in the fields of incomes and influence, but also in their political emancipation. The power balance between men and women is arguably the most neglected dimension of gender relations in Thailand and it is in this area where the disparities are most in evidence. At present, women accounted for only 6.6 per cent of all Members of the Parliament. At the local level, the under-representation of women is even more pronounced, with women constituting only 1 per cent of elected village heads and tambon heads. Extending the comparisons used earlier, in the area of gender empowerment Thailand not only lags behind the former socialist countries of Eastern Europe but also other countries in the sub-region.[9]

A core issue remains the biases that exist in Thai and many other societies against women. These biases take a variety of forms. They include biases in technical and vocational training that serve to limit the occupational choices available to women, with well-intentioned programmes aimed at promoting the position of women sometimes serving to reinforce a traditional division of labour rather than changing it by guiding or preparing women for work in the occupations in which they already predominate. They find expression in formal credit arrangements that are often insufficiently sensitive to the needs of women and especially the small-scale and informal economic activities in which they are especially active, compelling even the most enterprising women to make use of informal credit arrangements with their punitive conditions and high interest rates. More subtle are the biases that underpin perceptions and attitudes about the role and place of women in a rapidly changing society. These are perceptions that remain impervious to legislation, even legislation that is guided by the principle of emancipation.

3. Social Disintegration

The growth process has also brought social costs in the form of family and community dislocation, with forces that are unraveling the fabric that has traditionally bound Thai society together. These costs have been mainly in the form of rural-urban migration, especially from villages to the

[9] Thailand scores 0.407 on UNDP's Gender Empowerment Measure (GEM) and it is ranked 64th on the GEM compared with 67th on the HDI. Thailand's GEM compares with scores of 0.451 for Malaysia, 0.480 for Phklippines, and 0.512 for Singapore. Of the countries in the sub-region for which the GEM is available, only Indonesia, with 0.362, scores lower than Thailand. See UNDP, Human Development Report 1999.

Bangkok metropolitan area, with the most enterprising of the rural population seeking to escape from poverty and from the mechanisms that lock rural households into patterns of dependence and debt and deprive them of their land holdings. Migration has drawn many young people – men and women – from their rural homes, leaving some parts of rural Thailand occupied mainly by the elderly and children that has impacted negatively on family and social relations in rural areas as well as deprived farming of its most dynamic element.

Impacts have been positive as well as negative. Remittances are, for example, an important source of income for rural households. The remittances received from urban migrants have been used not only for consumption but also for investments that have helped to raise the productivity of farming households, further adding to their incomes. However, the pressures on young migrants are often considerable. This is especially the case with young women who have traditionally assumed prime responsibility for the care of aging parents. The pressure on them to provide financial support and to show their gratitute to their families often places them at risk of sexual exploitation and entry into the commercial sex industry with the promise of quick and easy money. Between 150,000–200,000 young women are estimated to work in the commercial sex industry, with the National Commission on Women's Affairs suggesting that as many as 20,000–40,000 of them are under 18 years of age, while some NGOs place the figure even higher.[10] Some of the young women and girls do not enter the commercial sex industry voluntarily, but are sold into it by parents and relatives, especially in parts of the country where there are no cultural or moral injunctions on prostitution. To these Thai women must be added the many more who have been illegally trafficked into Thailand, the number of whom was estimated in 1996 at more than one million.[11]

Thailand's rapid economic transformation and the increase in disposable incomes have also spawned consumerism and an attachment to material possessions that have given rise to tensions with traditional values and system of beliefs. The Buddhist system of values and beliefs, embraced by more than 95 per cent of all Thais, has traditionally accorded central importance, not to material possessions and rewards, but rather to spiritual development, sanctity of life, compassion for others, respect for nature, social harmony, and the importance of compromise. This tradition forms a rich foundation of social and cultural philosophy. The tradition is under sustained assault by consumerism and materialism. It is an assault that has undermined the foundations upon which Thai society has traditionally been built as well as weakened the place occupied by local cultures.[12] It finds concrete expression not only in the erosion of the role of religious and monastic institutions in the mainstream of the nation's consciousness but also in such social problems as vandalism, drug addiction, the spread of HIV/AIDS, and cultural alienation, all of which are becoming more severe with the passage of time and the further the nation travels along the narrow path of modernisation (see boxes 1.9 and 1.10).

[10] See UNICEF, Children and their Families in a Changing Thai Society, Bangkok, December 1997. For a further review of estimates, see W. Boonchalaksi and P. Guest, 'Prostitution in Thailand' in L.L. Lim (ed.), The Sex Sector: The Economic and Social Bases for Prostitution in Southeast Asia, ILO, Geneva, 1998, pp.130-169.

[11] Quoted in UNIFEM, Trafficking in Women and Children: Mekong Sub-Region, Bangkok, February 1998.

[12] For a further discussion of the erosion of social and cultural capital, see Chapter 6.

Box 1.9

The Social Impacts of HIV/AIDS

At the end of 1997, an estimated 780,000 adults and children were infected with HIV/AIDS, of which 290,000 were women between the ages of 15 and 49. It has been estimated that by the year 2000 some 1.5 million women will be HIV positive. These women are likely to leave some 2 million surviving children who will have to be cared for by their extended families, particularly the grandparents. A recent study has revealed that 83 per cent of current orphaned children are taken care of by their extended families, with the remaining 17 per cent becoming the responsibility of the community. Because nearly one-half of all households currently experience elderly care problems, the growth in the number of orphaned children can be expected to exacerbate family and household problems.

At the family level, the social and economic impact of HIV/AIDS on the family has several dimensions. For example, there will be many grandparents who will assume the role of mothers of the children left by the deaths of their parents. The burdens that fall on the grandparent's generation could be enormous since they will not only lose the support and care traditionally provided by their children, especially their daughters, but will also have to bring up their grandchildren. In some cases grandparents will be under extra pressure to work to support their grandchildren while, in others, the children themselves may be under pressure to work so as to support their grandparents.

The economic impact on families with HIV infected members and AIDS deaths is very high. One study has revealed that medical care costs for each patient from the beginning of their illness until death are, on average, equal to approximately six months of the average yearly income of the affected household (about 24,000 baht). In addition, the survey revealed that around one-half of the family production was lost as a consequence of the reduction in labour supply, leading to a 47.5 percent decrease in annual family income. In order to cope with the double financial burden of both income loss and increasing medical care expenditure, families used various strategies. Fifty-two per cent of the households reduced their consumption by an average of 41 percent, which had serious implications for the welfare of 29 percent of the households. Sixty percent of households used their savings to offset the loss of income. A further 19 percent had to sell assets ranging from land, vehicles, jewellery and livestock, 11percent turned to borrowing, and 15 percent of school-aged children were withdrawn from school to enter the labour market in order to contribute to family income.

The above suggests that by 2010 HIV/AIDS could have had an enormous impact on the family structure of the Thai population. The family, as a micro-social unit, will have had to deal with an increasing number of deaths of family members. Some families may be without the means to provide the support required by orphaned children, while the opportunities of the children themselves may be seriously curtailed. These developments will impact negatively on the human development situation in Thailand as well as add to the burdens of the state.

Source: United Nations Resident Coordinator System, Common Country Assessment, Bangkok, 1999

4. Resource Depletion and Environmental Degradation

Nowhere does the erosion of traditional Buddhist values find clearer expression than in the field of natural resource depletion and environmental degradation, areas in which the process of economic transformation has enacted a high price. Traditionally, Thai acceptance of the cycle of birth and rebirth governed attitudes to nature and all living creatures. Human relationships were traditionally defined in terms of relationships with other living creatures and of systems in which human beings formed only part of the complex web of life. The respect for nature, rooted in the understanding

Box 1.10

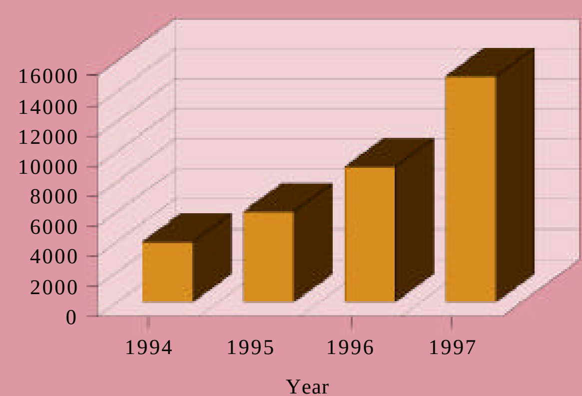
The Growing Problem of Drug Abuse

Despite the considerable efforts made by the Government to address negative trends, drug smuggling and substance abuse are becoming increasingly serious problems on both the demand and supply side. It has been estimated that almost one-half of all villages and communities were confronted with drug problems in 1996, with metamphetamine, marihuana, volatile substances and heroin constituting the major drugs of abuse.

While truck drivers, agricultural labourers and workplace employees remain the major groups of drug abusers, in-school and out-of school youth are increasingly engaging in drug use and are becoming the most vulnerable group in society. Results of nation-wide urine testing of 118,375 school students by the Ministry of Education and the Office of Narcotics Control Board (ONCB) in 1996 revealed that 1,375, or 16 per cent, were using amphetamines. Records of drug treatment centres also indicate an increasing number of students among patients.

Figure 2: Main groups of patients at drug treatment centres in 1997

Figure 3: Seizures of metamphetamine



On the supply side, despite remarkable success in achieving a decrease in poppy cultivation in the country, heroin and metamphetamine continue to be smuggled in from neighbouring countries. It was estimated that 100 million tablets of metamphetamine were smuggled into Thailand in 1997 and that only 20 per cent of them were seized.

Source: United Nations Resident Coordinator System, Common Country Assessment, Bangkok, 1999

of the unending cycle of birth and rebirth, has been eroded by the forces of modernization. As in many other countries that are without a Buddhist tradition, the environment has come to be seen increasingly as an object that stands outside human experience and existence and which can be exploited or misused for human reward and gain. As a consequence, Thailand's list of environmental problems has become longer and, notwithstanding the many efforts that are being made to redress negative trends, threatens to become even more problematic. The list includes the following:[13]

[13] See Supachit Manopimoke, 'Economic Development and Environmental Change in Thailand', paper presented to the Fifth Convention of the East Asian Economic Association, 26-27 October 1996.

- Deforestation and biodiversity reduction. Three decades of forest clearing for agricultural development has greatly depleted the nation's area of forests and woodlands. In the period 1981-92, the area of forest land declined from more than 16 million ha to 13.4 million ha, or by a rate of nearly 240,000 ha per annum. This loss has been accompanied by the destruction of watersheds and the loss of biodiversity in terms of both the number and population of species. Although protected forest areas have been established, such problems as illegal encroachment, wildlife poaching, overharvesting of vulnerable and protected species, and illegal logging are not uncommon in protected forest areas (see box 1.11)

- Land competition and urban encroachment. Although Thailand still has abundant fertile land, it is not always well-managed. Some of the most productive land is under constant threat from urban encroachment. This has been particularly the case near cities like Bangkok and Chiang Mai, where thousands of ha have been converted into residential, industrial and commercial uses. Although land is still being converted, the total area of arable land has remained unchanged since 1990 at 20.6 million ha, with conversions of new land balanced by losses of existing forest areas. Another aspect of encroachment is the illegal occupation of land. Around 40 per cent of all agricultural land in Thailand is farmed and worked by persons who hold no legal land titles. This insecurity is an obstacle to the long-term management of soil resources.

- Depletion of water resources. Growing demand for water in all sectors of the economy and society are giving rise to growing pressures on available water resources as well as increasingly severe water shortages. The shortages are most acutely felt by farmers dependent upon irrigation water in the Central Plain, who have figured prominently among the main victims of upland watershed destruction, as well as urban populations. Ground-water resources in Bangkok have been exploited on an unsustainable basis, giving rise to land subsidence in the capital as well as surrounding provinces.

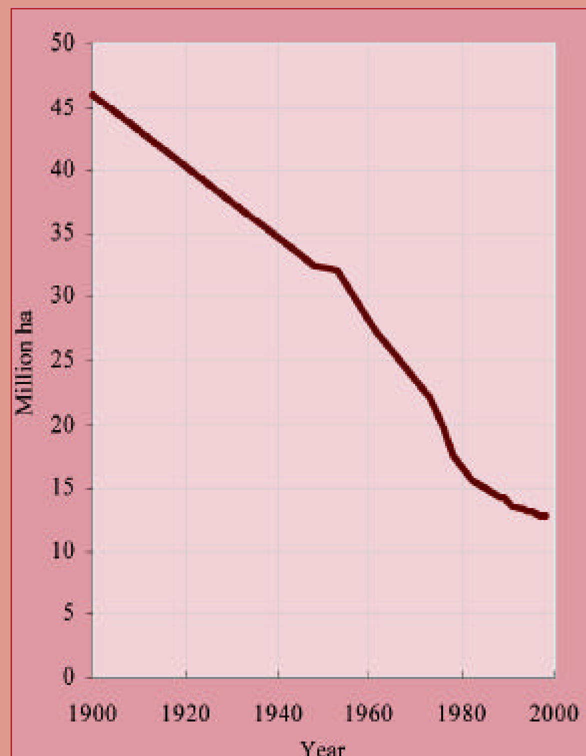
- Depletion of marine resource base and deterioration of the coastal zone. Since the early 1990s, marine fish landings have been in the order of 3 million tonnes annually, twice the level recorded in 1972 and 20 times the level of 1960. This growth has placed the marine resources of the coastal zone under pressure and, in some areas, they have been seriously depleted. Destruction has been particularly severe in mangrove forests due to their rapid conversion for shrimp farming. Marine resources and coastal ecosystems are also under mounting pressure from the pollution of the coastal zone, with rivers and coastal communities discharging a wide range of pollutants, including heavy metals and toxic substances. Heavy loads of biochemical oxygen demand (BOD) draining through rivers into the Gulf of Thailand have reduced the dissolved oxygen levels in some sections around all estuarine areas to near zero (see box 1.12).

Box 1.11

Deforestation and Biodiversity

At the beginning of the century, Thailand was estimated to have about 46 million ha of forests, accounting for more than 90 percent of the total land area. The first nation-wide forest inventory, conducted during 1958-61, estimated the area of forests at 27.4 million ha, or 53 percent of the total land area. The trend towards deforestation accelerated during the 1960s, 1970s and 1980s. The highest deforestation rate was recorded during 1976-78 at 1.11 million ha per year. A deforestation rate of half a million ha per year continued during the 1980s, but it has dropped in recent years to 100,000 ha per year as shown in the table and chart.

Year	Forests in million ha	% of the total land area	Deforestation rate (%)**
1900[1]	46+	90+	-0.73
1948[2]	32.43	63.2	-0.19
1953[3]	32.13	62.6	-1.99
1961	27.36	53.3	-1.74
1973	22.17	43.2	-3.63
1976	19.84	38.7	-6.03
1978	17.52	34.1	-2.77
1982	15.66	30.5	-1.24
1985	15.09	29.4	-1.59
1988	14.38	28.0	-0.26
1989	14.34	27.9	-2.37
1991	13.67	26.6	-1.16
1993	13.36	26.0	-0.77
1994	13.25	25.8	-0.77
1995	13.15	25.6	-0.77
1996*	13.05	25.4	-0.77
1997*	12.95	25.2	-0.77
1998*	12.85	25.0	-0.77



Notes:
* The annual figures of these years are estimates derived from calculations using the annual deforestation rate between 1993-95.
** Annual deforestation rates calculated between the year in the same row and the following one.

Sources: 1) Kashio, M. 1995. Sustainable Forest Management in Asia and the Pacific. FAO RAP Publication: 1997/7.
2) FAO. 1948. Unasylva. Vol. II, No. 4.
3) FAO. 1954. Unasylva. Vol. VIII, No. 3.The rest from 1961 to 1995 are from the Forestry Statistics of Thailand, Royal Forest Department.

Forests have been cleared in response to population and economic pressures. The main driving force behind deforestation has been the combination of logging and agricultural expansion. Logging roads constructed in forests have made it easier for landless farmers to gain access to forests. These have been cleared mainly through 'slash and burn' and later abandoned as wasteland. The consequences of deforestation and degradation in natural forests are a series of environmental, social and economic problems, such as frequent floods, droughts and landslides; soil erosion and siltation; changing climate patterns; and shortages of water, timber, wood for fuel, and fodder. Deforestation is also reducing the Kingdom's rich biodiversity. Thailand supports a wide array of forest types ranging from tropical rain forests in the South, to dry evergreen, mixed deciduous, dry deciduous, and hill evergreen forests further North. These forests are home to an extremely species-rich flora and fauna with an estimated 14~18,000 vascular plants, 1,200 butterflies, 922 birds, 307 reptiles, 297 mammal species, in addition to countless other organisms, many of which have not yet been documented.

In an effort to halt deforestation and conserve biodiversity, remaining natural forest areas have been designated protected areas, notably national parks and wildlife sanctuaries. Logging in natural forests is prohibted, although some illegal felling still takes place. Forestry policy is increasingly shifting to the development of plantation forests. Reforestation programmes have been enhanced with teak, pines, and fast-growing exotic tree species, such as eucalypt and acacia. Some 800,000 ha of government-owned land has so far been reforested, with a survival rate of around 65-70 per cent.

Source: United Nations Resident Coordinator System, Common Country Assessment, Bangkok, 1999

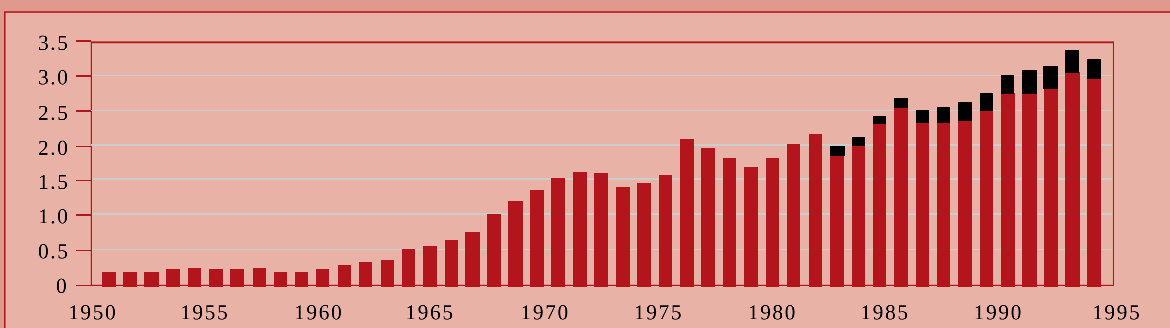
- Air and water pollution. Residential and industrial waste water discharges pose an increasingly serious threat to especially urban populations, with many rivers and waterways serving as sewers and waste receptacles. The water quality in the middle and lower ranges of the Chao Phraya river, one of the most important in the country, is very poor and the quality of water in many other water courses is providing increasing cause for concern. Air quality in urban and industrial areas, caused by mainly industrial and exhaust emissions, constitutes another major problem, with Bangkok occupying an unenviable place among the list of most polluted cities to be found anywhere on earth (see box 1.13).

- Solid and hazardous waste disposal. In the past decade, solid and hazardous waste disposal have emerged as major issues in urban areas. In 1996, the Bangkok metropolitan area alone produced more than 24 million tonnes of solid waste – equivalent to more than 6,500 tonnes per day – while the country produced an estimated 2 million tonnes of toxic and hazardous wastes. Most of these wastes are in the form of heavy metal sludge and solids, much disposed of through the nation's rivers and waterways, with failure to deal effectively with this problem posing a growing risk to human health.

Box 1.12

Pressures on Marine Resources

Thailand is one of the world's top ten fishing nations in terms of catches and the value of marine exports. The annual catch has increased from around 10,000 tonnes in the early 1960s to pass 3 million tonnes in the 1990s. However, as shown below, the increases recorded in the 1990s have mainly come from aquaculture and mariculture.



Marine resources everywhere are under mounting pressure. This is most clearly demonstrated by the enormous increase in catch rates per unit of effort. In 1961, for example, a trawler could catch 297 kg of demersal fish per hour. In 1991 the figure had declined to only 23 kg per hour. This indicates overutilization as well as overcapitalization in the trawl fishery.

In addition, there is an unequal distribution of the catch between commercial and small-scale fisheries. While commercial fisheries account for around 85 percent of the annual catch, small-scale fisheries provide work for about 80 percent of all Thai fishermen. This unequal distribution is the source of acute problems between the two groups. Although the government has banned trawling, push netting and shellfish racking within 3 km of the shore to protect the fishing grounds of small-scale fishermen, enforcement of the measures is incomplete. As a result, coastal resources continue to be heavily exploited and protection measures have so far been insufficient to safeguard the livelihoods of small-scale fishermen who have incomes that are well below the national average.

Source: United Nations Resident Coordinator System, Common Country Assessment, Bangkok, 1999.

Occupational and environmental health. The combination of rapid industrialization, pollution and resource depletion is giving rise to increasingly serious problems of occupational and environmental health. Although Thailand possesses legislation designed to regulate conditions in the workplace, it is not strictly enforced and many workers in the manufacturing and service industries, especially in informal and small-scale enterprises, spend long hours in premises that are poorly ventilated, cramped, noisy and sometimes dangerous that constitute hazards to their health. These growing hazards find expression in very high rates of industrial injuries. In addition, while Thailand has achieved remarkable improvements in enlarging access to such basic infrastructure as water and sanitation, the quality of the infrastructure often leaves much to be desired. Water provided through public supply systems is often unfit for direct consumption, while many sanitation systems in rural areas are based upon simple latrine systems that pose a threat to human health, especially through the contamination of ground water.

Box 1.13

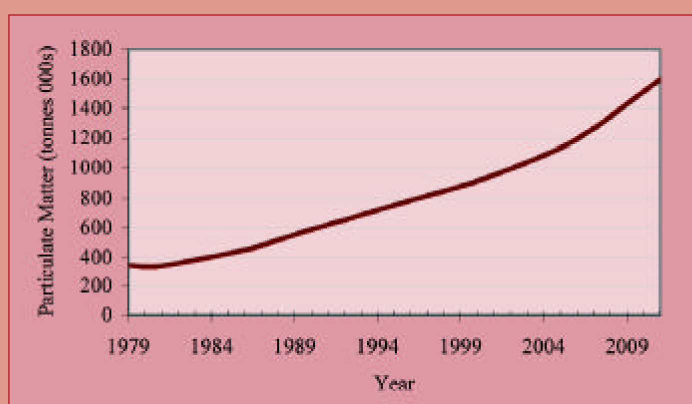
Air Pollution

Bangkok has acquired an unenviable reputation as one of the world's most polluted cities. The pollution comes from two main sources: the city's 4 million vehicles and the industry that encircles the city.

Efforts to curb the growth of Bangkok's traffic include the more active promotion of public transport, the centrepiece of which is the construction of a new light railway system, the first stage of which is due to open in 1999. The anti-pollution strategy has also included the promotion of unleaded petrol. Introduced only in 1991, unleaded petrol accounted for nearly 20 percent of all petrol sales in 1996.

As far as industry is concerned, 20,000 of Thailand's 27,000 factories were classified in 1995-96 as polluting industries. Most are to be found in and near Bangkok. According to some estimates, Thai industries release 500,000 tonnes of BOD, generate 2 million tonnes of hazardous and toxic wastes, and consume 10,000 tonnes of CFC and other ozone depleting substances every year.

Particulate Matter
Observed Trends 1979-96 and Estimates 1997-2011



As shown above, the growth of Thailand's prosperity has so far been matched by the pollution of Bangkok's air. Some estimates indicate a further deterioration in ambient air quality, pointing to the urgent need for new and purposeful initiatives aimed at addressing negative trends.

Sources: M. Parasnis and C. Bunyagidj, National Cleaner Production Policies in Thailand, Thailand Environment Institute, January 1998

V. CONCLUDING NOTE

This chapter has described the many achievements recorded by Thailand in the past three decades in the field of human development as well as the negative effects that have accompanied them. The key to the progress recorded resides in a combination of factors, especially the combination of high rates of economic growth, which have translated directly and indirectly into increases in disposal incomes, and the commitment to investments in the social sectors, especially health and education, which have been instrumental in reducing vulnerabilities, increasing personal and family security, and enlarging opportunities. Progress has also been facilitated by the readiness to periodically redefine the aims, scope and purposes of development, exemplified by the Eighth Plan, and by the determination to broaden and deepen the development process in ways that enlarge the basis for participation and representation, exemplified by the new Constitution. Both these developments have part of their origins in a flourishing civil society movement which, despite actively representing specific constituencies or their issue orientation, share a profound commitment to democratic principles and to such values as unity and harmony that are deeply rooted in Thai society. These are very tangible development assets, the importance of which is demonstrated by the experience of countries where they do not exist.

At the same time, achievements are shadowed by challenges. Much of the development that has taken place has been unbalanced development and the benefits of the growth that has taken place have been unequally shared, with some disadvantaged groups remaining on the margins of society. Development has also brought a variety of social problems that may be weakening the threads that have traditionally bound together Thai society in a rich, colourful and harmonious tapestry. They have also brought a range of environmental problems that are antithetical to many of the values on which Thai society is based and which are eroding the basis for sustainable development.

Thailand must seek to meet these challenges at a time that is unique in its history. The review of human development covered the period up to 1996. The following year was a watershed year that marked the end of an era and the beginning of a new one. The new era of crisis requires Thailand to again reinvent itself and to redefine challenges and opportunities on the eve of a new millennium. Before turning to these difficulties and to the challenges of a multi–dimensional crisis, we will take a closer look at income poverty, disadvantage and deprivation and their relationships with human development. These are the subjects of chapters 2 and 3.

Income Poverty: A Review and Assessment

I. INTRODUCTION

It was noted that Thailand has in the past three decades made considerable progress in the eradication of poverty. This chapter takes a closer look at the progress recorded. It addresses three main questions. What is the extent of income poverty within the Kingdom? Which groups are the poorest and where are they to be found? And what is the extent of income inequality and what are the observed trends in inequality? The chapter's focus is firmly on income poverty. Other dimensions of inequality and deprivation are the subject of the following chapter. [1]

The chapter requires two introductory observations. First, in taking a closer look at poverty we are approaching the core of human development. Poverty gives direct expression to income levels and to the means at the disposal of individuals, families and communities to safeguard their security and to enlarge their opportunities. It is this direct link between security and opportunity that makes poverty a key determinant of human development.

Second, in examining poverty there is always a risk of reducing it to a statistical abstraction, dominated by percentages and other quantitative measures. It must never be forgotten that poverty is a human condition that impacts on the quality of the lives of human beings. Poverty drives children from schools and into dangerous workplaces. It deprives them of the nutritious food they require not only for healthy bodies but also for their intellectual development, robbing them of opportunities they may be taken for granted by others. Poverty drives men and women into lives of unremitting struggle and physical drudgery from dawn till dusk with only the promise of miserable rewards and premature death. Poverty has millions of human faces and every face is able to tell its own story of hardship, deprivation, struggle and exploitation. These faces should be those that underpin any analysis of income poverty.

[1] The chapter draws upon the work of Prof. Medhi Krongkaew, Thammasat University, and Prof. Nanak Kakwani, University of New South Wales, both of whom have been at the forefront of poverty research in Thailand. Some of the work was especially commissioned by UNDP as input into this Thailand Human Development Report.

II. POVERTY REDUCTION

1. Trends in Household Incomes

The per capita incomes of the Thai population have increased dramatically over the past three decades. Following a period of stagnation in the mid-1980s, occasioned by macroeconomic difficulties and a sharp decline in rice prices that badly affected rural producers, per capita incomes took off. Evidence of the speed at which they have increased is provided by Table 2.1. The table shows that in the period 1988-95 the annual rate of per capita GDP growth exceeded 7 per cent in almost every year, reaching double digit figures in the period 1988-1990 (see box 2.1).

Table 2.1

Average Annual Growth in GDP per Capita, 1980-95

Year	GDP (Bt billions)	Population (millions)	Per Capita GDP (Bt)	Per Capita GDP Growth (%)
1980	913,733	46.96	19,458	
1981	967,706	47.88	20,211	3.87
1982	1,019,501	48.85	20,870	3.26
1983	1,076,432	49.52	21,737	4.16
1984	1,138,353	50.58	22,506	3.54
1985	1,191,255	51.80	22,997	2.18
1986	1,257,177	52.97	23,734	3.20
1987	1,376,847	53.87	25,559	7.69
1988	1,559,804	54.96	28,381	11.04
1989	1,749,952	55.89	31,311	10.32
1990	1,945,372	56.30	34,554	10.36
1991	2,111,861	56.96	37,076	7.30
1992	2,285,865	57.79	39,555	6.68
1993	2,481,278	58.34	42,531	7.53
1994	2,702,078	59.10	45,720	7.50
1995	2,941,183	59.46	49,465	8.19

Source: National Account Division, NESDB

GDP per capita figures often mask considerable differences in the gains recorded by different population groups. However, the evidence is overwhelming that Thais across the board enjoyed a sustained increase in incomes. This is demonstrated in Table 2.2, which records the annual average rate of growth in household per capita incomes by region and types of communities in the period 1988-96.

Table 2.2

Annual Average Rate of Growth of Monthly Household Income Per Capita, 1988–96

Location	Average Household Monthly Income per Capita (Baht)					Average Annual Rate of Growth (constant 1988 prices)			
	1988	1990	1992	1994	1996	88–90	90–92	92–94	94–96
Bangkok	**2,409**	**3,491**	**4,995**	**5,520**	**6,918**	**14.8**	**14.6**	**0.7**	**5.9**
Bangkok vicinity	**1,741**	**3,071**	**4,070**	**3,963**	**6,332**	**27.2**	**10.1**	**−5.7**	**20.4**
Municipal areas	1,837	4,785	4,800	4,831	10,324	55.8	−4.8	−4.1	40.2
Sanitary districts	1,695	2,822	4,249	3,968	4,799	23.4	17.7	−7.8	4.0
Villages	1,687	2,640	3,029	3,591	4,887	19.5	2.1	4.5	10.7
Central	**1,057**	**1,566**	**1,854**	**2,460**	**3,164**	**16.1**	**3.8**	**10.8**	**7.4**
Municipal areas	1,681	2,556	3,353	3,585	5,137	17.7	9.5	−1.0	13.7
Sanitary districts	1,253	1,788	2,341	3,476	4,308	13.8	9.4	17.5	5.3
Villages	930	1,365	1,540	2,063	2,586	15.6	1.2	11.3	6.0
Northeast	**665**	**909**	**1,063**	**1,418**	**1,855**	**11.3**	**3.1**	**11.1**	**8.4**
Municipal areas	1,485	2,278	3,058	3,651	5,368	18.3	10.9	4.9	15.3
Sanitary districts	1,114	1,528	1,619	2,189	2,327	11.5	−2.1	11.9	−2.9
Villages	585	788	914	1,159	1,558	10.4	2.7	8.2	9.9
North	**932**	**1,336**	**1,431**	**1,825**	**2,331**	**14.1**	**−1.5**	**8.5**	**7.0**
Municipal areas	2,014	2,977	3,565	3,915	5,084	16.0	4.4	0.4	8.0
Sanitary districts	977	1,606	2,003	2,126	2,975	22.6	6.7	−1.4	12.3
Villages	811	1,125	1,129	1,571	1,996	12.2	−4.8	13.6	6.7
South	**952**	**1,406**	**1,625**	**2,050**	**2,601**	**15.9**	**2.5**	**7.9**	**6.6**
Municipal areas	1,930	2,587	3,363	3,860	5,239	10.2	9.0	2.7	10.5
Sanitary districts	1,230	1,652	1,996	2,528	3,870	10.3	4.9	8.1	17.7
Villages	763	1,184	1,298	1,712	2,100	19.0	−0.3	10.4	4.8

Source: Socio-Economic Surveys, various years.

Note: The average increases in the CPI are as follows: 1988–90 5.6%; 1990–92 5.0%; 1992–94 4.4%; 1994–96 6.0%.

Examination of Table 2.2 reveals the following:

- The average income of households increased by an annual rate of 16.0 per cent in the period 1988–90, moderating to 5.2 in 1990–92, 6.5 per cent in 1992–94 and 8.1 per cent in 1994–96. Note that these are real increases, adjusted for the rate of inflation.

- The average incomes of households in municipal (urban) areas increased much more rapidly than the national increase in the period 1988–92, averaging a remarkable 17.1 per cent per annum in the period 1988–90 and 11.6 per cent per annum in the period 1990–92. In the following two-year period 1992–94, the incomes of urban households lost much of their growth momentum, although the growth rate recovered to 10.1 per cent per annum in 1994–96.

- During the same period, the incomes of rural households also increased sharply, reaching 10.2 per cent per annum in the period 1992–94,

- Significant income increases have been recorded in all the Kingdom's regions. Overall, household incomes in all regions, including the poorest, recorded a three-fold increase in real terms in the period 1988-96.

Box 2.1

GDP per Capita Growth 1980-95

The key to Thailand's remarkable performance in the field of poverty reduction has been the Kingdom's rapid rate of economic growth. Following a period of stagnation in the mid-1980s occasioned by an oil price increase and poor rice harvests, GDP growth exploded. As shown below, real rates of GDP per capita growth reached over 10 per cent per annum in the late 1980s during the peak of the economic boom. Since the boom years, they remained consistently above 6 per cent per annum, only coming to an abrupt halt in 1997 with the onset of the economic crisis. With the population growth rate now at replacement levels, GDP per capita growth has translated directly into significantly higher per capita incomes.

The importance of GDP per capita growth for poverty reduction provides a clear warning of the possible consequence of the country's current economic crisis. The contraction of the economy may have serious implications for the poverty situation, with the risk that the progress recorded in the past decade may be seriously undermined.

Source: National Account Division, NESDB

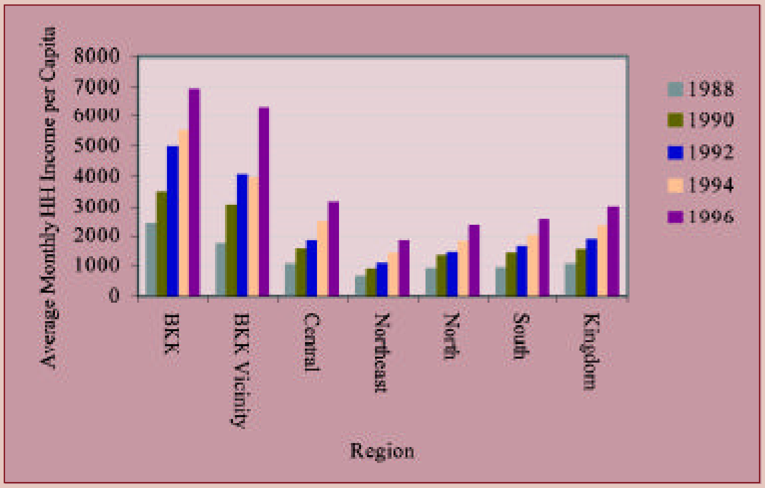
In short, In the period 1988-96 significant increases were achieved in the household incomes of all groups and in all geographical areas (see box 2.2). However, the growth pattern was uneven, with the urban population being the first to enjoy the economic benefits of the boom period of the late 1980s and early 1990s. However, rural populations have also enjoyed sustained increases in household incomes, with the time lag providing some evidence of so-called 'trickle down' effects, with the benefits of export-led growth accruing first to urban areas before reaching rural areas.

Box 2.2

The Growth of Real Incomes

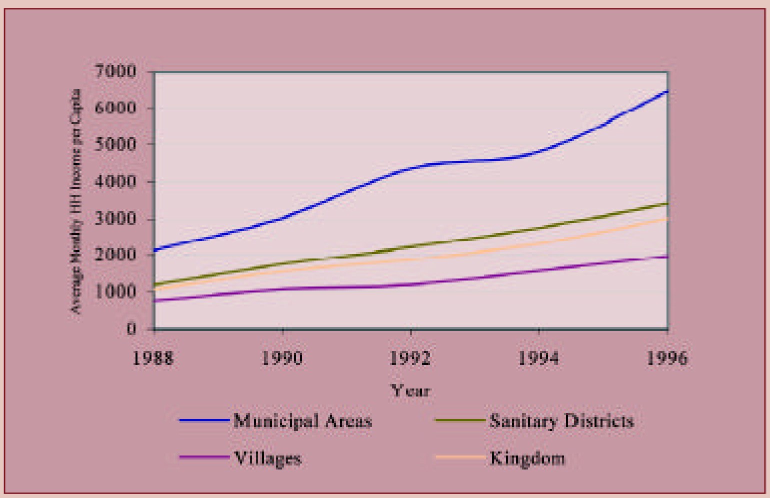
All regions and virtually all sections of the Thai population have benefited from the rapid rates of economic growth achieved in the ten-year period ending in 1997. As shown in the illustration below, real average monthly household income per capita increased in all regions two-to-threefold between 1988 and 1996. In the Kingdom as a whole, growth rates were highest in the boom years of 1988-90, when they averaged 16 per cent per annum. They later moderated, averaging 8 per cent per annum in the period 1994-96.

Average Monthly Household Income Per Capita by Region, 1988-96



Source: Socio-Economic Surveys, various years

Growth in Average Monthly Household Income per Capita by Community Type, 1988-96



Source: Socio-Economic Surveys, various years

Growth in real incomes has been shared by the three main community types in Thailand - municipal (urban) areas, sanitary districts and villages - although growth rates have been generally higher in urban areas. However, income growth in villages picked up after 1992 when investments in rural areas sharply increased.

2. Poverty Eradication

The strong growth in household incomes has obviously impacted positively on the incidence of poverty. Different approaches have been used in Thailand for the measurement of poverty, each of which is based upon the notion of a poverty line. The first attempts to construct a poverty line for Thailand were made in 1974 by the World Bank, developed not only as a method for estimating the extent of poverty but also as a means for determining minimum wage rates. The poverty line is based upon nutritional criteria and the income required to satisfy nutritional needs. The required minimum income was referred to as the food poverty line, to which the minimum non-food requirements (for shelter, clothing and medicine) were added in order to arrive at an overall poverty line. The World Bank constructed two such poverty lines, one for urban and one for rural populations and the incidence of poverty figures were derived. The Head Count Ratio (HCR) method was employed by the World Bank in 1985. Based on the original systems of poverty line, adjusted for the price level, HCR is the proportion of the population whose income falls below the poverty line. In this chapter, this methodology is called the World Bank Method.

Kakwani and Krongkaew have recently prepared new estimates of income poverty based upon a revised and updated Word Bank methodology.[2] They argue that the old methodology has a number of flaws, notably the fact that it is based on 1978 conventions and it fails to distinguish between the calorie requirements of different individuals, between different food prices within the country, and the changes that have taken place in the past two decades in population structure and consumption patterns. Kakwani and Krongkaew have modified the methodology to take account of these deficiencies and have prepared new estimates of the extent of income poverty. This method is referred to in this chapter as the New Method. These estimates, which retain the distinction between food and non-food needs in the derivation, are reproduced regionally together with the figures derived from the World Bank's method in Table 2.3.

Table 2.3

Percentage of Poor: Old and New Poverty Lines

Location	Percentage of Poor New Poverty Line					Percentage of Poor World Bank's Poverty Line			
	1988	1990	1992	1994	1996	1988	1990	1992	1994
North	32.0	23.2	22.6	13.2	11.2	20.7	16.6	13.6	8.5
Northeast	48.4	43.1	39.9	28.6	19.4	34.51	28.27	22.31	15.7
Central	26.6	22.3	13.3	9.2	6.3	16.0	12.9	6.0	5.2
South	32.5	27.6	19.7	17.3	11.5	21.5	17.6	11.8	11.7
Bangkok	6.1	3.5	1.9	0.9	0.6	2.9	2.0	1.1	0.5
Bangkok Vicinity						6.5	2.8	1.3	0.8
Whole kingdom	32.6	27.2	23.2	16.3	11.4	22.2	18.0	13.1	9.6

It can be seen from Table 2.5 that there are substantial differences between the figures from the

[2] See Nanak Kakwani and Medhi Krongkaew, Poverty in Thailand: Defining, Measuring and Analysing, Development Evaluation Division, NESDB, with technical assistance from Asian Development Bank, 1998.

two measures for a given year. The new measure gives a much higher percentage of the population living under poverty than that of the World Bank. However, both measures confirm rapid progress recorded in poverty reduction. The new measure also suggests that the reduction in percentage of poor is greater than the reduction originally indicated by the old measure within the same time frame. Table 2.3 also confirms that significant levels of poverty reduction have been achieved in all regions. In 1996, the overall percentage of the poor indicated by the new measure is 11.4 per cent. In real term, some seven millions people were living in poverty, less than half of the 1994 head count.

III. PROFILE OF THE POOR

Analysis of the Socio-Economic Surveys (SES) data makes it possible to develop a profile of poor households in Thailand. Given the rapid reduction in the incidence of poverty, such a profile facilitates targeting the poorest and most vulnerable groups. A profile is presented below that seeks to identify the main characteristics of poverty and of poor households.

1. Regional Distribution of Poverty

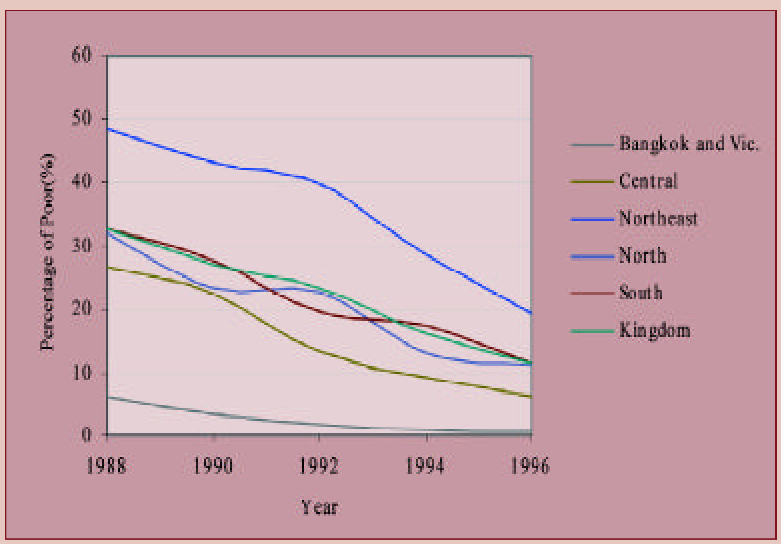
Analysis of SES data using the new measure in table 2.3 also reveals that the poverty incidence has declined sharply in all regions (see box 2.3).

Box 2.3

Regional Poverty Incidence

The broad-based character of the growth in per capita incomes finds very tangible expression in the sharp reductions in regional poverty incidences. As shown in the illustration below, all regions have recorded significant reductions in the percentage of the population living below the poverty line (percentage of poor).

The highest percentage of poor can still be found in the Northeast region. However, as the illustration shows, the reduction in the incidence of poverty in the Northeast region has been particularly marked, falling more rapidly than in most other regions, especially since 1992. Bangkok and Bangkok Vicinity is the direct opposite, although the percentage of the poor between 1988 and 1996 has never risen above eight per cent, there have been relatively little reduction in the incidence of poverty in this period. All other regions have similar percentages of poor that decline over time in a similar manner.



Source: 'Poverty and Inequality During the Economic Crisis in Thailand' Indicators of Well-Being and Policy Analysis, NESDB newsletter, January 1999

Table 2.3 also indicates that poverty is overwhelmingly a rural phenomenon, the regions with higher proportion of rural areas such as the Northeast, the North and the South are found to have much higher percentages of poor. This is confirmed by Table 2.4, which shows that the villages consistently have much higher percentage of poor. However, it is worth pointing out that villages have also been experiencing much larger reductions in poverty over time compared with other community types and the poverty gap between the villages and the municipal areas is narrowing down considerably.

Table 2.4

Percentage of Poor by Main Community Type, 1988-96

Community Type	Percentage of Poor				
	1988	1990	1992	1994	1996
Municipal areas	8.0	6.9	3.6	2.4	1.6
Sanitary districts	21.8	18.2	12.7	9.6	5.8
Villages	40.3	33.8	29.7	21.2	14.9

Source: 'Poverty and Inequality During the Economic Crisis in Thailand',
Indicators of Well-Being and Policy Analysis, NESDB newsletter, January 1999

2. Main Characteristics of Poor Households

Household size: Poverty appears to be positively correlated with average household size. As shown in Table 2.5, households with four or more members in the households have high percentage of poor. Larger households tend to be poor because in large households, the numbers of people who do not work far exceed the number of the income-earners. This is confirmed by an examination of dependency ratios that can be shown to always be consistently higher for poor households in all regions of the country.

Table 2.5

Percentage of Poor by Average Household Size, 1988-96

Household Size	Percentage of Poor				
	1988	1990	1992	1994	1996
1 person	3.4	3.7	2.9	1.0	1.0
2 persons	10.6	9.2	6.5	3.2	2.5
3 persons	20.2	16.1	14.3	8.6	6.2
4 persons	29.1	23.0	20.9	16.4	10.9
5 persons	34.9	28.3	27.4	19.4	13.8
6 persons	41.2	34.3	32.2	23.7	19.5
7 persons and over	50.4	43.2	33.5	27.9	18.3

Source: 'Poverty and Inequality During the Economic Crisis in Thailand'
Indicators of Well-Being and Policy Analysis, NESDB newsletter, January 1999

Further evidence of the correlation existing between poverty and average household size can be found by comparing the average size of poor households in the Northeast Region and Bangkok. In 1992, for example, the average size of a poor family in the Northeast Region was 5.64 persons compared with 4.43 persons in Bangkok. Interestingly, the highest average size of poor households is found in the Southern Region and this may help to explain the region's poverty incidence more than in any other region.

Sex of household head: It can be seen from table 2.6 that there is comparatively little evidence of correlation at the aggregate level between poverty and the sex of the household head. However, female-headed households appear to be accounting for an ever-larger share of the nation's poor population. In 1988, the difference in the percentage of poor between the male and female-headed households was noticeable. In 1994, the difference was negligible, about the same proportion of female-headed households were in poverty. There is also evidence, presented later in this report, that women may be confronted with even greater problems in maintaining the level of household incomes.

Table 2.6

Percentage of Poor by the Sex of the Household Head, 1988-94

Gender	Percentage of Poor			
	1988	1990	1992	1994
Male	33.4	28.0	24.1	16.3
Female	28.7	23.4	18.8	16.6

Source: N. Kakwani and M. Krongkaew, 'Poverty in Thailand: Defining, Measuring and Analysing', Development Evaluation Division, NESDB, 1998

Age of household head. As indicated in Table 2.7, the correlation between poverty and the age of the household head is not evident among the household heads within age group of 30-69 years. The percentage of poor is slightly higher in the case of households headed by the elderly (those above 70 years old).

Table 2.7

Percentage of Poor by Age of Household Head, 1988-96

Age of Head	Percentage of Poor				
	1988	1990	1992	1994	1996
under 20	11.2	4.8	11.5	1.4	3.2
20-29	26.4	23.0	17.3	12.0	7.7
30-39	33.0	27.4	23.2	16.7	12.0
40-49	35.1	28.3	24.3	16.0	11.7
50-59	32.4	26.9	23.3	16.6	10.5
60-69	32.4	26.6	22.3	14.7	11.6
70 and over	33.8	30.6	27.5	22.9	14.0

Source: 'Poverty Profiles for Thailand', Indicators of Well-Being and Policy Analysis, NESDB newsletter, May 1998

However, households headed by people 60 years and older have the similar percentage of poor to those headed by younger people. This indicates that a substantial proportion of old people may find it increasingly difficult to cope physically with poverty and allied deprivation.

Education of household head: The correlation between levels of educational attainment and poverty is clearly demonstrated in Table 2.8. It shows that the heads of poor households, especially those who live in the villages have either no formal education or only primary education. Over the years, the average educational attainment level varies very little among the poor. There is however, little improvement in the municipal areas and declines in both the sanitary districts and villages. On average, there are no poor household heads that have completed more than 5.5 years of schooling.

Table 2.8

Average Educational Attainment Level of Household Heads among Poor and Non Poor by Community Types, 1988-96

Community Types	Average Educational Attainment Level (number of year in school)									
	1988		1990		1992		1994		1996	
Household Types	Poor	Non poor	Poor	Non poor	Poor	Non poor	Poor	Non poor	Poor	Non poor
Municipal areas	4.3	7.1	4.2	7.6	4.3	8.1	5.1	7.8	4.8	8.3
Sanitary districts	4.0	5.8	3.5	5.4	3.7	5.9	3.7	5.7	3.8	5.7
Villages	3.7	4.6	3.5	4.2	3.5	4.4	3.4	4.5	3.5	4.5

Source: 'Poverty Profiles for Thailand', Indicators of Well-Being and Policy Analysis, NESDB newsletter, May 1998

For the non-poor, the figures are quite different. The average educational attainment levels of non-poor household heads in villages are higher than the figures of poor household heads in municipal areas. On average, all non-poor household heads in the municipal areas have completed at least primary education and a couple of years of lower secondary education. Over the years, the figures for the non-poor households in sanitary districts and villages remain quite unchanged but there is a considerable increase in the level of educational attainment among non-poor household heads in municipal areas. These figures support the view that education is an important road for climbing out of poverty, while the lack of education is an important reason for falling into it. Also, educational level in urban areas tend to be higher than that of the rural areas for both poor and non-poor households, this suggests that educational policies should target the rural areas rather than the urban areas.

Occupational status of household head: Table 2.9 reveals that poverty is strongly correlated with occupational status. It shows that the percentage of poor is comparatively high for those households with the household heads working in agriculture and unskilled labour. However, it must be said that there has been a drastic decline in percentage of poor for both of the above occupational status of household heads since 1988. Households with retired or disabled household heads also have a rather high percentage of poor. This indicates that further measures should be introduced to alleviate the retired or the disabled from poverty.

Living conditions: Table 2.10 shows several indicators of basic necessities, housing conditions and access to consumer durable in different community types for the poor and non-poor[3]. It reveals

[3] The Indices of drinking water, water use, toilet facility and cooking fuel (highlighted in the table) are calculated by the Development Evaluation Division, NESDB on the basis of cleanliness, accessibility, convenience and availability. The highest possible value of each index is 100.0 and the lowest value is 0.0, the higher the value, the better.

Table 2.9

Percentage of Poor by Occupation of Household Head, 1988-96

Occupational Status	Percentage of Poor				
	1988	1990	1992	1994	1996
Professional and technical	2.4	1.0	1.1	0.7	0.4
Executives	0.0	2.9	2.0	3.1	1.7
Clerical workers	2.5	0.9	0.7	0.1	0.0
Sales workers	8.3	6.9	5.4	3.1	1.3
Services workers	6.0	6.6	3.4	2.3	1.1
Farmers	45.6	38.6	35.7	26.6	18.8
Production workers	13.7	11.0	6.1	5.1	3.3
Unskilled Labourers	37.7	34.3	22.8	14.5	5.6
Housework	20.7	12.3	13.5	9.1	5.2
Students	4.6	3.9	14.0	1.8	5.5
Retired workers	36.9	27.7	23.0	16.0	13.5
Disabled workers	35.1	42.9	35.0	25.1	15.8
Unemployed workers	15.5	56.9	9.8	2.0	7.5
No occupation	21.7	21.2	25.1	4.5	6.7

Source: 'Poverty Profiles for Thailand', Indicators of Well-Being and Policy Analysis, NESDB newsletter, May 1998

Table 2.10

Living Conditions of Poor and Non-Poor in 1994

Living Conditions	Municipal areas		Sanitary districts		Villages	
	Non Poor	Poor	Non Poor	Poor	Non Poor	Poor
Index of drinking water	73.4	49.9	36.4	19.1	19.3	15.3
Index of water use	70.4	49.9	49.2	35.1	33.6	28.5
Index of toilet facility	62.3	55.5	60.1	57.4	58.0	52.2
Index of cooking fuel	80.4	61.1	72.1	37.3	54.8	34.5
Rooms per 100 people	71.9	43.9	70.8	49.9	65.8	46.3
Sleeping rooms per 100 people	53.5	35.1	49.1	34.6	44.4	32.4
Electricity in dwelling	99.3	98.0	98.4	95.8	94.8	89.0
Telephone in structure	39.8	5.4	17.4	1.7	3.3	1.1
Air conditioner in household	19.1	1.0	4.3	0.4	1.0	0.2
Bicycle in household	31.8	40.7	53.3	66.3	57.2	58.6
Electric fan in the household	96.1	86.0	94.4	83.4	83.9	65.6
Electric iron in the household	89.8	61.7	82.8	53.9	60.3	30.3
Motor cycle	42.7	45.5	61.7	41.0	65.1	31.8
Radio	85.3	6.02	78.2	62.9	71.0	55.1
Refrigerator in household	78.3	53.2	72.2	29.0	47.3	17.8
Colour TV in household	85.6	61.0	78.1	41.9	58.0	30.4
B&W TV in household	7.8	16.4	14.1	33.0	26.3	21.0
Video in household	40.8	11.4	21.4	1.9	7.8	1.0
Washing machine in household	33.6	12.1	18.9	1.8	6.0	0.7

Source: 'Poverty Profiles for Thailand', Indicators of Well-Being and Policy Analysis, NESDB newsletter, May 1998 that there are large disparities between the poor and non-poor in possessions of some consumer durable and household luxuries in all community types. Households in municipal areas are generally better off than village households. Basic necessities tend to have lesser disparities between the poor and non-poor especially at the village level. In the municipal areas, provision of these necessities, especially electricity, drinking water, water usage and cooking fuels are very high. In the villages, households that are classified as non-poor perform worse than poor households in municipal areas in some necessities and durable such as drinking and non-drinking water, electricity and a few others.

Poverty in Thailand can be seen as a rural phenomenon, those who live in villages and involve in agriculture are more likely to live in poverty, undernourished, under-educated and possess less consumer durable and basic necessities that entail well-being. In the cities, there are still pockets of poverty. Households with household heads working as production workers or unskilled labourers are still quite disadvantaged. Households with older, retired or disabled household heads tend to have very high chance of living in poverty, this shows that sufficient provisions have not been given to these areas of the population. It is in these areas that the policy makers should target urgently.

IV. INCOME GROWTH AND SHORTFALLS

1. Income Growth

Recent studies by N. Kakwani and the Development Evaluation Division, NESDB[4] using 1996 data show that there is a strong sensitivity (high elasticity) between poverty measures and per capita real GDP. An increase in the per capita real GDP of one percent will lead to a decrease in the percentage of poor of more than one percent. Therefore, this can be seen as one of the proofs that there is a trickle down effect from growth to poverty.

In the micro-level, studies[5] show that income of the non-poor grows at a much faster rate and with a much higher value than income of the poor. Income of the poor in municipal areas grows faster than income of those who live in rural villages. However, this does not necessary mean that the poor in the municipal areas are better off. Inflation rates have always been higher in urban areas than in rural areas. Higher level of occupation and education attainment level also lead to higher and faster growing income for both poor and non-poor, but the level and growth of income are much higher in the case of the non-poor. Household size does not significantly effect the level or the growth rate of income in the poor households, but in non-poor households, household size significantly affects both the level and the growth rate of income.

[4] See 'Poverty and Inequality during the Economic Crisis in Thailand', Indicators of Well-being and Policy Analysis, NESDB newsletter published under Asian Development Bank technical assistance, January 1999.

[5] This is based on the work of Medhi Krongkaew especially commissioned by UNDP Thailand for this report.

2. Income Shortfalls

Income shortfalls express the income required by poor households to bring them up to the poverty line. This can be indicated by the amount of money per year required by the government to eliminate poverty. Table 2.11 shows such data derived from 1994 SES statistics.

Table 2.11

Money per year Required to Eliminate Poverty

Region/Area	Per person per year	Total amout (mil. Baht)	Percentage share
Bangkok	**25**	**167**	**0.9**
Bangkok vicinity	**22**	**44**	**0.2**
Municipal areas	0	0	0.0
Sanitary districts	32	24	0.1
Villages	22	20	0.1
Central region	**169**	**1,861**	**10.3**
Municipal areas	117	142	0.8
Sanitary districts	92	164	0.9
Villages	194	1554	8.6
North-eastern region	**512**	**10,380**	**57.6**
Municipal areas	157	197	1.1
Sanitary districts	355	738	4.1
Villages	558	9,448	52.4
Northern region	**227**	**2,519**	**14.0**
Municipal areas	86	75	0.4
Sanitary districts	143	200	1.1
Villages	254	2,243	12.4
Southern region	**376**	**3,043**	**16.9**
Municipal areas	110	116	0.6
Sanitary districts	185	107	0.6
Villages	437	2,820	15.6
Whole Kingdom	**305**	**18,020**	**100.0**
Municipal area	102	698	3.9
Sanitary district	264	1,235	6.9
Villages	458	16,085	89.3

Source: N. Kakwani and M. Krongkaew, 'Poverty in Thailand: Defining, Measuring and Analysing' Development Evaluation Division, NESDB, with technical assistance from Asian Development Bank

Table 2.11 shows that Bt 18,020 million, if targetted appropriately should have closed the 'poverty gap' - lifting all Thais above the poverty line. Further, one can see that the most needy with very high income shortfalls are those who live in rural areas. Nearly ninety percent of total injection needed to eliminate poverty is needed to eradicate poverty at the village level. The most needy region is the Northeast, which require more than half of the total injection.

The designated poverty lines represent a very minimum requirement by households, this means that any shortfalls in the rural areas have to be fulfilled by means of borrowing, past-savings, grants and others. This put many rural Thais in a debt-poverty trap, a restriction of opportunities for these Thais to climb out of poverty.

V. INCOME INEQUALITIES

Although the incidence of poverty has declined significantly, income inequalities have tended to increase. This has held for all periods from the beginning of the 1960s to 1992. The worsening in income distribution is confirmed by the three main methods used to measure income inequality:

- Quintile groups. Comparison of the shares of different quintile groups in the income distribution, with income distribution becoming more equal if the income shares of the poorer quintiles increase in relation to those of the richer quintiles;

- T/B ratio. Comparison of the share of the top (T) and bottom (B) quintiles and determination of the ratio between the two, with a declining ratio signifying an improvement in income distribution;

- Gini coefficient which measures the extent to which income distribution deviates from a hypothetical distribution in which all persons receive the same income on a scale of 0-1, with 0.0 representing perfect equality and 1.0 complete inequality.

As shown in Table 2.14, income equality deteriorated in the period 1988-92, irrespective of the method used to measure it. For example, the income share of the richest quintile (Quintile5) grew from 54.2 per cent in 1988 to 59.0 per cent in 1992, whereas the income share of the poorest quintile (Quintile1) fell from 4.6 per cent in 1988 to 3.9 per cent in 1992. The T/B ratio, which reflects the superior income position of the richest quintile, increased from 11.8 to 15.0 during the same time periods, while the Gini coefficient also increased from 0.485 to 0.536. Although the table covers the period starting in 1988, it can be shown that earlier periods were also marked by a continuous deterioration in income equality.

Table 2.12

Trends in Income Inequality, 1988-96

Indicator	1988	1990	1992	1994	1996E
Quintile1	4.60	4.20	3.94	3.99	4.49
Quintile2	8.13	7.38	7.02	7.29	7.88
Quintile3	12.46	11.50	11.06	11.60	12.10
Quintile4	20.66	19.26	18.95	19.60	20.14
Quintile5	54.16	57.67	59.04	57.52	55.38
T/B Ratio	11.8	13.7	15.0	14.4	12.3
Gini coefficient	0.485	0.522	0.536	0.525	0.497

Source: Socio-Economic Surveys, 1988, 1990, 1992, 1994 and 1996

Note: The figures for 1996 are estimates derived from linear trends of previous years.

No less importantly, the table also reveals an improvement in income distribution in the period 1992-96. The income share of the richest quintile fell from 59.0 percent in 1992 to 57.5 percent in 1994, while the income share of the poorest quintile increased from 3.9 percent in 1992 to 4.0 percent in 1994. What is even more surprising is that the relative income shares of all other quintiles with the exception of the richest also increased, something which is quite unusual and which undoubtedly contributed to the overall improvement in income distribution. The Gini coefficient for 1994 confirms this positive trend, with a 1994 value of 0.525 compared to 0.536 in 1992. Available evidence suggests that the improvement in income distribution continued in 1996.

Box 2.4

Income Distribution and Rural Development

Income distribution in Thailand has recorded an improvement since 1992. This marks the first improvement in some 30 years of continuous measurement. The reason for the improvement is still unclear and positive developments can no doubt be attributed to a combination of factors. One of these factors may be the commitment made by the Government since 1990 to investments in rural areas and the rural population. These investments have covered employment and income generation programmes as well as the development of rural infrastructure and institutions. Advanced under the theme of 'spreading prosperity from the centre to the countryside', investments in rural development increased sharply from 1990 onwards. In 1989 around 2.6 per cent of the government budget was devoted to rural development expenditures. The share increased to reach more than 8 per cent in 1994, peaking at 10.1 per cent in 1997. Since poverty in Thailand is an overwhelmingly rural phenomenon, these investments may be feeding through into the Kingdom's income distribution.

The illustration below plots investments in rural development with the Gini coefficient. It provides some evidence, albeit far from conclusive, that after a time lag of around two years investments in rural development started to impact positively on patterns of income inequality.

Rural Development Expenditures and the Gini Coefficient

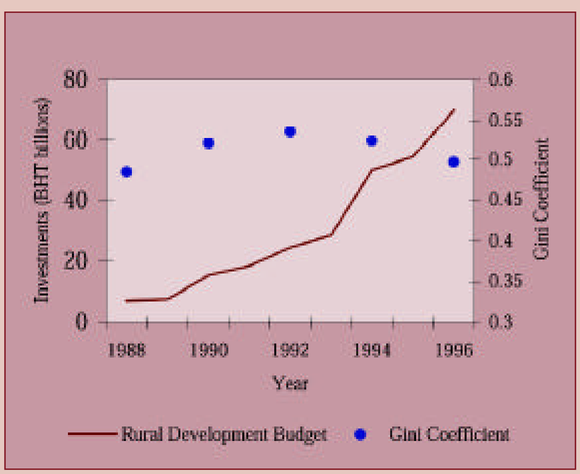
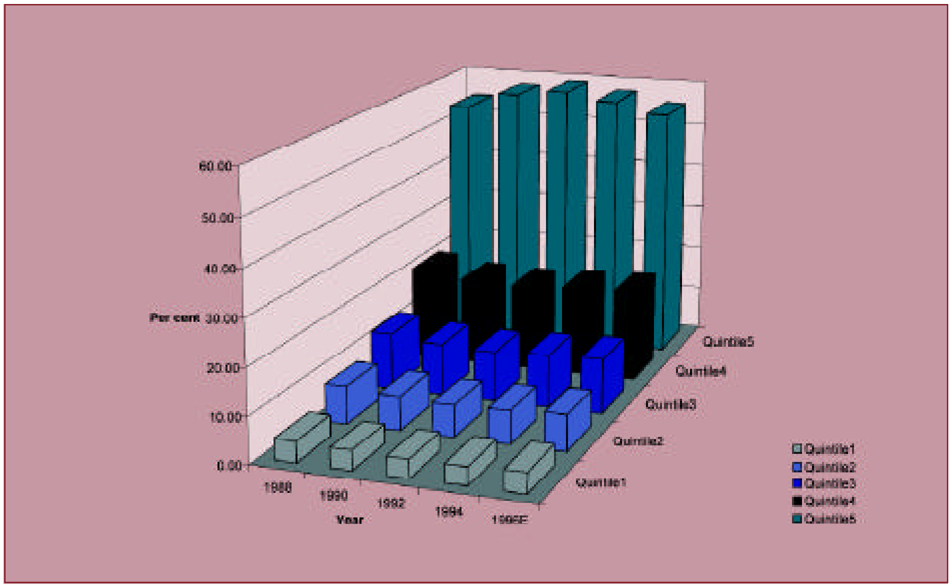


Figure 2.1

Income Share by Quintile Group, 1988-1996



The reasons for the improvement are uncertain. The improvement may be linked to the positive stimulus given to rural development by the policy of 'spreading prosperity from the centre to the countryside' that was vigorously pursued in the early 1990s. Under this policy, government funds allocated to rural development increased significantly and this may have been instrumental in reversing negative trends in income distribution (see box 2.4). In any event, 1994 has the character of a landmark year since it appears to herald a turning point in income distribution, with the first improvement in income distribution in almost three decades of continuous measurement.

Figure 2.1 summarises trends in income distribution based on the income shares of different quintile groups. Although the share of the richest quintile towers above the other quintiles, it appears to have reached its peak in 1992.

VI. CONCLUDING OBSERVATIONS

In the introduction, reference was made to the three main questions to be addressed by this chapter. They related to the extent of poverty, the identification of the poorest and most vulnerable groups, and trends in income distribution. We are now in a position to provide provisional answers to these questions.

On the extent of poverty, it has been shown that estimates of the number of poor people in Thailand are dependent upon the method used to measure poverty, especially the definition of poverty lines. Depending upon the method used, Thailand can be shown to have between 6.8 to 8.5 million persons in the mid-1990s who live below a predetermined poverty line and are unable to meet their basic food and non-food subsistence needs.

Thailand's poorest people are overwhelmingly found in rural areas. Eight out of every 10 of the poorest people are to be found in the nation's 66,000 villages. Within these villages, the poorest households will either have little or no agricultural land, being dependent upon a plot that is insufficient in size to meet the subsistence needs of the household or on the wages intermittently obtained through agricultural labour. The household will be a relatively large one, with additional mouths to feed. The heads of the poorest households will have little or no formal education and be without the skills that equip them for occupations outside their rural homes in all but the most menial of jobs. An increasing number of the heads will be women and older persons who are no longer able to work, adding to the vulnerabilities of the households. Many poor households will be required to lend more just to meet their subsistence needs, locking them ever more tightly in a debt trap that systematically deprives them of their few material assets and makes it increasingly difficult for them to climb above the poverty line. Many rural households dependent on farming that have succeeded in climbing above the poverty line exist precariously just above it, figuring prominently among the poorest of the non-poor, and where unexpected developments - an illness in the family, drought-induced crop losses or failures, the loss of remittances received from a son or daughter working in Bangkok or another large city - will be sufficient to drive the household back down below the poverty line. Around one-half of these most vulnerable households are to be found in the Northeast Region.

The income gap between poor rural households and other households has widened considerably, providing justification for the younger and more enterprising young people to abandon, either permanently or temporarily, their rural homes. This is depriving the countryside of its most dynamic group and adding to the problems encountered by poor farming families in maximising returns on their meagre land holdings.

While poverty is a daily fact of life for around seven million Thais and for many millions more who live just above the poverty line, the number of persons living in poverty declined sharply in the ten years leading up to 1996. The keys to this sharp reduction appear to be the high rates of economic growth combined with rural development programmes that have specifically targeted rural populations. High rates of economic growth have translated directly into income gains, with Thailand appearing to provide evidence of 'trickle-down' effects in which the benefits of growth are transmitted through urban to rural areas. However, 'trickle-down' effects would be insufficient to explain the progress recorded in poverty reduction. No less important have been the measures that have specifically targeted poor and vulnerable households through a wide variety of programmes implemented by many government agencies, which appear to be better co-ordinated today than was once the case.

However, the apparent existence of hardcore poverty provides a real cause for concern. Hardcore poverty is likely to be immune to the benefits of 'trickle-down' effects and it poses challenges for poverty targeting that have yet to be fully met. Moreover, the onset of crisis has meant that 'trickle-down' effects have effectively dried up and that challenges must be met in an environment of reduced government expenditures and reduced room for manoeuvre. Against this background, Thailand is called upon to open and write a new chapter in its ongoing efforts to reduce poverty and raise the living standards of its 61 million people.

Non-Income Poverty: An Assessment of Human Deprivation

I. THE DEVELOPMENT OF DEPRIVATION INDICES

1. Introduction

The previous chapter was devoted to a closer look at income poverty. The chapter was able to draw upon a long tradition of poverty analysis, with Thailand having established a strong track record for academic and policy-oriented research in this area. However, relatively few attempts have so far been made to invent and synthesize disparities and inequalities across a broader spectrum and to present the results in ways that are able to contribute to the formulation of policies and programmes that seek to address the many dimensions of deprivation and disadvantage. This chapter represents a first attempt to provide a more comprehensive and integrated approach.

2. Approach

To measure and assess the extent of inequalities and disparities, it was decided to make use of indices and indicators. It was recognized that the development of indices would need to meet conceptual, methodological and practical requirements. Principal among these were the following:

- Multi-dimensionality. The indices should give expression to the multi-dimensional character of human development and should seek to capture in systematic ways as many of these dimensions as possible and practicable.

- Policy relevance. The indices should have a policy application and be capable of supporting informed decision-making on strategies and programmes aimed at addressing inequalities and disparities.

- Spatial disaggregation. Since the indices seek to map deprivation and disadvantage and should have a policy application, they should not be excessively aggregated. The indices must penetrate below the nation's 7 main regions, since these are too broad in character and too few in numbers to serve as the focus for the development of indices.

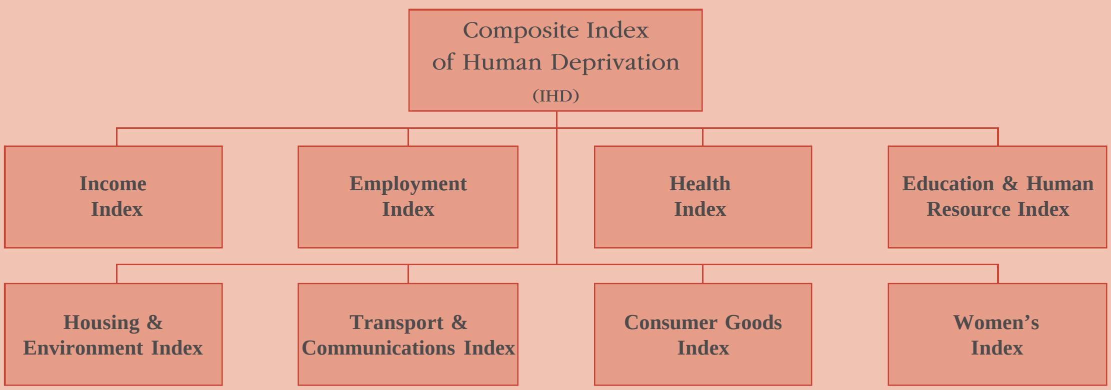
- Existing data sources. Since the collection of 'new' data for the compilation of the indices fell beyond the scope of the report, indicator development should draw entirely on available sources of data. This was not regarded as a major problem since Thailand, compared with many other developing nations, is a relatively 'data rich' country, with institutions, led by the National Statistical Office, with a well-developed capacity to collect, process and disseminate information on a wide range of topics.

- Transparency and replicability. The methodology used for the construction of the indices should be simple and replicable in order to facilitate the use of the indices and to encourage others to undertake comparable exercises.

Box 3.1

The Index of Human Deprivation (IHD)

This chapter presents an Index of Human Deprivation (IHD) that maps the disparities and inequalities that have followed in the wake of three decades of development. The Index is a composite index that brings together the results of eight separate indices, each of which has been calculated for individual provinces (changwats). The structure of the composite index can be illustrated as follows:



The separate indices are together made up of 17 components and 48 indicators in order to capture many of the dimensions of human development as well as the variations existing in patterns of deprivation and disadvantage. The 48 indicators are synthesized in the composite index.

Following a review of available data sources, it was decided to proceed with the development of 8 separate indices that could be combined into a single composite Index of Human Deprivation (IHD) (see box 3.1).[1] It was also decided to use the level of the province (changwat) for the compilation of the indices. Since there are 76 provinces (including Bangkok), this would ensure that the indices have a high degree of spatial disaggregation. Because provinces are frequently used as a basis for resource allocation, it would also help ensure the policy relevance of the indices.

The focus of the separate indices is summarized in Table 3.1. The large number of disparities captured by the indices confirms that the composite index will be multi-dimensional in character.

[1] The expression Index of Human Deprivation was preferred to Human Deprivation Index since its abbreviation (IHD) prevents possible confusion with UNDP's Human Development Index (HDI).

Table 3.1

Indices and Disparity Measurement

Index	Measurement
1. Income Index	Measures disparities in per capita and household incomes
2. Employment Index	Measures disparities in open unemployment and underemployment
3. Health Index	Measures disparities in health conditions and in access to health services and infrastructure
4. Education and Human Resource Index	Measures disparities in levels of educational attainment and in access to educational services and infrastructure
5. Housing and Environment Index	Measures disparities in the quality of housing and the built environment
6. Transport and Communications Index	Measures disparities in access to modern forms of transport and communications
7. Consumer Goods Index	Measures disparities in the ownership of consumer durables associated with standards of living and the quality of life
8. Women's Index	Measures disparities in the position of women at the provincial level
9. Composite Index of Human Deprivation	Single Index that combines and integrates the 8 individual indices

This approach was preferred to one based upon the calculation of the indices with which UNDP is strongly associated: the Human Development Index (HDI), the Human Poverty Index (HPI), and the Gender Development Index (GDI). The HDI is confined to four main indicators covering life expectancy at birth, educational attainment (expressed in terms of adult literacy rates and school enrollment ratios), and real GDP per capita. The GDI uses the same indicators as the HDI, but with the indicators disaggregated for both men and women, providing, in effect, an estimate of the HDI for both men and women. The HPI, developed later by UNDP, represents an attempt to capture more of the dimensions associated with poverty. It uses five main indicators covering survival deprivation (expressed as the percentage of the population not expected to survive to the age of 40 years), educational deprivation (expressed in terms of the adult literacy rate), and economic deprivation (expressed in terms of the percentage of the population without access to safe water, to health services, and the percentage of underweight children under five years of age).

Although these indices have demonstrated their value in comparing situations between countries, they have been found to be less helpful in identifying differences within countries, especially countries which, like Thailand, have consistently high (male and female) adult literacy rates, high primary school enrollment rates, and low percentages of underweight children. Moreover, there are practical problems in Thailand in the calculation of the indices at a disaggregated level. There is, for example, no estimate of the percentage of income retained by women (required for the calculation of the GDI), and no estimate of the percentage of the population that is not expected to survive to the age of 40 (required for the HPI). These difficulties become insurmountable when the province is the focus of attention.[2]

Since indicator development is tied to existing sources of information, data availability precluded the compilation of some indices with a particular significance for human development. This applied, for example, to the compilation of an index that would give expression to such concepts as empowerment and participation. The disaggregated data required for the development of such indicators are simply not available in a usable form.

The strength and robustness of an index tends to increase in proportion to the number of indicators included. This applies to the indices presented in the following pages. The results of indices that are able to draw upon only two indicators, such as the Employment Index, should thus be interpreted with caution. The Health Index, which is able to draw upon 10 indicators, is accordingly more robust and its results more informative. It follows that the main value of index development is to be found in the composite IHD, which unifies 48 different indicators.

It should also be noted that indicators are preeminently concerned with the quantifiable. Many aspects of human development that are qualitative in nature often remain beyond their reach. While every effort has been made, within the confines of available data, to identify indicators that are able to capture qualitative information, the indices presented in the following pages have, like all indices, inherent limitations. Student/staff ratios and population/doctor ratios, for example, can be regarded as qualitative indicators, but the first says little about the quality of education available to students, while the second is deficient in its presentation of the quality of health services. Such observations acquire a significance in Thailand with its large rural population, given that it is not unusual for the most qualified and able teachers and doctors to prefer an urban location.

3. Methodology

Each of the 8 indices is composed of components and indicators that are used for purposes of measurement. A full list of components and indicators is provided in Table 3.2.

The methodology used for the compilation of the indices is simple and easily replicable. For each indicator there are 76 observations that fall within a range from 'best' to 'worst' These observations are organized in the form of a frequency distribution that permits the calculation of a median, quartiles and deciles. Given the distribution of observations, the methodology applies a penalty score to provinces that perform badly on the indicator. Poor performance is defined in relation to the median calculated for the frequency distribution. The median was preferred to the average given that the average is often biased by very high and/or very low observations, characteristic, for example, of income distributions. All provinces with observations that fell between the first and second quartiles were allocated 0.5 penalty points, and all provinces with

[2] HDIs have been calculated for the main regions in Thailand and these are reproduced and compared with the Index of Human Deprivation towards the end of the chapter.

Table 3.2

Composition of indices

INDICES	COMPONENTS	INDICATORS
1. Income Index	1. Income level	1. Per capita income 1996, (Baht)
	2. Income change	2. Medium-term change in per capita incomes 1988-96 (%) 3. Short-term change in household incomes 1992-96 (%)
2. Health Index	3. Prevailing health situation	4. Infant Mortality Rate (per 1,000 live births) 5. Under Five Mortality rate (per 1,000 live births) 6. Maternal Mortality Rate (per 100,000 live births) 7. Incidence of first degree malnutrition in children (%) 8. Incidence of notifiable diseases (per 1,000) 9. Incidence of malaria (per 1,000) 10. Incidence of Sexually Transmitted Diseases (per 1,000)
	4. Health infrastructure	11. Persons per physician (persons) 12. Persons per nurse (persons) 13. Persons per hospital bed (persons)
3. Education and Human Resource Index	5. Educational attainment	14. Adult literacy rate (%) 15. Persons without formal education (%) 16. Persons completed primary education (%) 17. Persons completed secondary education (%) 18. Primary school enrollment ratio (%) 19. Secondary school enrollment ratio (%)
	6. Educational infrastructure	20. Students per teacher (persons) 21. Students per classroom (persons)
4. Employment Index	7. Unemployment	22. Economically active population actively looking for work (%)
	8. Underemployment	23. Economically active population waiting for farm season (%)
5. Housing and Environment Index	9. Housing quality	24. Houses in non-permanent building materials (%) 25. Average number of persons per sleeping room (persons)
	10. Environmental quality	26. Households without access to safe sanitation (%) 27. Households without access to electricity (%) 28. Households cooking with fuelwood and charcoal (%)
6. Transport and Communications Index	11. Transport infrastructure	29. Households with access to a bicycle (%) 30. Persons per motor cycle (persons)
	12. Communications infrastructure	31. Households with access to a radio (%) 32. Persons per telephone (persons)
7. Consumer Goods Index	13. Consumer goods	33. Households with access to a colour TV (%) 34. Households with access to a refrigerator (%) 35. Households with access to a sewing machine (%) 36. Households with access to an electric fan (%)
8. Women's Index	14. Level of economic activity	37. Women in the labour force (%) 38. Women's unemployment rate (%)
	15. Educational attainment	39. Women without formal education (%) 40. Women completed primary education (%) 41. Women completed lower secondary school (%) 42. Women completed secondary education (%) 43. Enrollment rate of girls in lower secondary schools (%) 44. Enrollment rate for girls in secondary education (%)
	16. Reproductive health	45. Contraceptive prevalence rate (%) 46. Maternal Mortality Rate (per 100,000 live births) 47. Incidence of Sexually Transmitted Diseasess (per 1,000)
	17. Family and marriage	48. Average number of children per women (persons)

observations falling within the first quartile were given 1.0 penalty points.[3] Provinces with observations above the median were considered as performing either satisfactorily or well and

[3] Depending upon the formulation of the indicator (for example 'access to' or 'no access to') this procedure was reversed, with penalty points being awarded to provinces falling between the 2nd and 3rd quartiles and above the 3rd quartile.

were allocated no penalty points. This simple system means that three scoring possibilities were available for each province for each indicator: 0 (performing satisfactorily or well), 0.5 (performing poorly), and 1.0 (performing badly), with the notion of performance tied to relative deprivation and disadvantage.[4] This methodology was applied consistently to all indicators. Because the composite IHD brings together the 48 indicators used in the 8 indices, it represents the sum of 144 possible outcomes for each province, or of nearly 11,000 possible outcome for the Kingdom as a whole.

The methodology used does not provide for a system of priority weights either within individual indices or for the calculation of the composite index. This means that all indicators are assumed to possess the same importance and to have equal significance within a single index. Similarly, the 8 separate indices are given an equal weight in the calculation of the composite index. Although a system of weights could be applied without difficulty both to indicators within an index and to indices within the composite index, such a system was not developed given the absence of an objective basis for establishing priorities and the weights to be used. However, the methodology used easily permits the introduction of a system of prioritized weights, which could be based upon the exercise of political or other preferences.

4. Data Sources

Although Thailand is a 'data rich' country, the collection of the information required for the compilation of the indices required a major data collection exercise that extended over several months. The data required were spread over a wide range of sources and, for some indicators, it was necessary to make use of the 1990 Population and Housing Census, which was the only source that tabulated required data at the level of the province. Generally, the indicators draw upon data for different years in the period 1990–97. Data for different years have, when necessary, been used for the compilation of different indices, although data for a single year have always been used for individual indicators. Major efforts have necessarily been made to ensure consistency in terms of year and underlying concepts and definitions within individual data sets. For the three new provinces (Amnat Charoen, Nong Bua Lam Phu and Sa Kaeo), the data sets of the province from which each was separated are often used as proxies.

5. Supporting Maps and Tables of Human Deprivation and Disadvantage

The data used to calculate the indices are presented in a series of maps and tables that are integrated into this Chapter. There are maps for almost all of the indicators. It is hoped that the publication of supporting data in both tabular and graphical form will not only add to the value of the report but also help to establish the database required for more detailed investigations into patterns of human deprivation and disadvantage in Thailand.

[4] The possibility was considered of introducing a more complex scoring system that linked penalty points to deciles rather than quartiles. However, this was rejected since the more complex system was unlikely to influence final rankings in the composite index.

II. REVIEW OF INDIVIDUAL INDICES

1. Income Index

The Income Index measures disparities in household incomes. It thus deals with the core issue of poverty. Poverty is a direct function of income levels, which in large measure determine the means at the disposal of an individual, household or community to safeguard their security and to enlarge their opportunities. For the same reasons, income levels are a key determinant of human development.

The index draws upon the results of the Socio-Economic Surveys (SES) that have been conducted in Thailand on a regular basis since the 1980s as well as other sources published by NSO. It is based upon three indicators:

- Average per capita income, with the indicator serving as a measure of disparities between income levels;
- Medium-term change in per capita incomes (1988-96);
- Short term change in household incomes (1992-96).

It should be noted that figures for income levels are those reported in the SES and NSO publications, which are in nominal prices. The figures have not been corrected for differences in purchasing power parity (PPP) since the calculation of PPPs for 76 locations fell well beyond the scope of this investigation. However, as shown in Table 3.3, the differences in per capita incomes are so large, ranging from a high of Bt 254,611 in Bangkok to a low of Bt 19,636 in the case of Si Saket in the Northeast Region (1996 figures), that PPP corrections would be very unlikely to change the frequency distribution of observations.

For the calculation of the index it was not necessary to convert the nominal prices recorded in the SES into constant prices. The Income Index is not concerned with absolute values but rather in relationships existing between provinces. These relationships are unlikely to be highly sensitive to changes in the retail price index, especially in a country like Thailand with consistently low rates of inflation.

Table 3.3

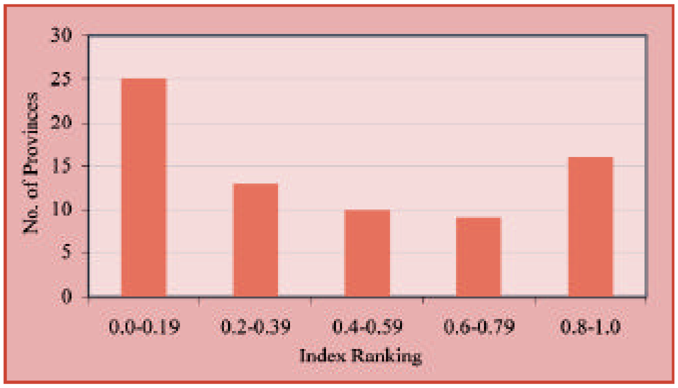
Income Indicators

Indicator	Unit	Best			Worst			Disparity
		Figure	Province	Region	Figure	Province	Region	
Average per capita income	Baht	254,611	Bangkok	BKK	19,636	Si Saket	Northeast	13:01
P.C. Income change 1988-96	%	410.3	Ayutthaya	Central	45.9	Tak	Northern	9:01
HH income change 1992-96	%	126.7	Nonthaburi	BV	-6.9	Suphan Buri	Western	

Figure 3.1

Income Index:

Distribution of Provinces by Index Ranking



Maps 1-3 show the provincial distributions for each of the indicators that have been used for the calculation of the Income Index.

The distribution of provinces by index ranking is given in Figure 3.1. The figure shows that twenty-five or one third of all provinces have moderately high index ranking. Nine of the twenty-five provinces scored 1.000 on the index, indicating that they should be regarded as the most deprived and disadvantaged. Seven of the nine provinces - Uttaradit, Chiang Rai, Mae Hong Son, Uthai Thani, Tak, Phichit and Phetchabun - are to be found in the North, and two - Phatthalung and Narathiwat - in the South. In contrast, 12 provinces are recorded as the least deprived in term of their income level.

2. Employment Index

Productive employment and sustainable livelihoods are recognized as the most powerful means for raising incomes, overcoming poverty, reducing vulnerabilities, and expanding choices and opportunities. However, the compilation of an Employment Index was frustrated by the absence of up-to-date, province-based information capable of providing the indicators required for the index. Following the review of available data, two indicators were adopted, although in both cases it was necessary to make use of 1990 Population and Housing Census data. These indicators are:

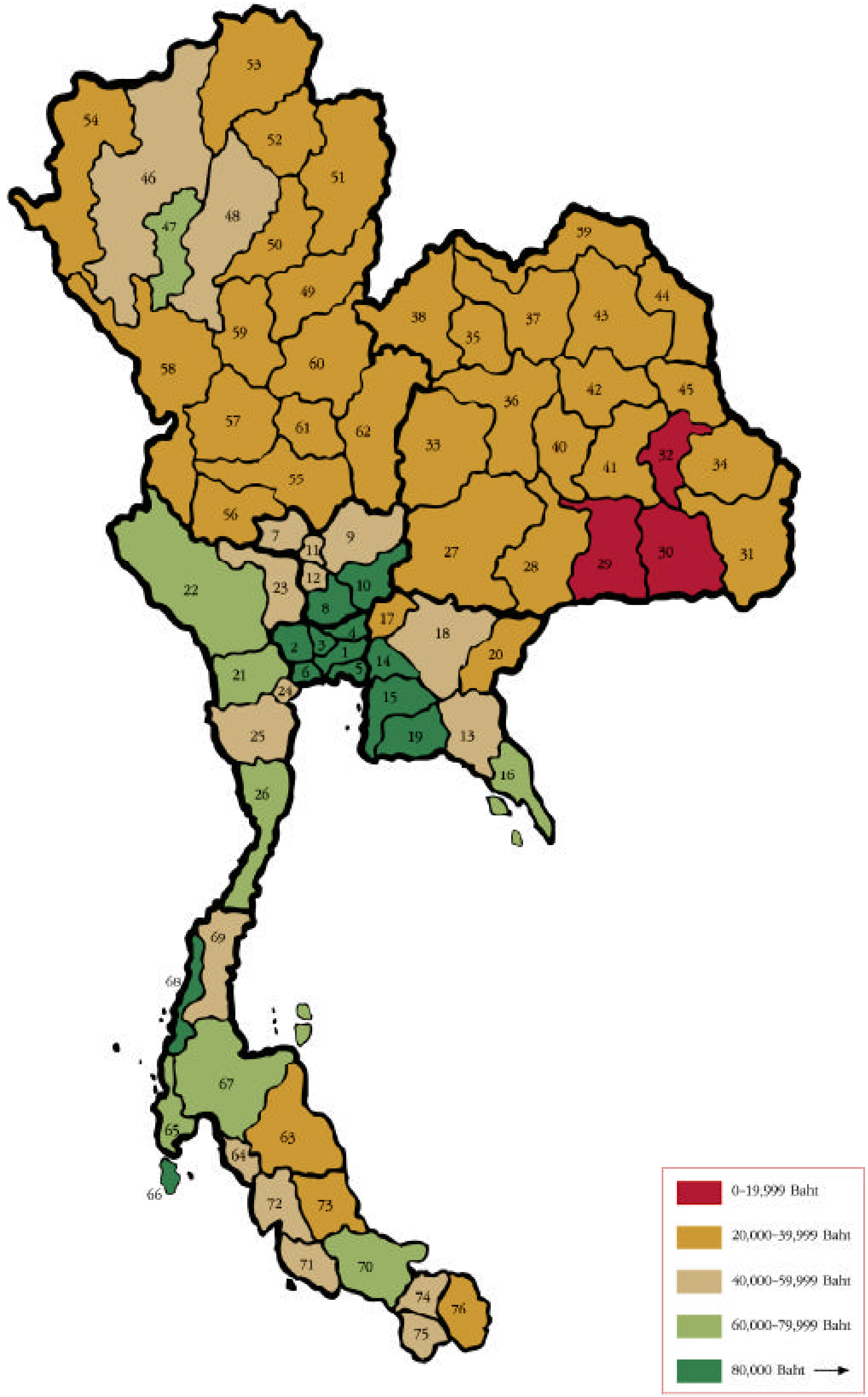
- The numbers of persons as a percentage of the economically active population who are actively looking for work, which is adopted as the unemployment indicator;
- The numbers of persons waiting for the start of the farm season, which is adopted as the general indicator of underemployment.

Both indicators are recognized as very imperfect. The underemployment indicator is biased towards rural areas and takes no account of underemployment existing within, for example, the urban informal sector. Data on such underemployment are unavailable at the provincial level.

The 'best' and 'worst' cases of the two indicators are summarized in Table 3.4. Maps 4 and 5 show the provincial distributions for each of the two indicators that have been used for the calculation of the Income Index.

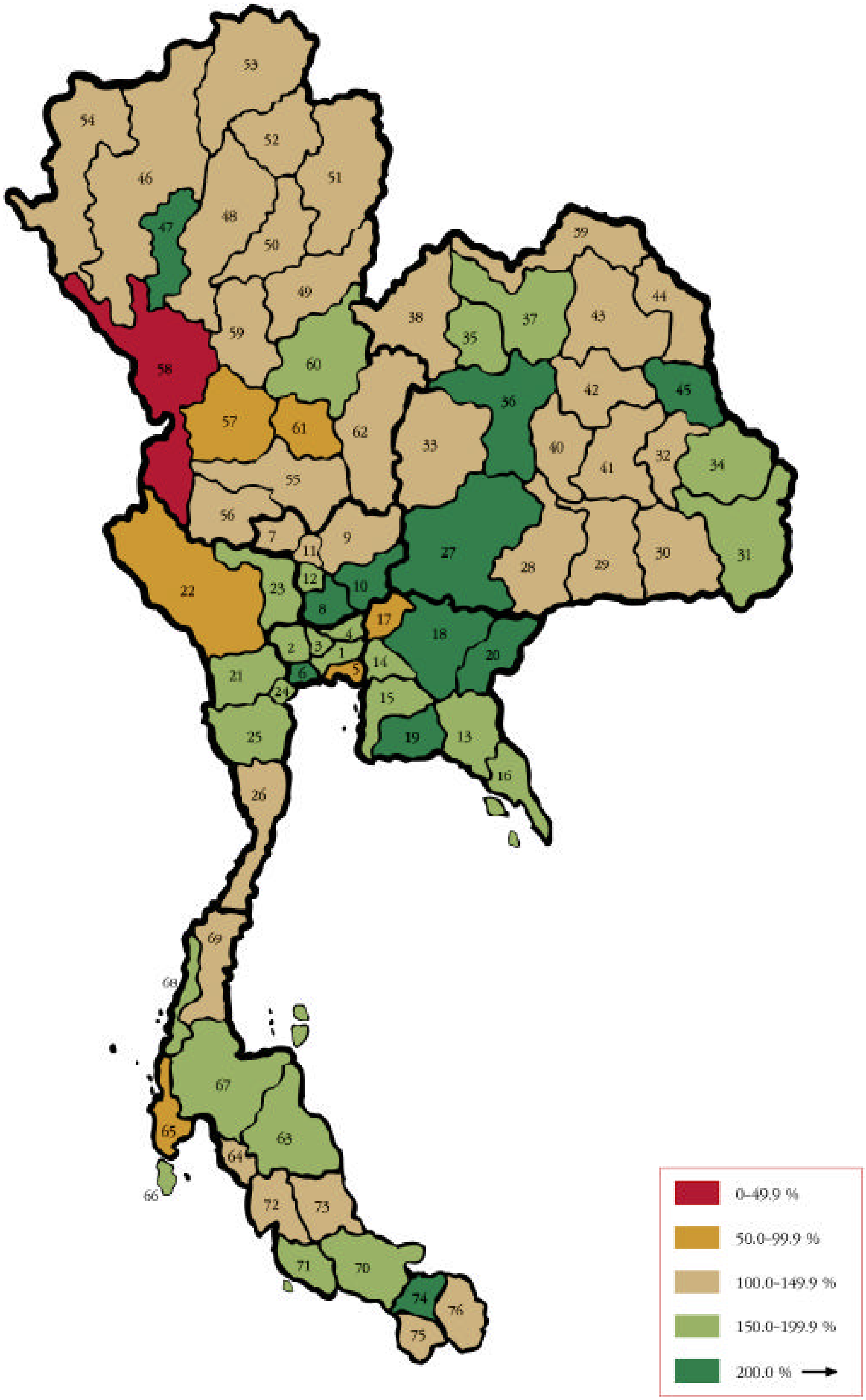
Map 1. Per Capita Income, 1996

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



Map 2. Change in per Capita Income 1988-96

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



Map 3. Change in per Capita Income 1992-96

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat

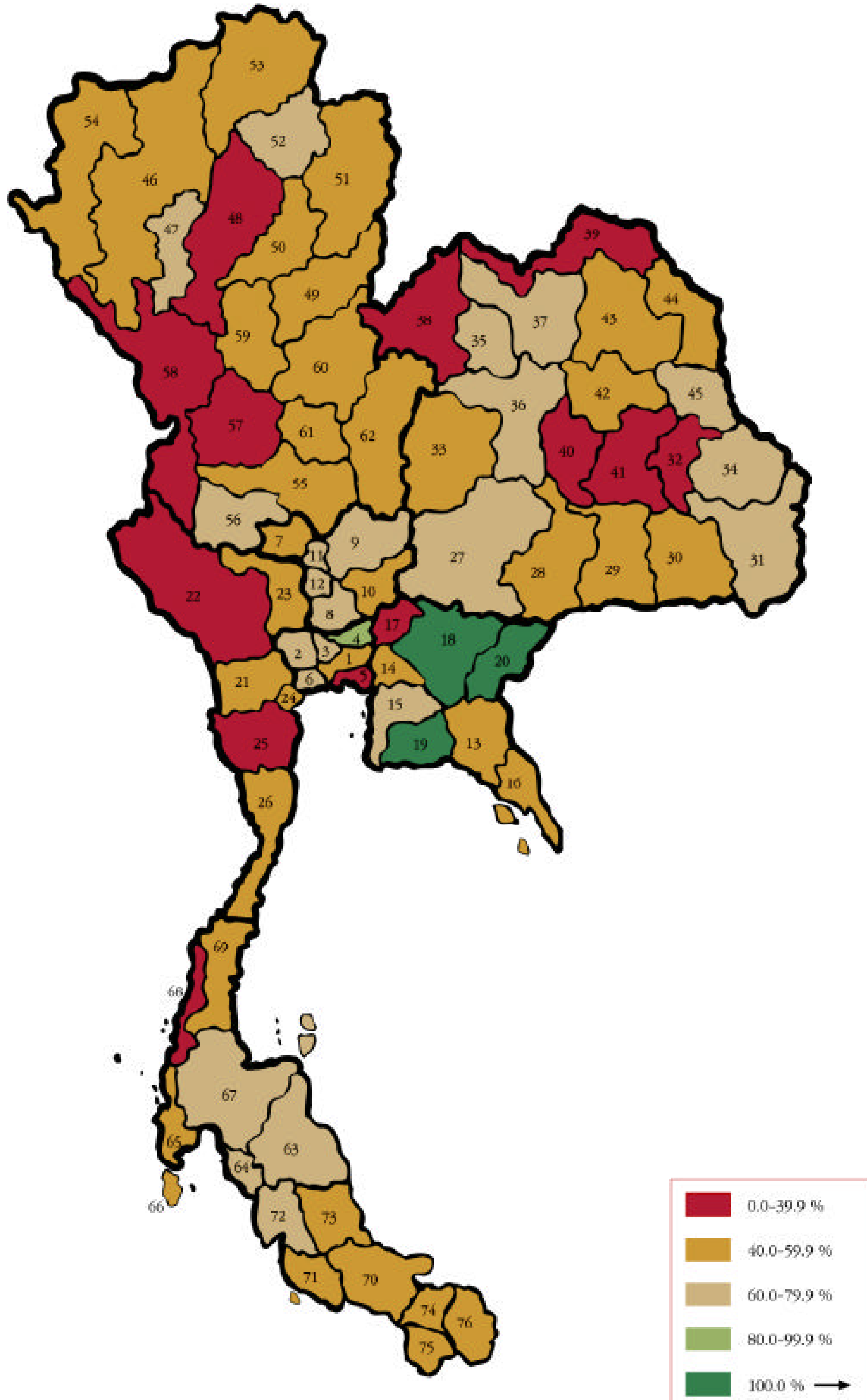


Table 3.4

Employment Indicators

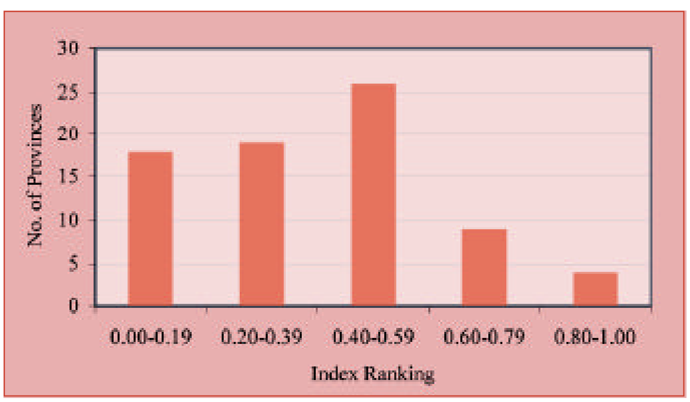
Indicator	Unit	Best			Worst			Disparity
		Figure	Province	Region	Figure	Province	Region	
Population looking for work	%	1.5	Trat	Eastern	28.0	Nakhon Phanom	Northeast	19:1
Population Waiting for farm season	%	0.0	Samut Songkhram	Western	68.0	Si Saket	Northeast	68:1

The distribution of index rankings in Figure 3.2 shows that four provinces have the highest level of unemployment and underemployment, they are Buri Ram, Sakon Nakhon and Nakhon Phanom in the Northeast and Tak in the North. They are followed by nine provinces that have slightly lower unemployment and underemployment figures. Five of these provinces (Nong Bua Lam Phu, Khon Kaen, Udon Thani, Nong Khai and Mukdahan) are to be found in the Northeast, two (Phayao and Chiang Rai) in the North, and one (Phatthalung) in the South. Thus, the majority of the provinces with relatively high unemployment and underemployment rates are in the north and the northeast. In contrast, eighteen provinces have low unemployment and underemployment figures, majority of which lie in the Central and Western Regions.

Figure 3.2

Employment Index:

Distribution of Provinces by Index Ranking



3. Health Index

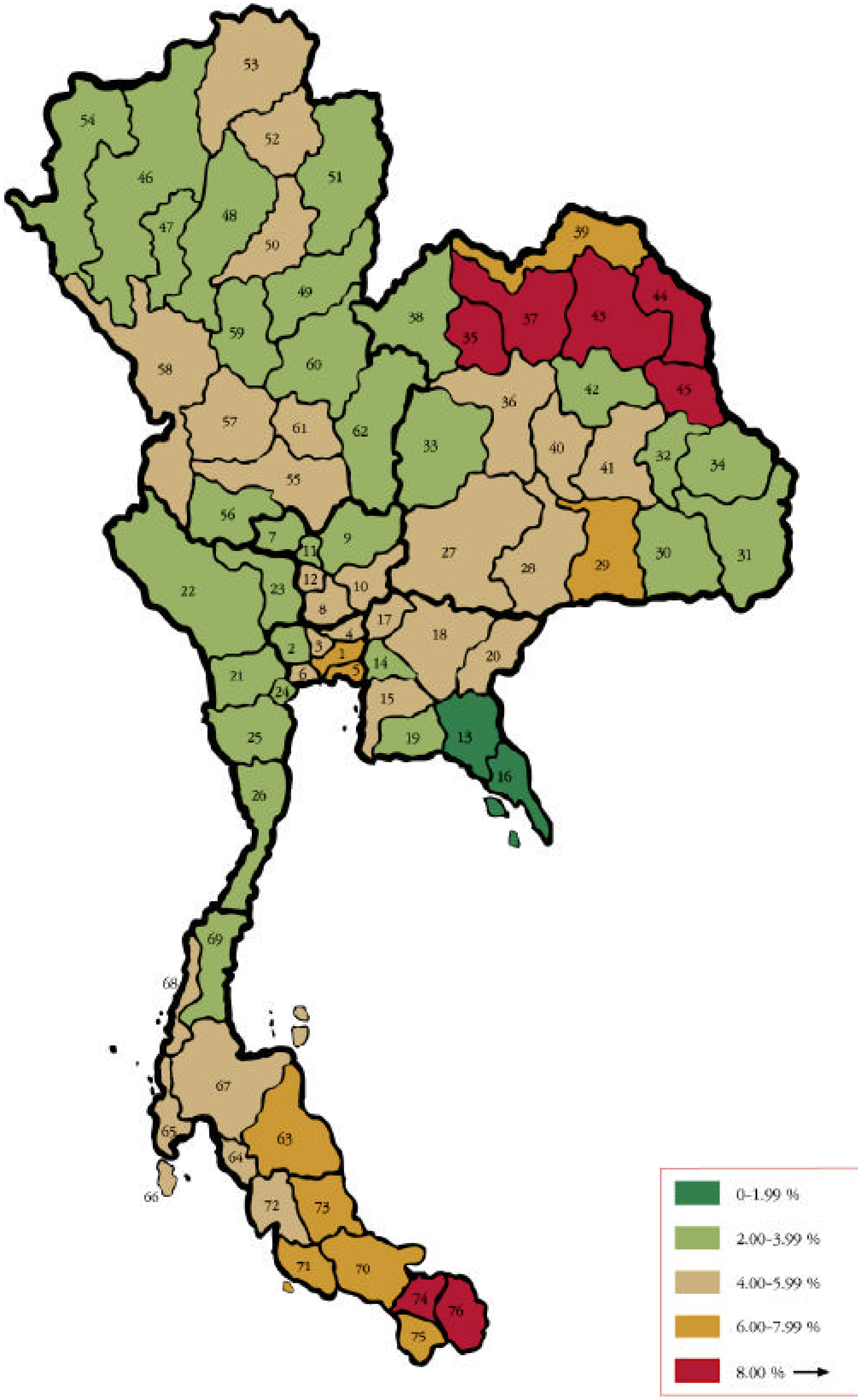
The Health Index is composed of two components covering the prevailing health situation and access to health services and infrastructure. The prevailing health situation is measured with seven different indicators covering:[5]

- The Infant Mortality Rate
- The Under Five Mortality Rate;
- The Maternal Mortality Rate;
- The incidence of first degree malnutrition among children;
- The combined incidence of reported cases of diahorrea, food poisoning and dysentery (referred to as selected notifiable diseases);
- The incidence of malaria;
- The incidence of sexually transmitted diseases (STDs).

[5] All indicators are calculated from government data. While some indicators have a high degree of reliability, some others should be regarded as approximations due to small sample sizes. This applies in particular to some of the incidence rates.

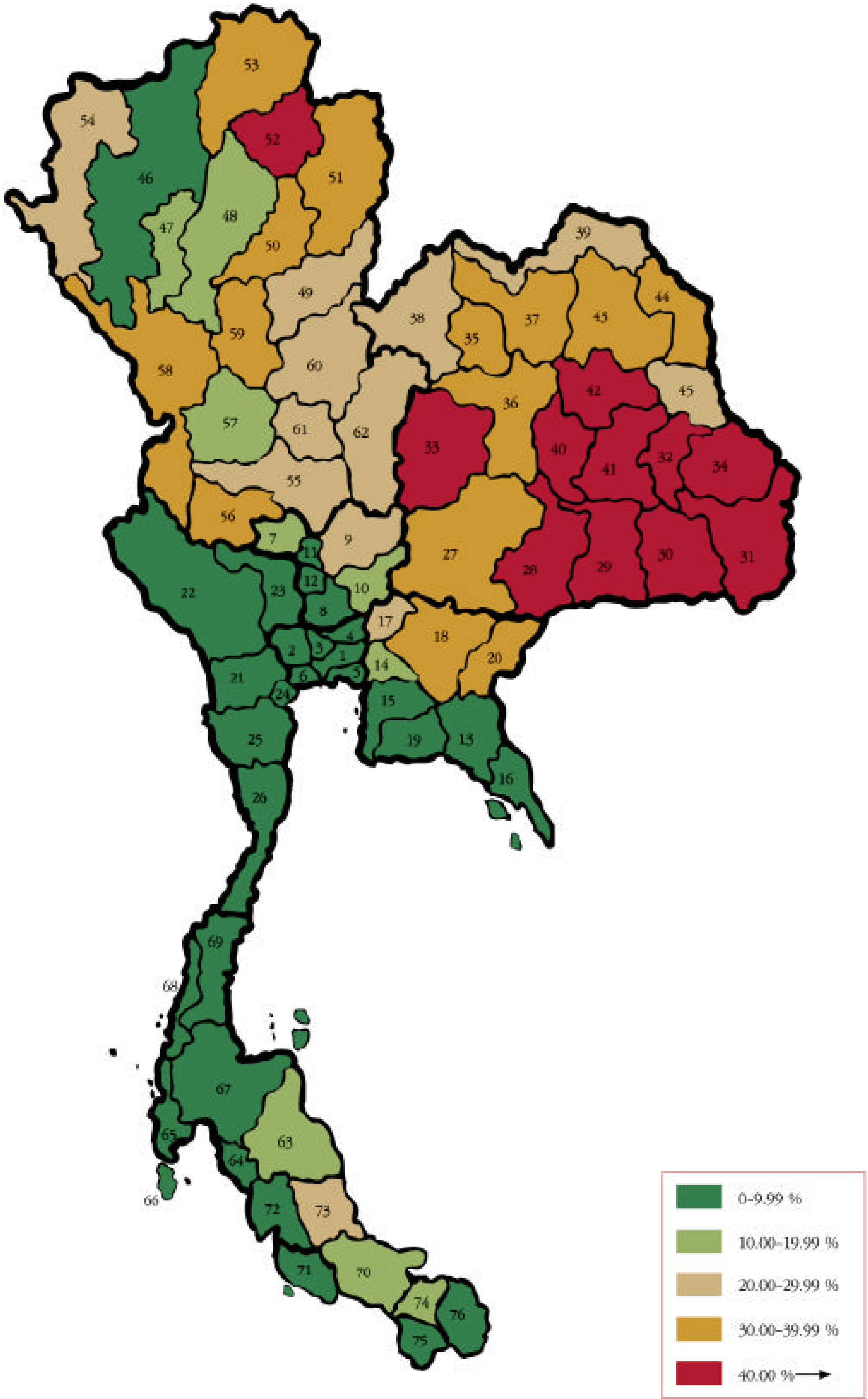
Map 4. Open Unemployment, 1990

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



Map 5. Percentage of Active Population Waiting for farm Season, 1990

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



Access to health services and infrastructure is measured with the following indicators:

- Ratio of persons per physician;
- Ratio of persons per nurse;
- Ratio of persons per hospital bed.

The indicators bring together data from different sources and, in some cases, were calculated especially for the compilation of the index. As indicated in Table 3.5, the disparities existing within these indicators varied from 7:1 in the case of the combined incidence of selected notifiable diseases to a high of 336:1 in the case of the incidence of malaria. Maps 6–15 show the provincial distributions for all of the indicators that constitute the health index.

Table 3.5

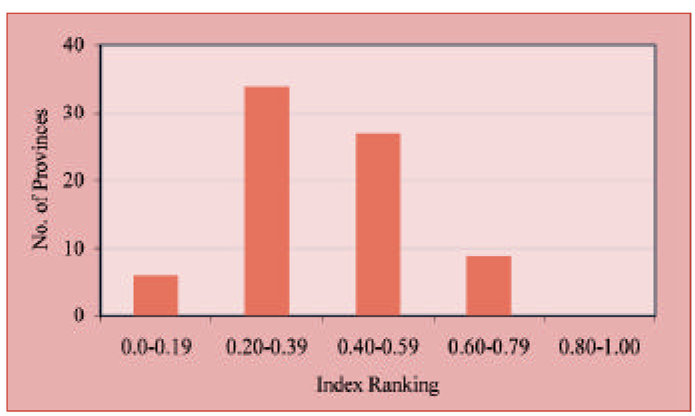
Health Indicators

Indicator	Unit	Best			Worst			Disparity
		Figure	Province	Region	Figure	Province	Region	
Infant mortality rate	Per 1,000	1.0	Lop Buri	Central	48.8	N.B. Lam Phu	Northeast	49:1
Under 5 mortality rate	Per 1,000	1.1	Chon Buri	Eastern	64.5	N.B. Lam Phu	Northeast	59:1
Maternal mortality rate	Per 100,000	0.0	Several	--	174.2	N.B. Lam Phu	Northeast	--
First degree malnutrition	%	0.7	Samut Prakan	BV	19.0	Khon Kaen	Northeast	
Incidence of selected notifiable diseases	Per 1,000	7.5	Bangkok	BV	41.5	M. Hong Son	Northern	6:1
Incidence of malaria	Per 1,000	0.008	N.B. Lam Phu	Northeast	26.639	Tak	Northern	336:1
Incidence of STDs	Per 1,000	0.01	Sakon Nakhon	Northeast	1.438	Lampang	Northern	144:1
Persons per physician	Persons	2,298	Chiang Mai	Northern	20,546	Si Saket	Northeast	9:1
Persons per nurse	Persons	331	Bangkok	BV	3,222	Kamphaeng Phet	Northern	10:1
Persons per hospital bed	Persons	281	Bangkok	BV	1,732	Si Saket	Northeast	6:1

Figure 3.3

Health Index:

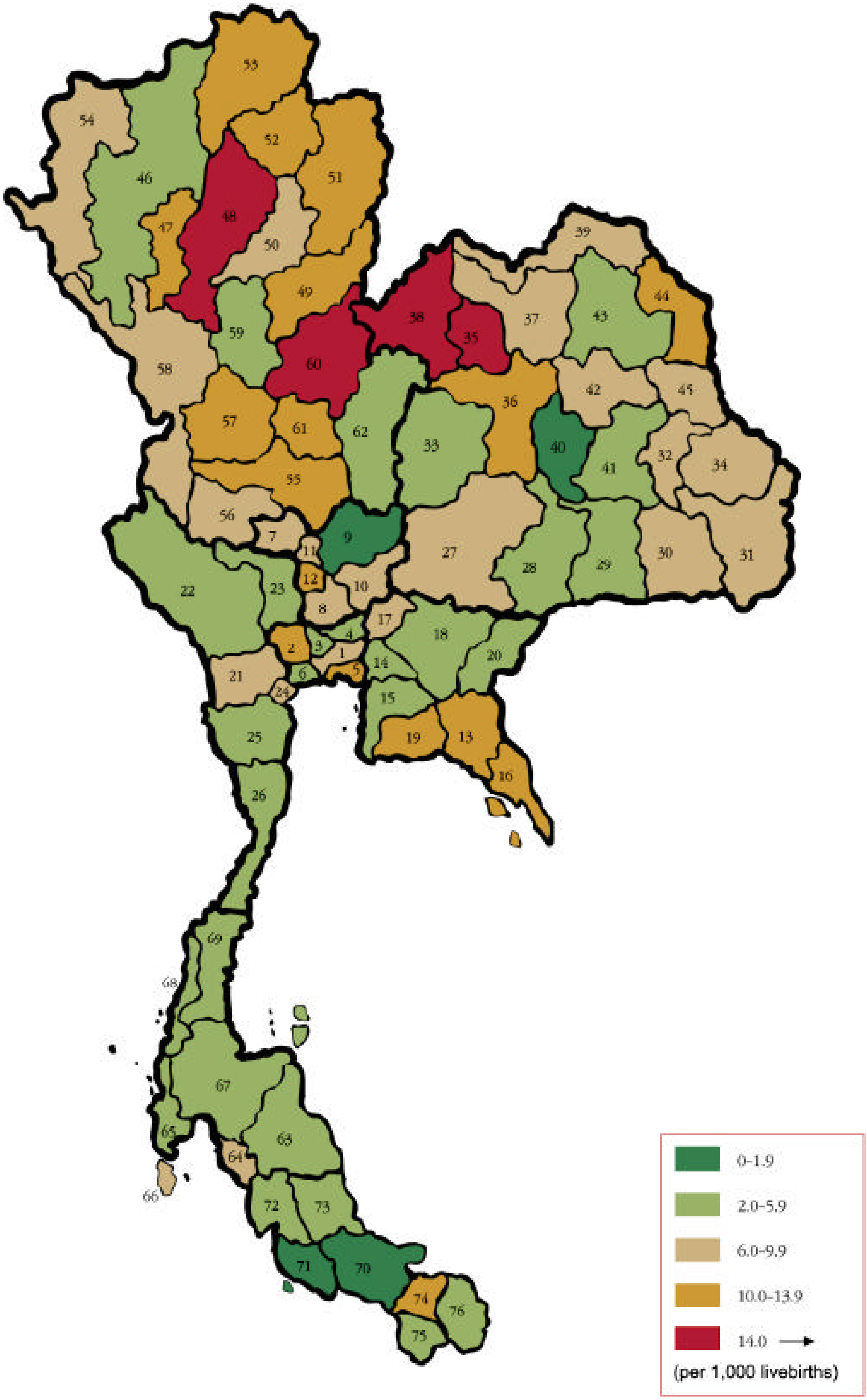
Distribution of Provinces by Index Ranking



The distribution of provinces by index ranking in Figure 3.3 shows that the health conditions among most provinces are roughly equal with very few provinces in either extreme. The highest scores that indicate relatively poor health conditions are recorded in Chiang Rai and Lamphun in the North followed by Loei and Nakhon Phanom in the Northeast, and Kamphaeng Phet and Tak in the North. Songkhla province in the South has the lowest score and thus has the best health conditions.

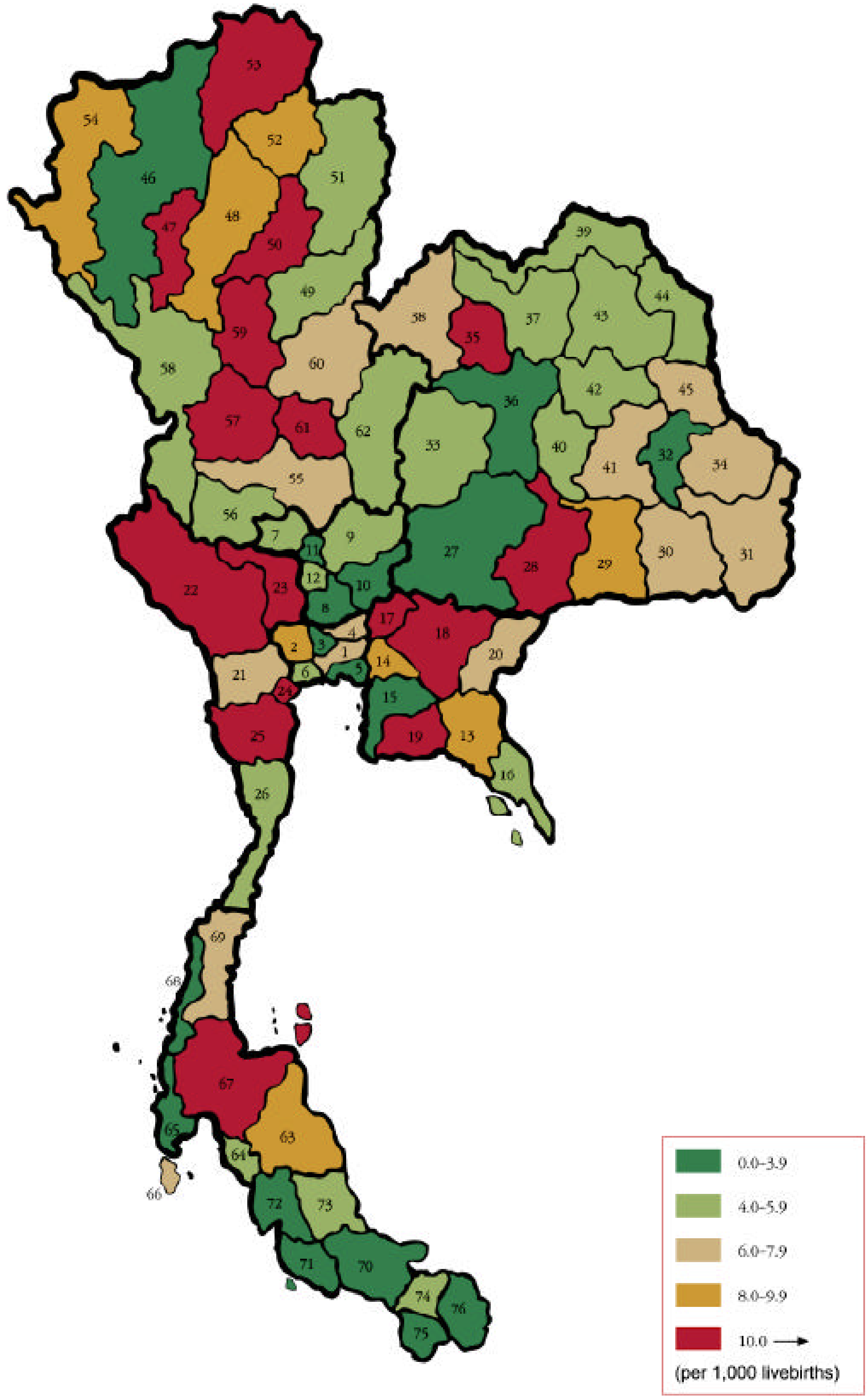
Map 6. Infant Mortality Rate, 1997

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



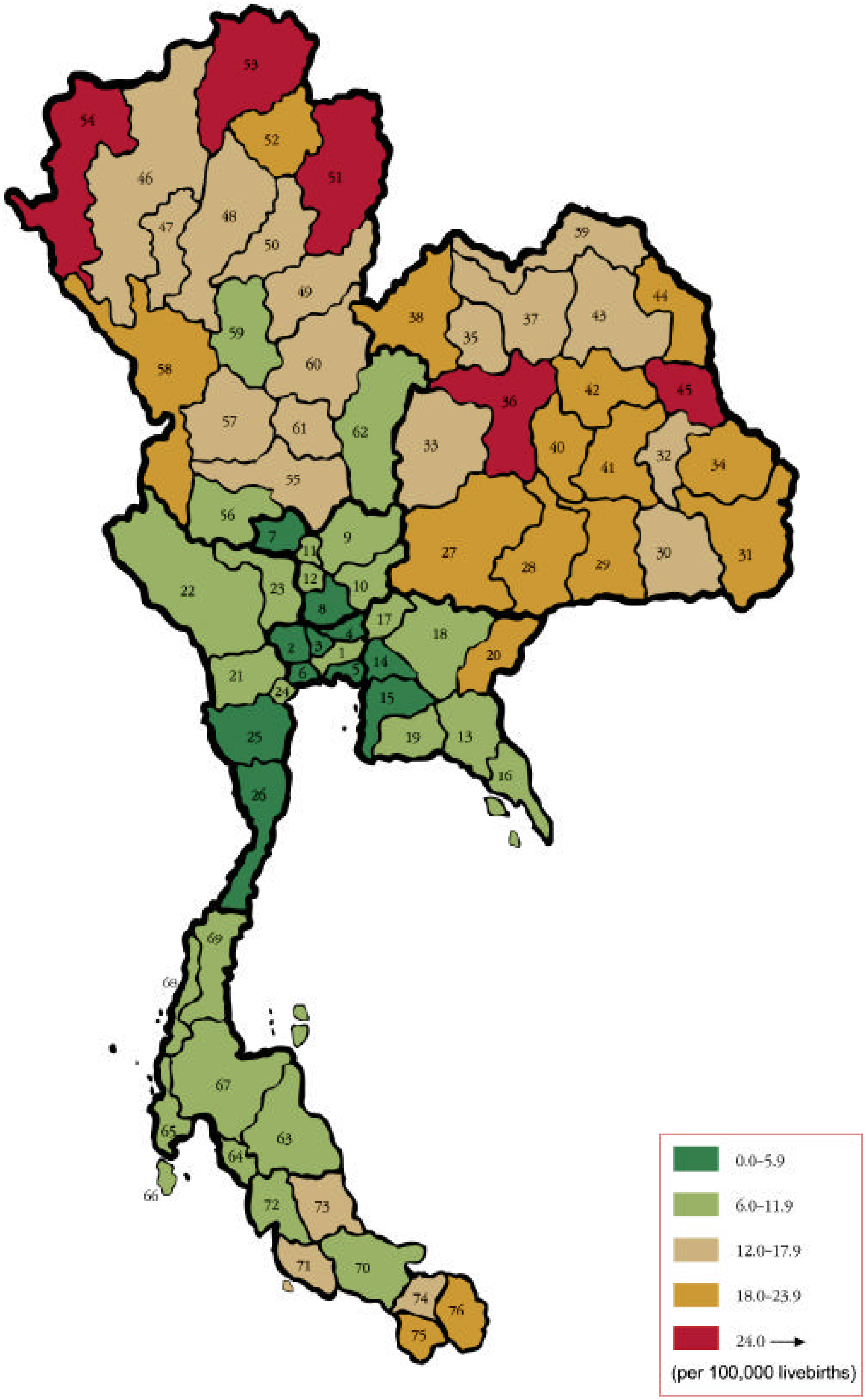
Map 7. Under-5 Mortality Rate, 1997

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



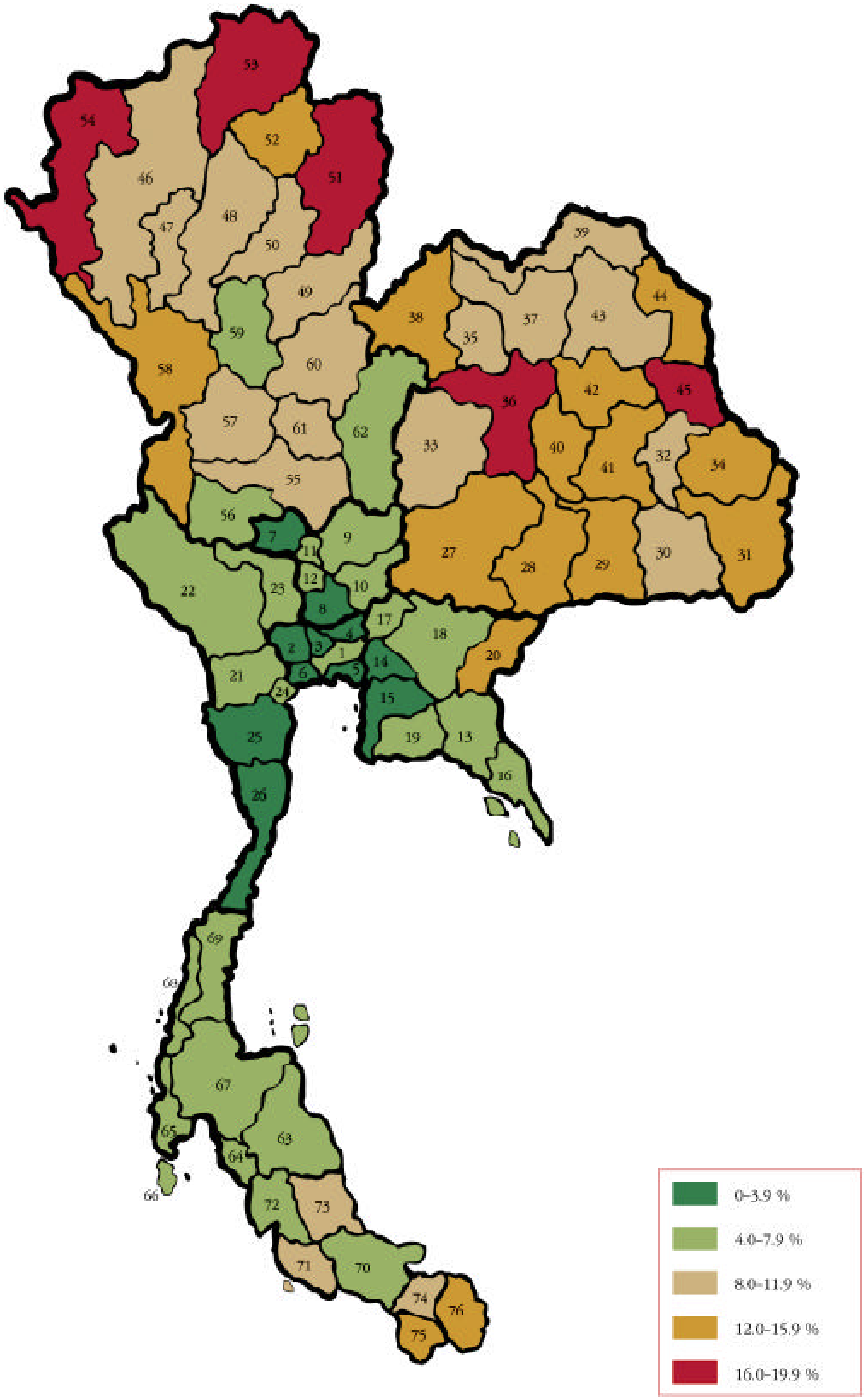
Map 8. Maternal Mortality Rate, 1997

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



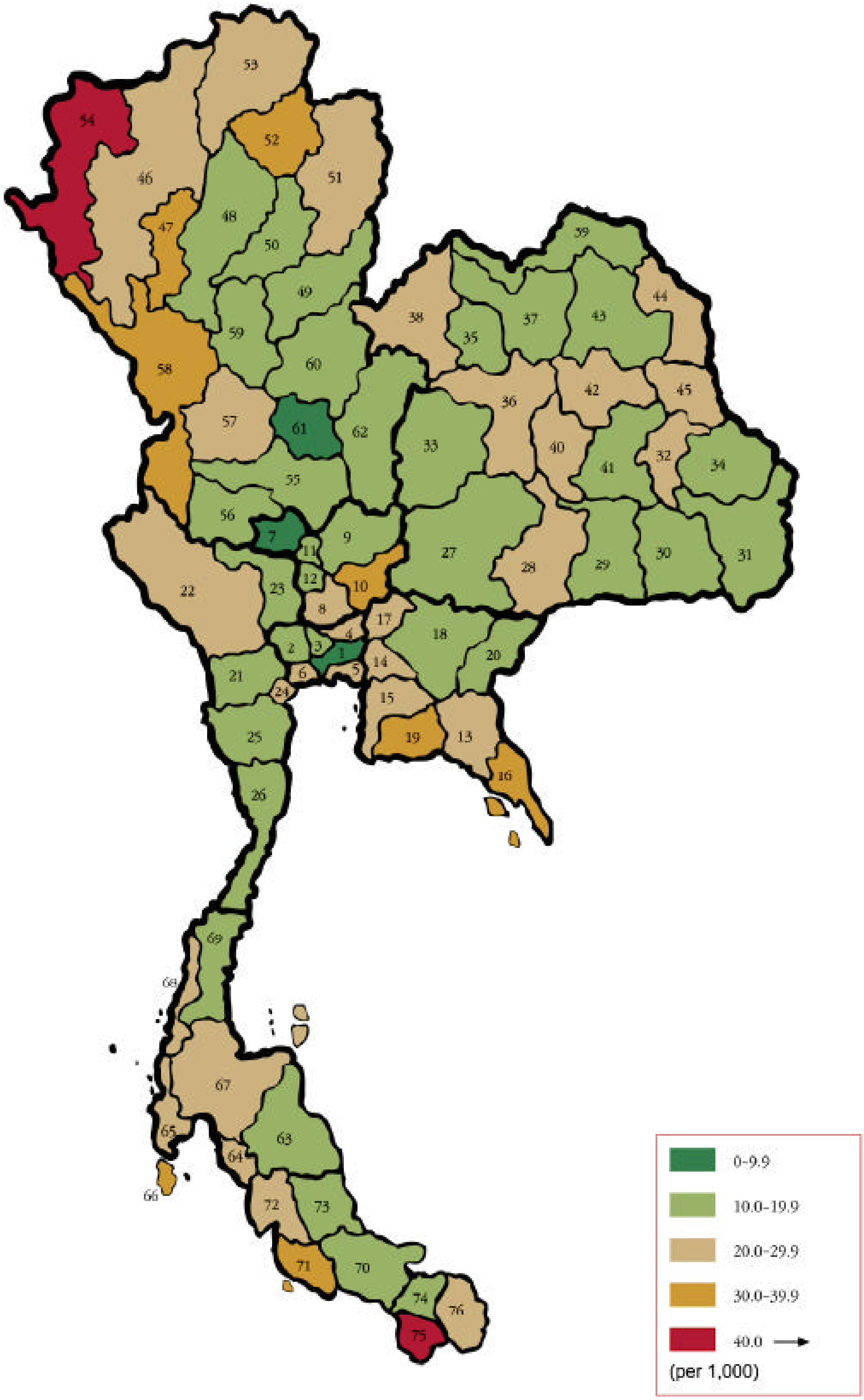
Map 9. Incidence of First Degree Child Malnutrition, 1996

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



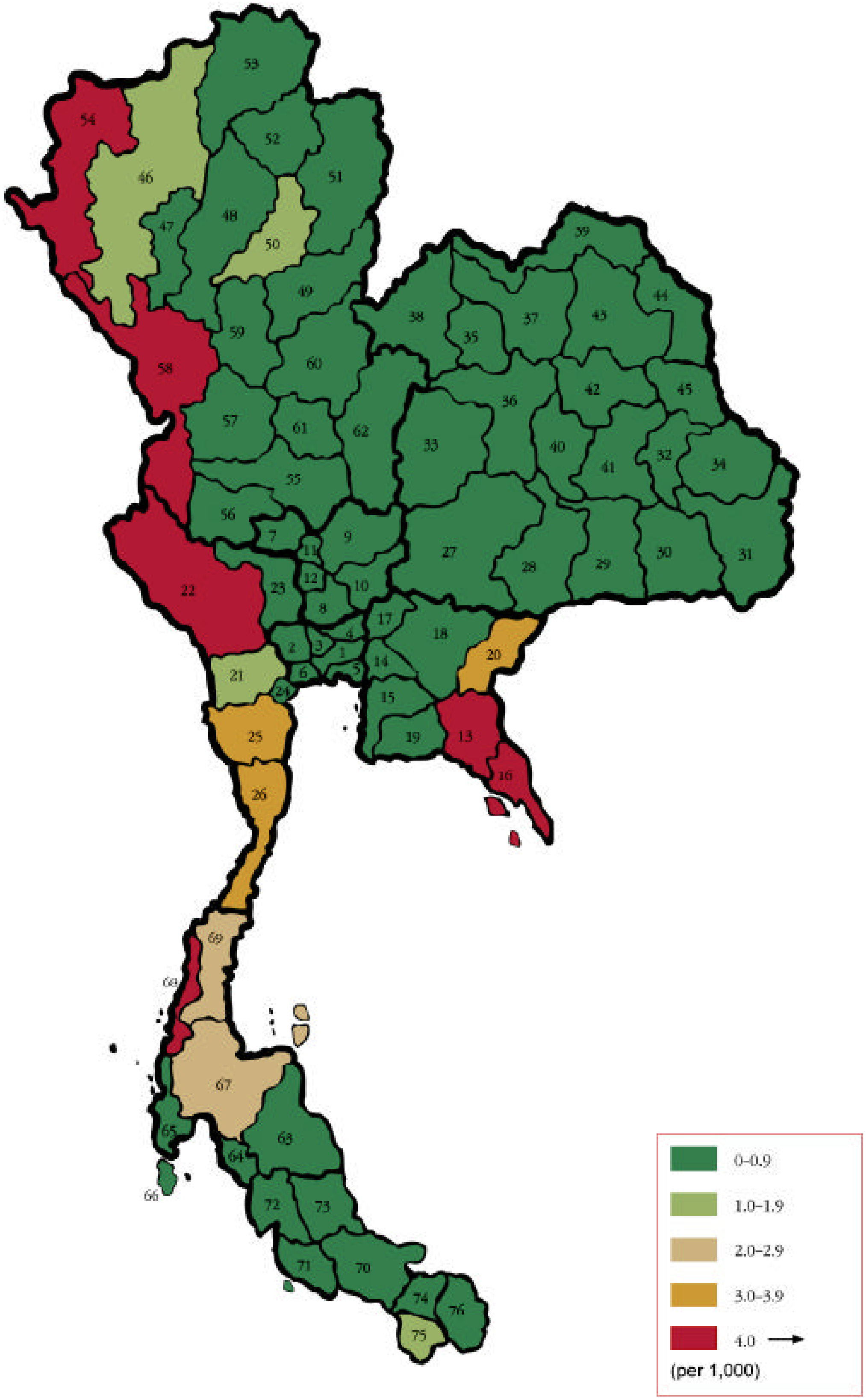
Map 10. Incidence of Selected Notifiable Diseases (diahorrea, food poisoning, dysentry), 1996

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



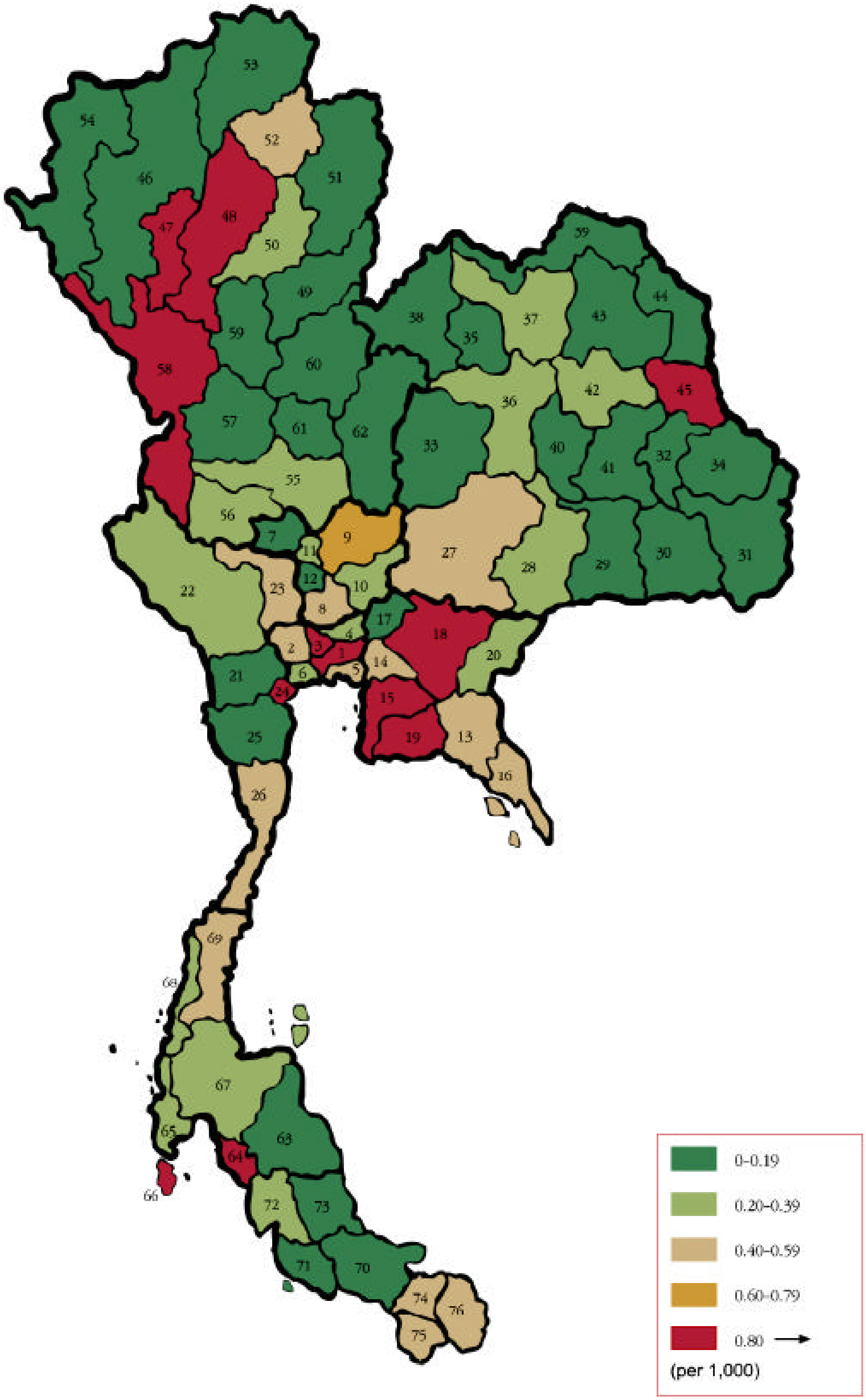
Map 11. Incidence of Malaria, 1996

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



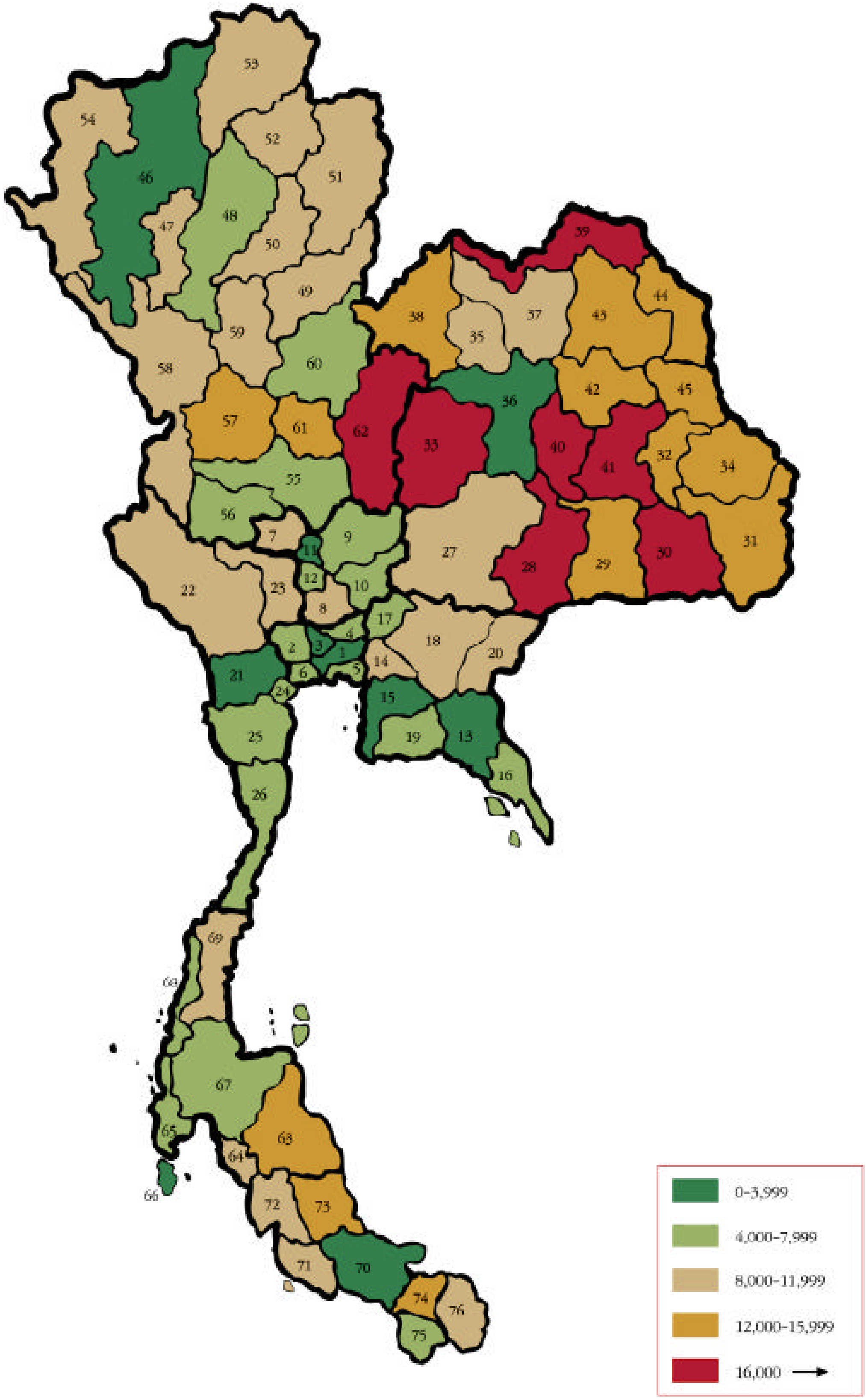
Map 12. Incidence of Sexually Transmitted Diseases, 1996

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



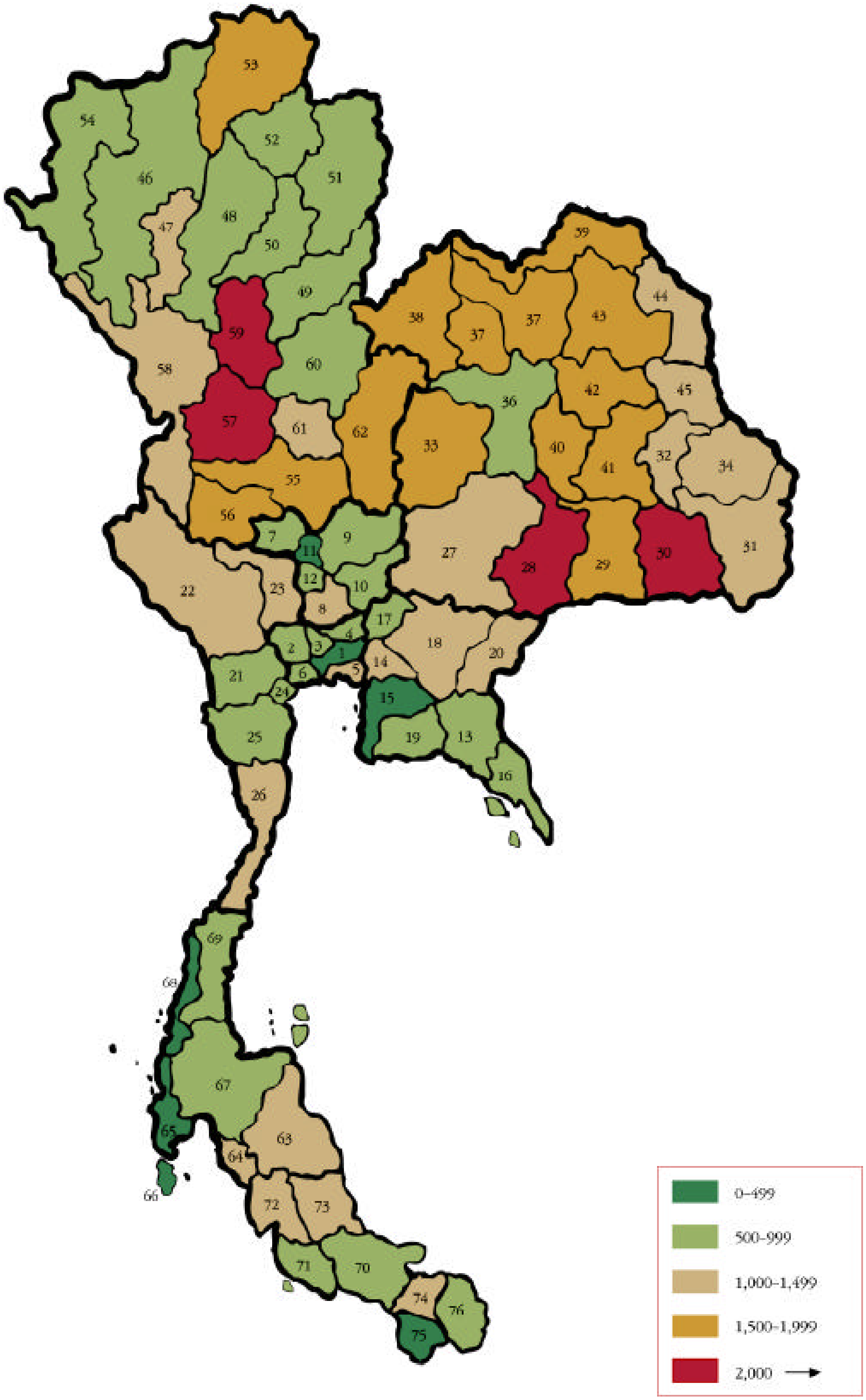
Map 13. Persons per Physician, 1992

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



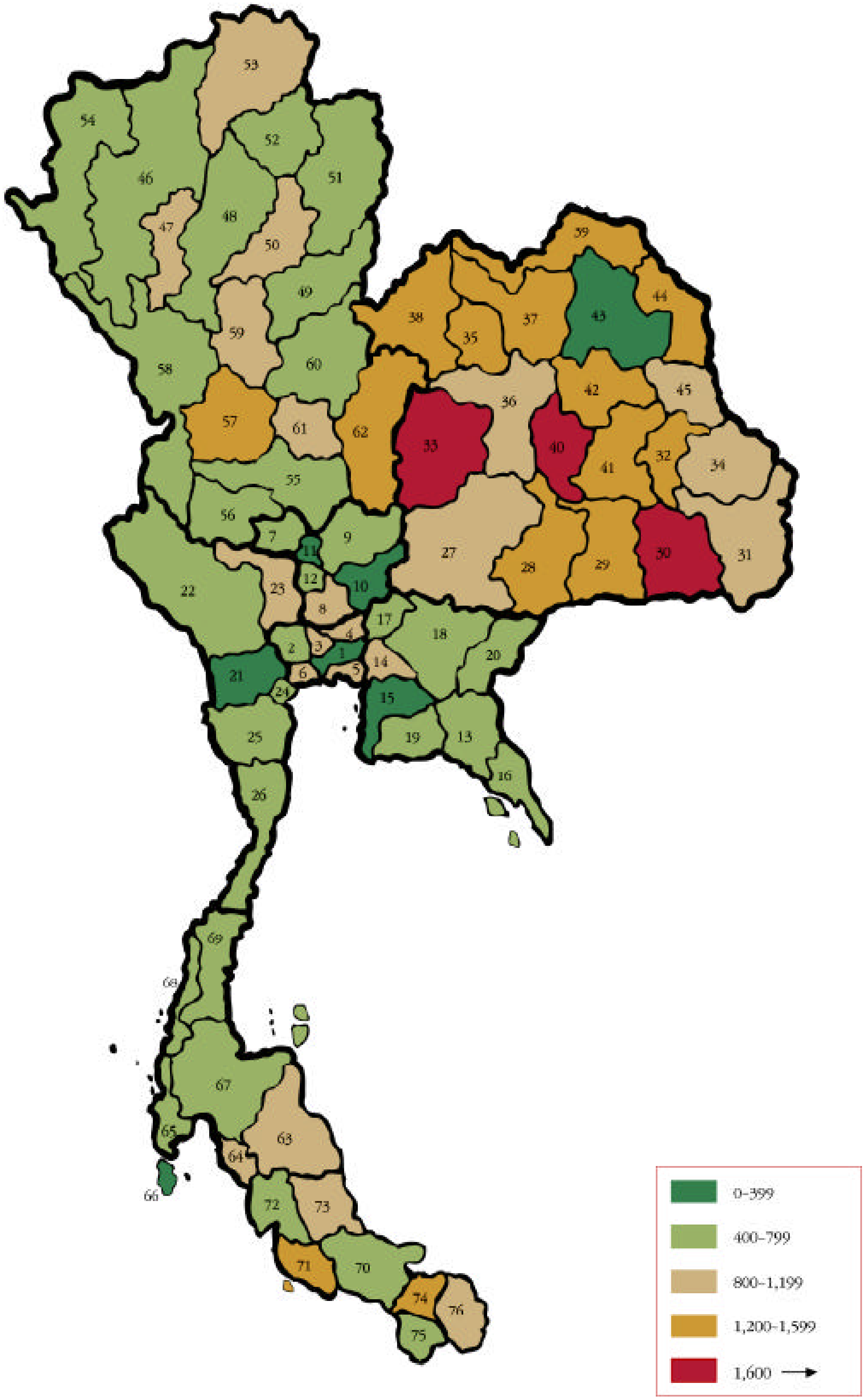
Map 14. Persons Per Nurse, 1992

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



Map 15. Persons per Hospital Bed, 1992

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat

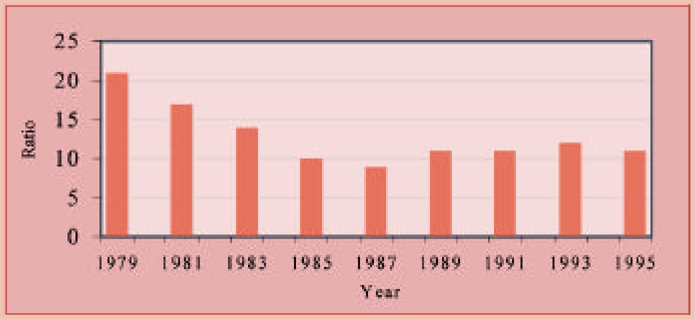


Box 3.2

Structural Impediments in Health and Education Ratios

Both the Health Index and the Education and Human Resource Index make use of indicators that are based on the ratio of the provincial population to basic services and infrastructure. These ratios provide evidence of the access of the population to such services. Although the Government has persistently pursued policies aimed at enlarging the access of the population to basic services and infrastructure, the policies have in some areas met with only limited success. Evidence for this position is provided by the case of the population/physician ratio. As indicated in the illustration below, the ratio of the population to doctors in the Bangkok region compared with the same ratio for the Northeast Region has remained basically unchanged since the mid-1980s. This points to the existence of structural impediments that must be addressed if the ratios are to be significantly improved.

Ratio of Doctor Density between Bangkok and the Northeast Region



Source: Health Resource Survey, Bureau of Health Policy and Plan, Ministry of Public Health, reproduced in Suwit Wibulpolpprasert et al, The Economic Crisis and Responses by Health Sector in Thailand, 1997-98, 15 April 1998 (mimeo)

4. Education and Human Resource Index

Like the Health Index, the Education and Human Resource Index takes account of both the situation prevailing in a Province and the access of the provincial population to educational services and infrastructure. It is composed of 8 indicators:

- Combined adult literacy rate;
- Population without any formal education;
- Percentage of the population that has completed primary education (pratom 1-6);
- Percentage of the population that has completed secondary education (matayom 1-6);
- Combined primary school enrollment ratio;[6]
- Lower secondary school enrollment ratio;
- The ratio of students per teacher;
- The ratio of students per classroom.

[6] In the indicators, high gross primary enrollment rates are regarded as positive. However, it is recognized that enrollment rates can be overstated due to the number of over-age children attending primary school and by high repeater rates. In such cases, enrollment rates may exceed 100 percent, with rates in excess of 100 percent being generally indicative of an unsatisfactory situation. While recognizing this limitation, there was no way to correct the figures and high rates are accordingly regarded as positive on the index.

The best and worst cases for each indicator are summarized in Table 3.6, revealing disparities that range from 200:1 in the case of the percentage of the population without formal education to 1.6:1 in the case of the secondary school enrollment ratio. Maps 16–20 show the provincial distributions for all of the indicators.

Table 3.6

Education and Human Resource Indicators

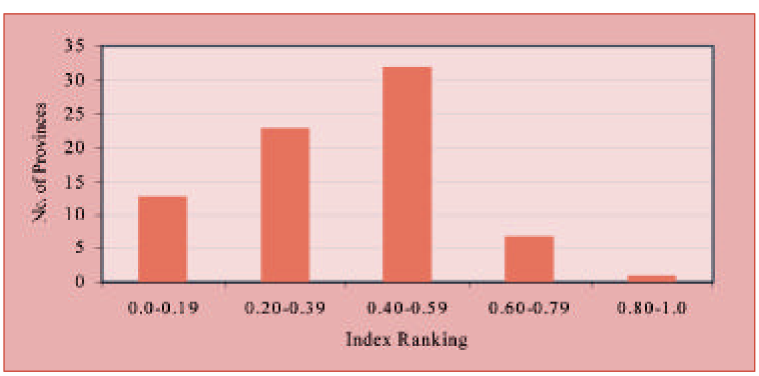
Indicator	Unit	Best			Worst			Disparity
		Figure	Province	Region	Figure	Province	Region	
Adult literacy rate	%	90.2	Bangkok	–	53.5	M. Hong Son	Northern	1.7:1
Pop. without formal education	%	0.2	Several	–	39.9	M. Hong Son	Northern	200:1
Pop. Comp. Primary school	%	83.3	Yasothon	Northeast	24.2	Chachoengsao	Eastern	3:1
Pop. Comp. Secondary school	%	33.3	Sam. Prakan	BV	8.6	Uthai Thani	Northern	4:1
Prim. School enrollment ratio	%	125.49	M. Hong Son	Northern	73.9	Yasothon	Northeast	1.7:1
Sec. School enrollment ratio	%	99.3	Pathum Thani	BV	61.8	Narathiwat	Southern	1.6:1
Students per teacher	pers.	14.7	Sing Buri	Central	24.3	Narathiwat	Southern	2:1
Students per classroom	pers.	25.2	M. Hong Son	Northern	51.8	Pattani	Southern	2:1

The distribution of index rankings in Figure 3.4 strongly resembles the one for health, with the vast majority of provinces with roughly the same standard of education and human resources. The index reveals that Narathiwat in the South appears particularly disadvantaged, with a very high index. This province is followed by Pattani, also in the South. Eight other provinces have a slightly lower standard of education and human resource development. They are Kanchanaburi in the West; Buri Ram, Si Saket, Nong Bua Lam Phu and Nong Khai in the Northeast; and Mae Hong Son and Tak in the North.

Figure 3.4

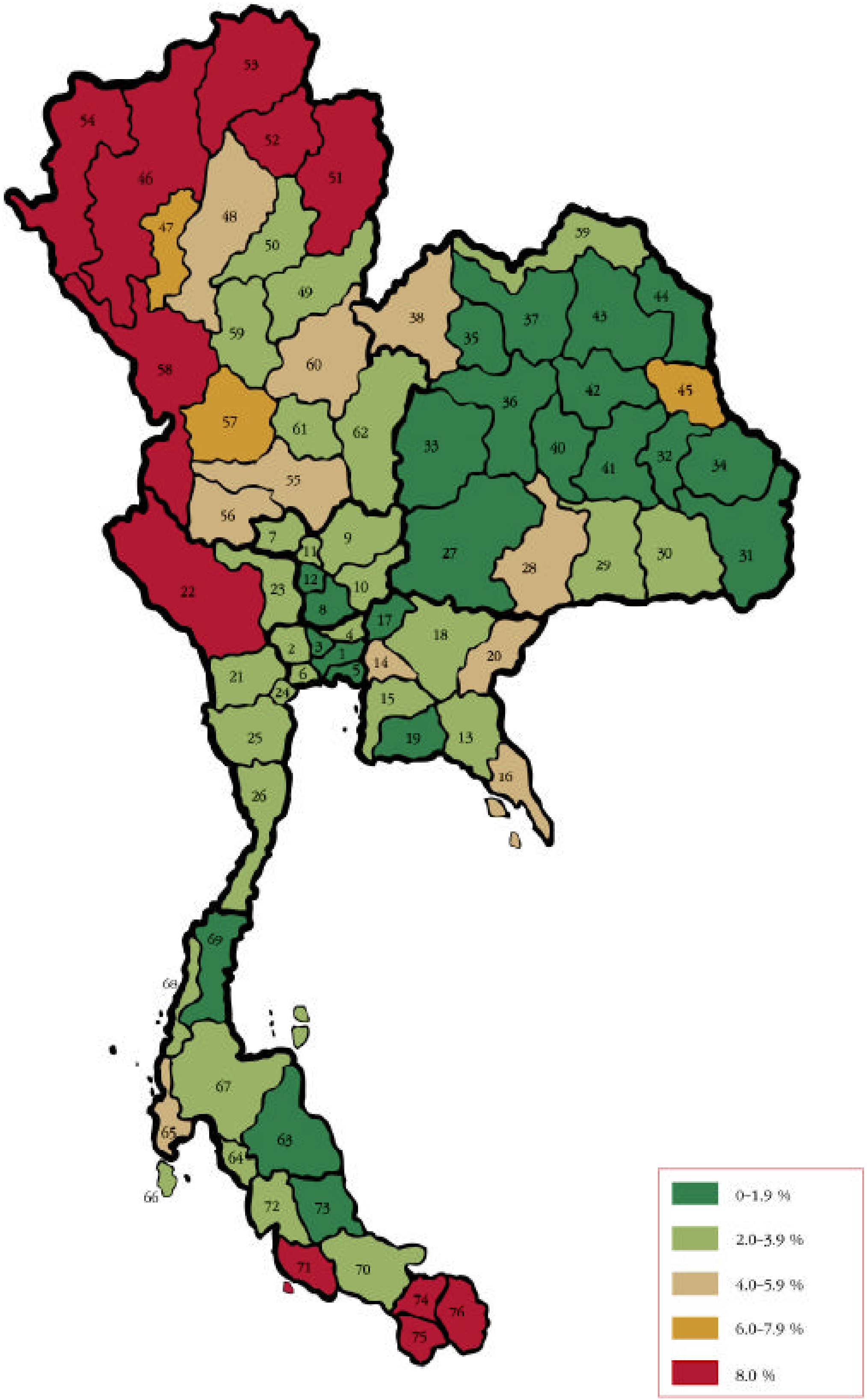
Education and Human Resource Index:

Distribution of Provinces by Index Ranking



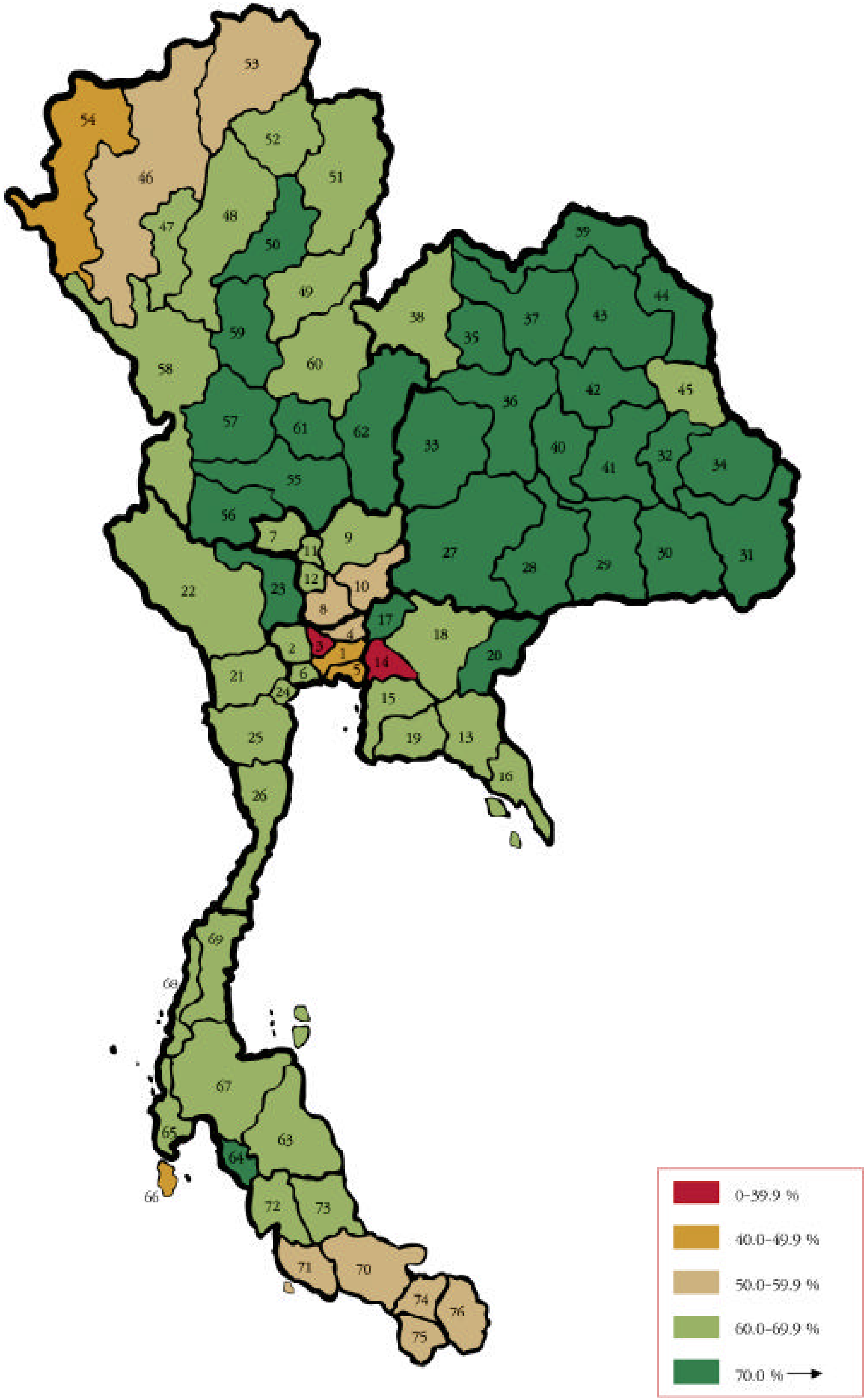
Map 16. Percentage of Population without Formal Education, 1998

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



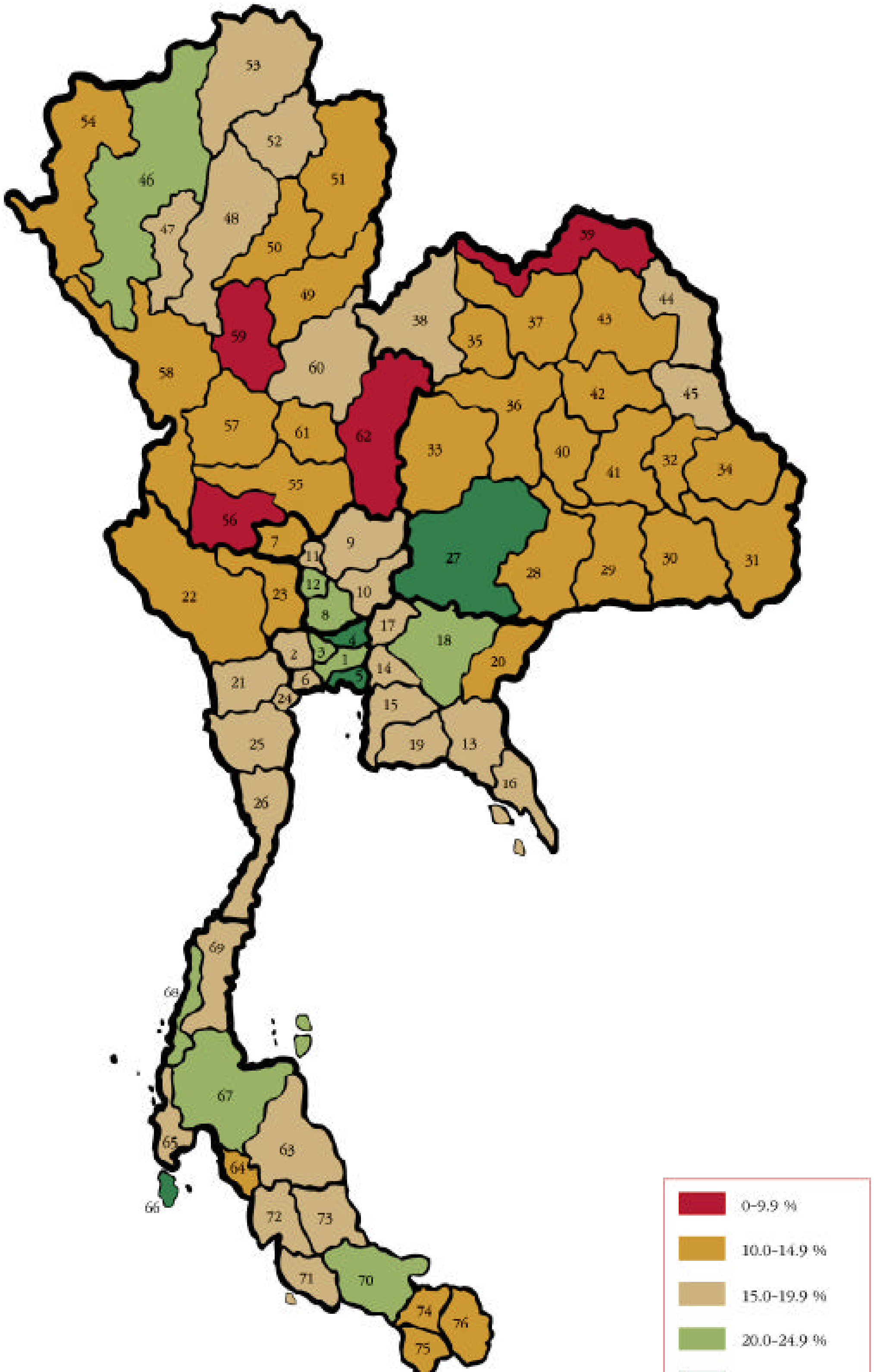
Map 17. Primary School Completion Rate, 1998

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



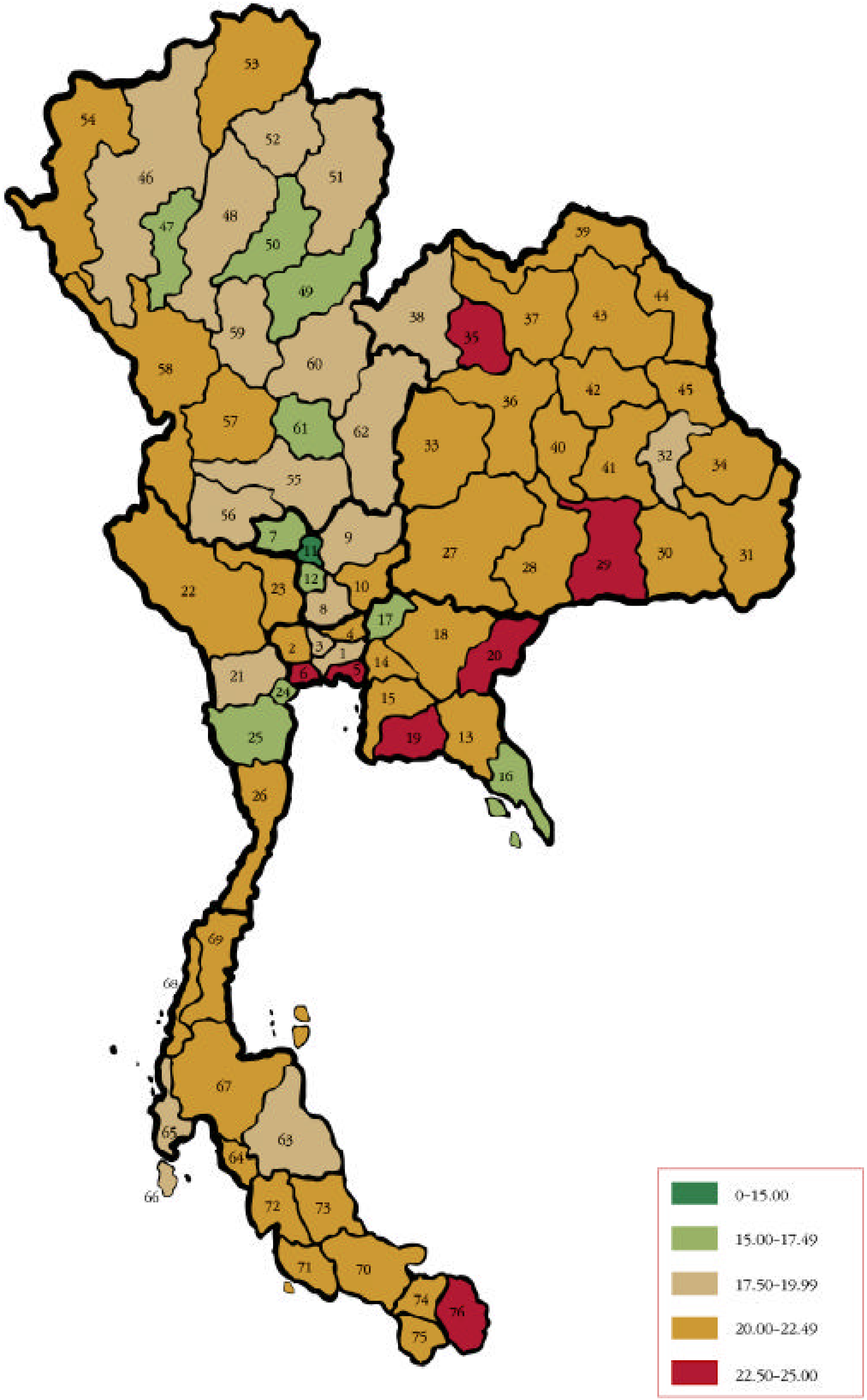
Map 18. Secondary School Completion Rate, 1998

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



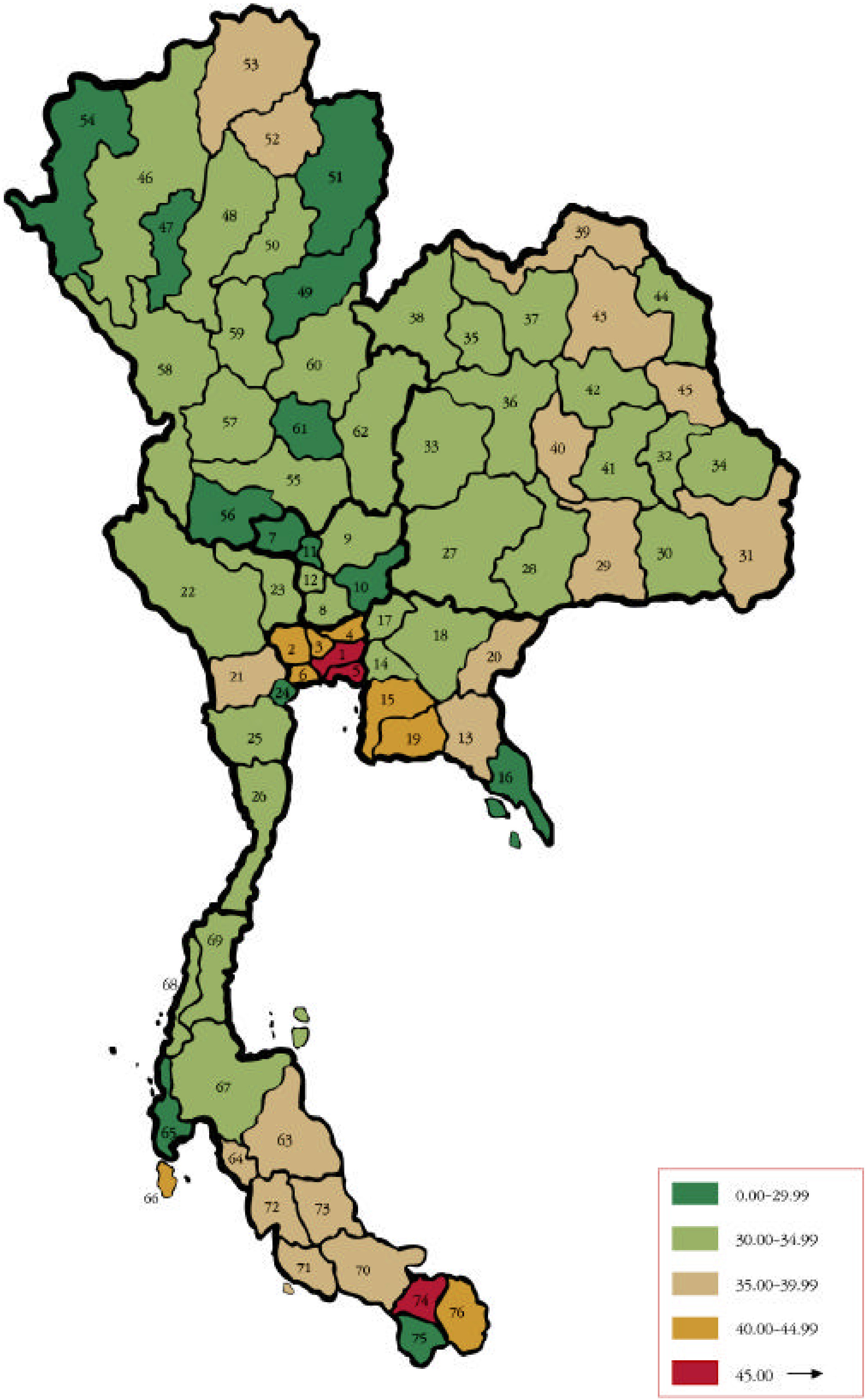
Map 19. Students per Teacher, 1997

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



Map 20. Students per Classroom, 1997

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



5. Housing and Environment Index

The quality of housing and the built environment is a measure of physical well-being and welfare. However, the concept of quality is not straightforward since it embodies intangibles related to, for example, family and community relationships that may be highly valued. Some of these intangibles are difficult to capture in traditional data sets that have their origins in periodic censuses. The indicators used for the compilation of the index are necessarily those that permit objective measurement.

The index is made up of two components covering the physical quality of the housing stock and environmental quality and impacts. The index makes use of the following indicators:

- The average number of persons per sleeping room, which is regarded as a measure of overcrowding and, hence, of the level of privacy existing within a household;
- The percentage of the houses constructed with non-permanent materials as a measure of the physical quality of the housing stock;
- The percentage of households without access to safe sanitation;
- The percentage of the population without access to electricity;
- The percentage of the population using fuelwood and charcoal as their primary fuel for cooking.

In the absence of other data, it has, in all cases, been necessary to make use of the 1990 Population and Housing Census for the respective data series. The definitions are, therefore, those adopted by the Census.[7] A notable absence in the list of indicators is access to potable water, for which reliable data could not be obtained.[8]

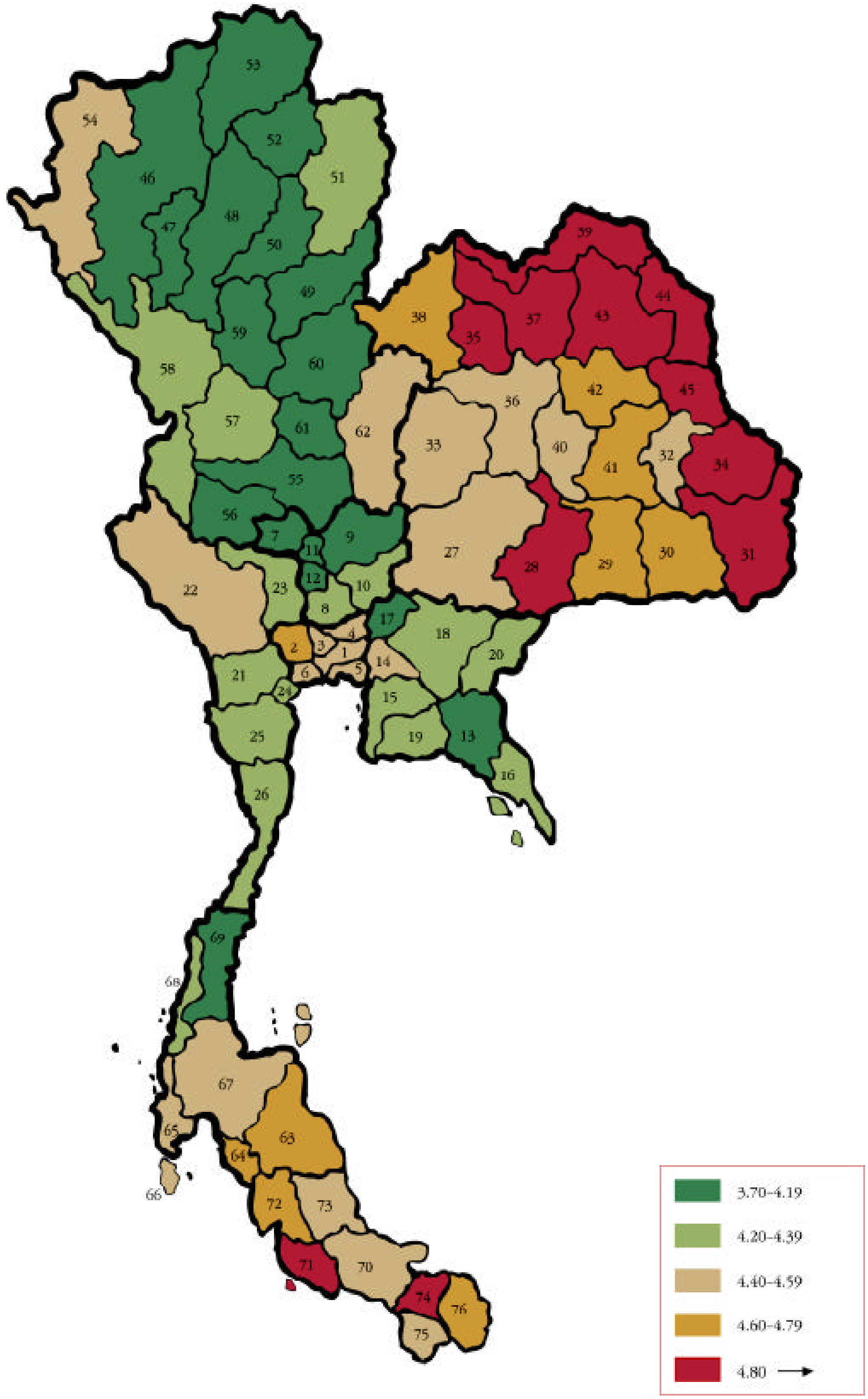
The disparities found to exist in relation to the different indicators vary considerably. As shown in Table 3.7, they range from a low of only 1.4:1 in the case of the number of persons per sleeping room to a high of more than 180:1 in the case of the percentage of the housing stock in non-permanent materials. Maps 21-25 show the provincial distributions for the five indicators that constitute the housing and environment index.

[7] The definitions used in the Population and Housing Census required some interpretation to arrive at the indicators used for the compilation of the index. The Census, for example, defines timber as a permanent building material. The definition of non-permanent materials is, therefore, based on the Census categories of 'local materials' and 'reused materials'. In the case of access to safe sanitation, the categories 'moulded bucket latrines' and 'flush and moulded bucket latrines' are considered safe means of excreta disposal, with inadequate access defined as the category 'pits and others'. Households without access to electricity are based on the Census categories 'pressure lamps', 'oil lamps' and 'others'.

[8] Although the Census provides information on access to drinking water, a definition could not be formulated that was consistent with the national figure published by the Ministry of Public Health on the percentage of the population with access to potable water. Examination of Census data reveals that households making use of public and private wells appear to be classified as having safe access, which, if such is the case, would appear to overstate the proportion of the population with access to potable water. According to the Census, the percentage of the population that obtained its water from rivers and canals in 1990 was a little over 3 percent, which is also inconsistent with the published figure on households without access to safe drinking water. In the absence of an acceptable definition of 'potable water' and of data sources that would permit the calculation of an index for each province, the decision was reluctantly taken to exclude this important indicator of environmental quality.

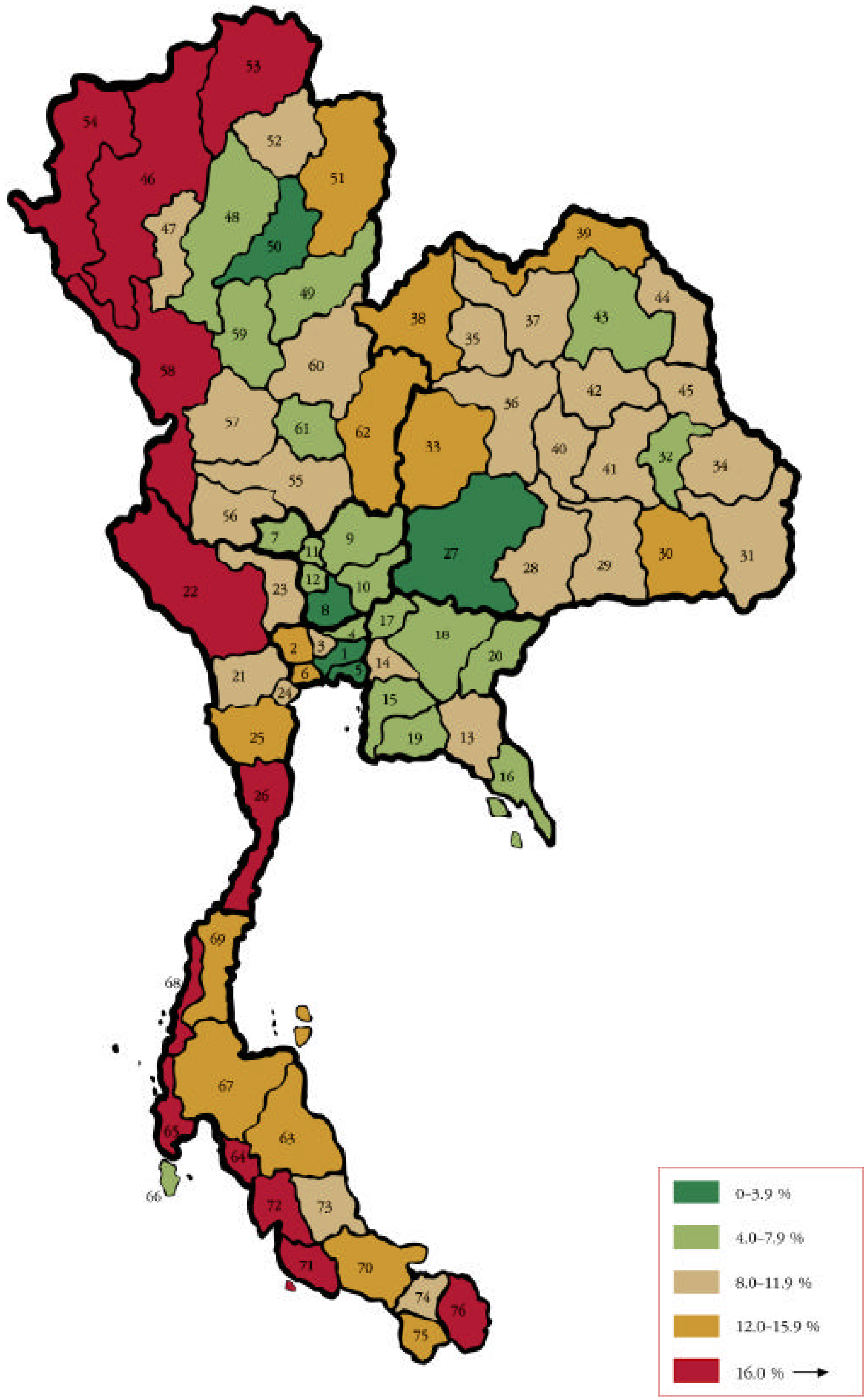
Map 21. Average Number of Persons per Sleeping Room, 1990

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



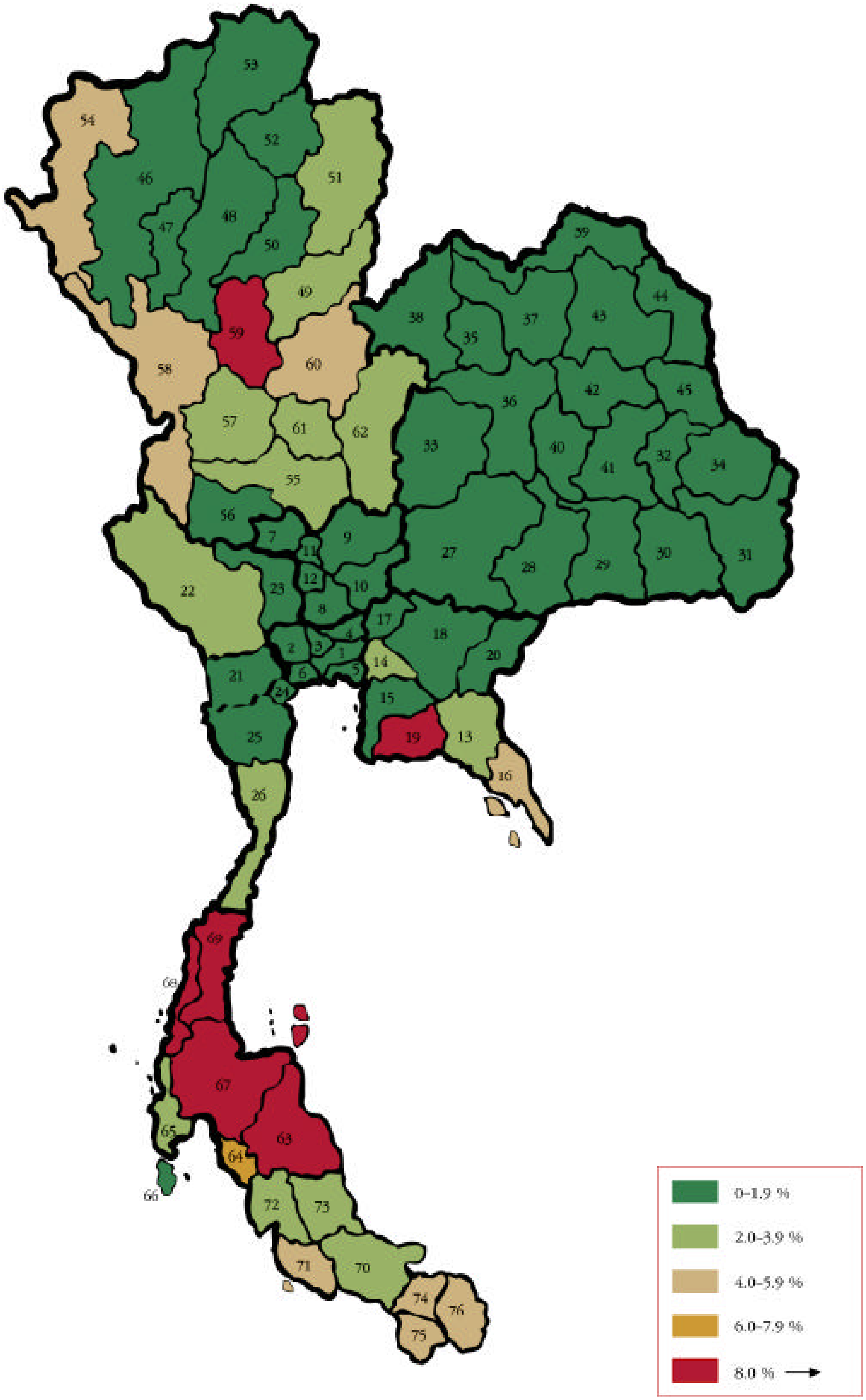
Map 22. Percentage of Dwellings in Non-Permanent Building Materials, 1990

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



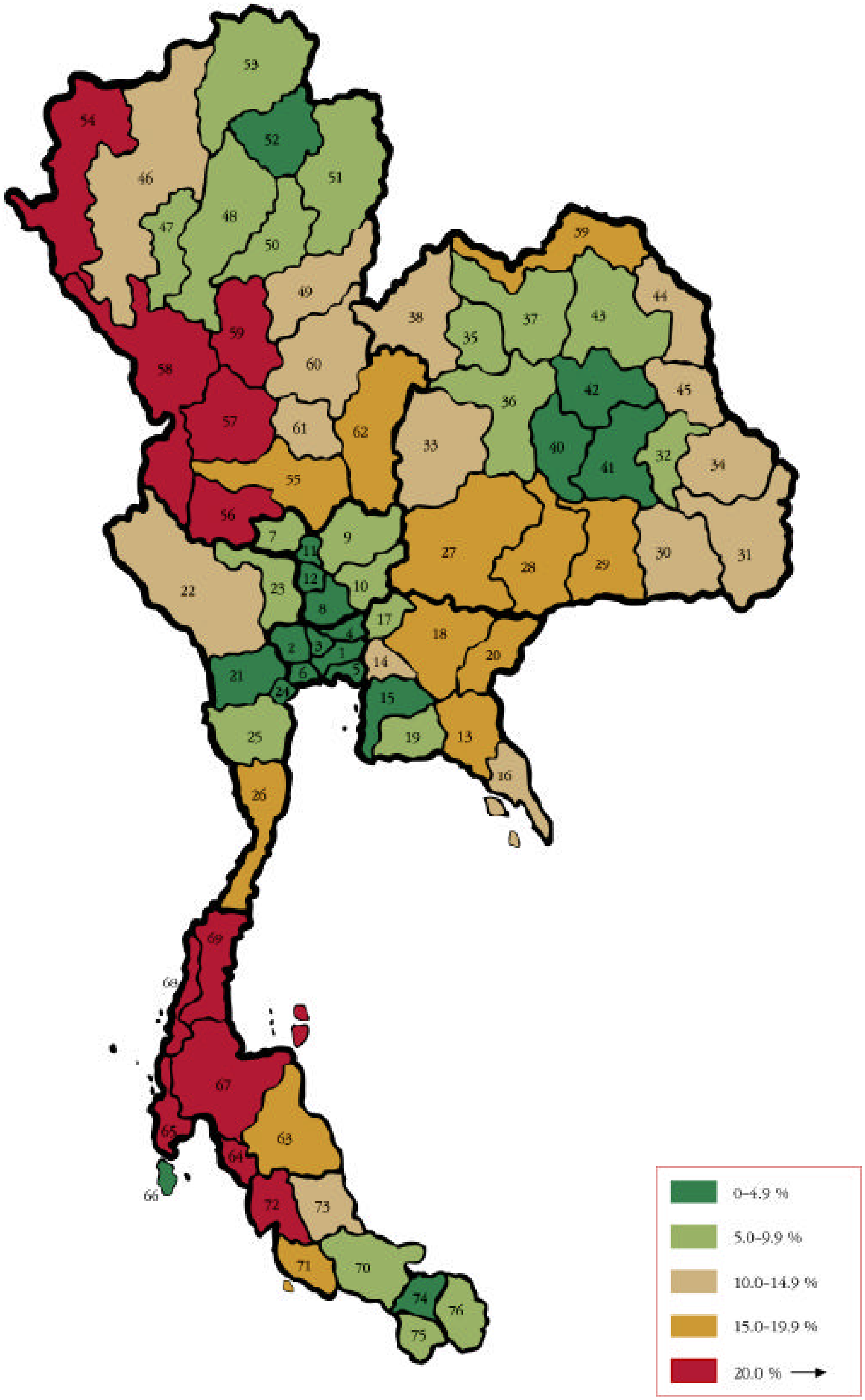
Map 23. Percentage of Households without Access to Safe Sanitation, 1990

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



Map 24. Percentage of Households without Access to Electricity, 1990

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



Map 25. Percentage of Households Using Fuelwood and Charcoal for Cooking, 1990

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat

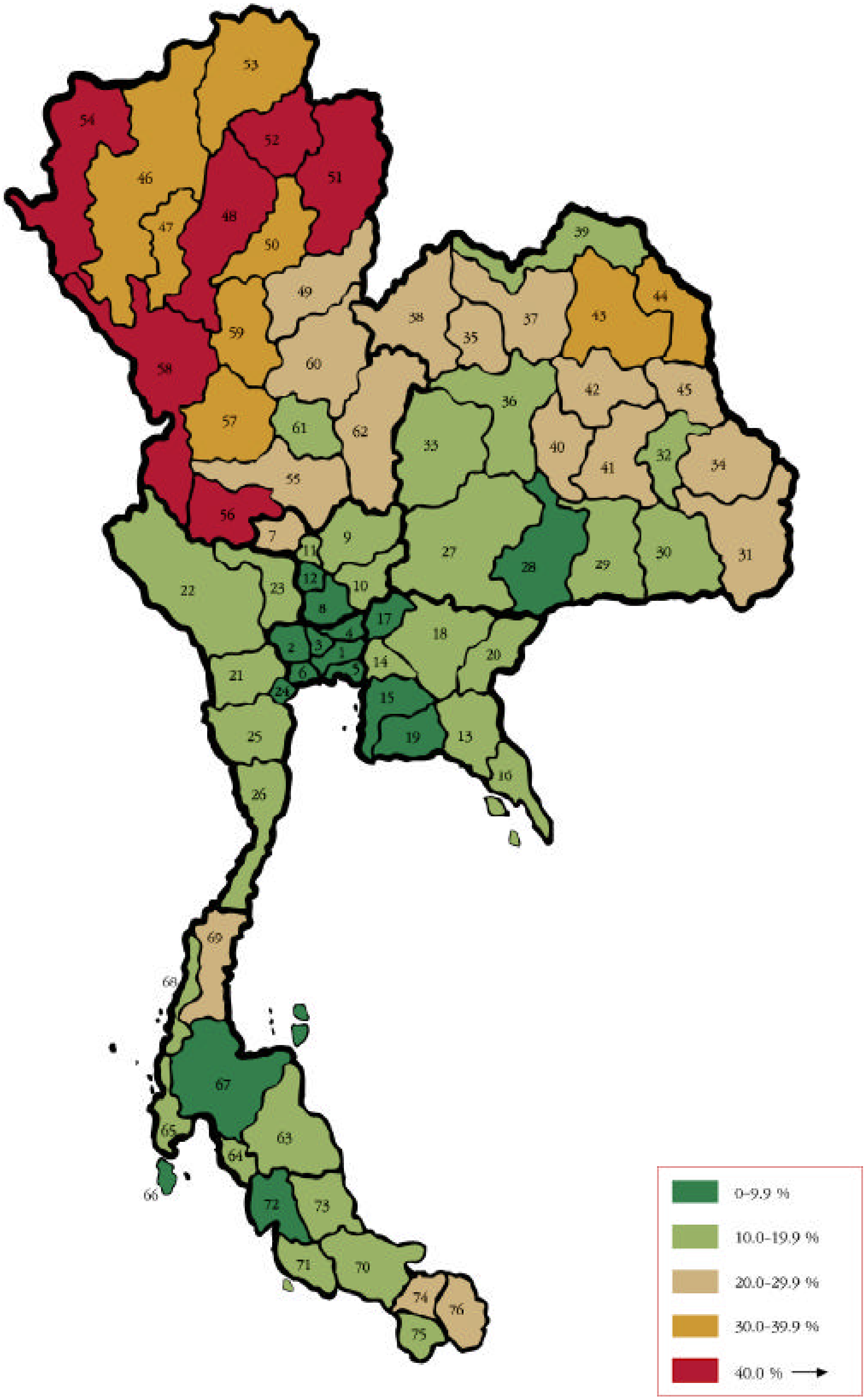


Table 3.7

Housing and Environment Indicators

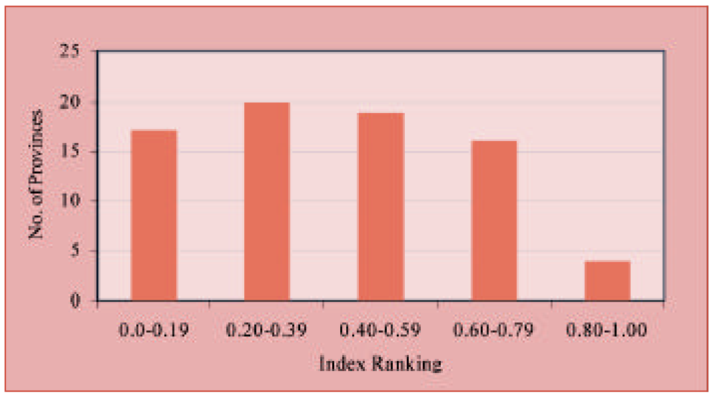
Indicator	Unit	Best			Worst			Disparity
		Figure	Province	Region	Figure	Province	Region	
Av. no. persons/sleeping room	pers.	3.7	Lamphun	Northern	5.1	Mukdahan	Northeast	1.4:1
Houses in non-perm. Materials	%	0.4	Nakhon Ratchasima	Northeast	72.9	M. Hong Son	Northern	182:1
HHs without safe sanitation	%	0.0	Nakhon Ratchasima	Northeast	19.2	Chumphon	Southern	19:1
HHs without electricity	%	0.4	Bangkok	Bangkok	47.1	M. Hong Son	Northern	118:1
HHs cooking with fuelwood	%	4.7	Rayong	Eastern	60.8	Nan	Northern	13:1
HHs without electricity	%	0.4	Bangkok	Bangkok	47.1	M. Hong Son	Northern	118:1

The distribution of provinces by index ranking in Figure 3.5 is more even than the ones recorded for most other indices. Half of all provinces have relatively high housing and environmental standards and four provinces are to be found with a low standard. The index reveals that the lowest housing and environmental quality is to be found in Chiang Rai and Kamphaeng Phet in the North and Songkhla and Nakhon Si Thammarat in the South. They are followed by Loei in the Northeast and Ranong, Satun and Yala in the South.

Figure 3.5

Housing and Environment Index:

Distribution of Provinces by Index Ranking



6. Transport and Communications Index

Access to transport services and communications are of considerable importance in a nation in which around 70 percent of the population is to be found in rural areas. Access to transport and communications reduces the isolation of rural communities, with improved access translating into reduced vulnerabilities and expanded opportunities and choices. Access to modern forms of communication – especially telephone and radio – also enable rural communities to participate more fully in the mainstream of the nation's economic life, thereby further enlarging their opportunities for participation as well as enabling them to share more equitably in the benefits of growth and progress.

The Transport and Communications Index is composed of the following 4 indicators:

- Percentage of households with access to a bicycle;
- Persons per motor cycle;
- Persons per telephone;
- Percentage of households with access to a radio.

As shown in Table 3.8, disparities in respect of these indicators range from 5:1 in the case of households with access to a bicycle to a high of 92:1 for the ratio of persons per telephone. Maps 26-29 show the provincial distributions for the four indicators that constitute the transport and communications index.

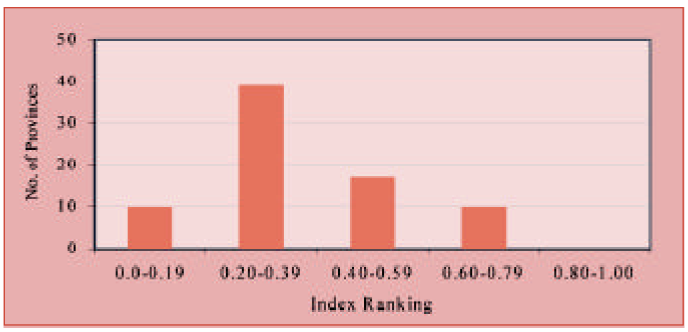
Table 3.8

Transport and Communications Indicators

Indicator	Unit	Best			Worst			Disparity
		Figure	Province	Region	Figure	Province	Region	
Persons per telephone	pers.	9.4	Bangkok	Bangkok	868	Si Saket	Northeast	92:1
Persons per motor cycle	pers.	2.6	Phuket	Southern	47.9	Chaiyaphum	Northeast	18:1
HHs with access to radio	%	92.1	SamutPrakan	BV	69.1	Surin	Northeast	1.3:1
HHs with access to bicycle	%	79.1	Chai Nat	Central	16.5	M. Hong Son	Northern	5:1

Figure 3.6

Transport and Communications Index: Distribution of Provinces by Index Ranking



The distribution of provinces by index ranking in Figure 3.6 shows that nearly half of all provinces have a relatively good access to transport and means of communication. Only ten provinces, mainly from the South, have moderately bad access and no province can be said to be seriously disadvantageous. Of the five worst provinces, four - Krabi, Ranong, Songkhla and Satun - are situated in the South, the fifth province being Mae Hong Son in the North.

7. Consumer Goods Index

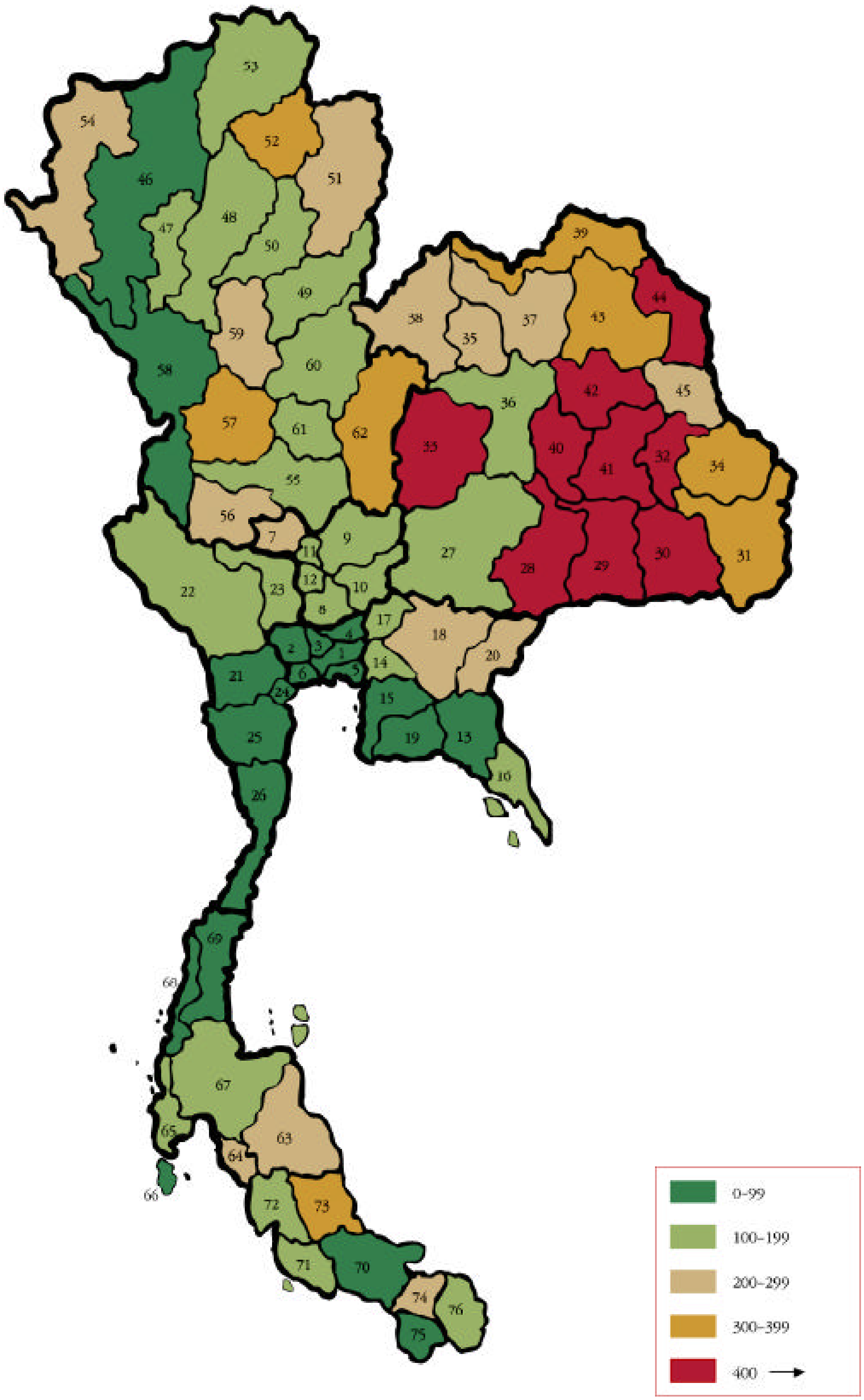
Ownership of consumer durables contributes to overall levels of well-being and welfare. This is especially the case when consumer durables reduce the struggle associated with the rural life, to ensure a subsistent economy and to increase the households' productivity and capacities to generate income. It is for such reasons that ownership of consumer durables has in the past been used in poverty and well-being studies in Thailand. As such, the Consumer Goods Index is an approximation for the general quality of life.

Data on ownership of consumer durables are recorded in the 1990 Population and Housing Census, where 20 categories of goods are enumerated. For the purpose of the index, four general purpose categories were selected that, biased to neither urban nor rural communities, can be considered indicative of the overall quality of life and level of well-being. These indicators are:

- Households with access to a colour television;
- Households with access to a refrigerator;
- Households with access to a sewing machine;
- Households with access to an electric fan.

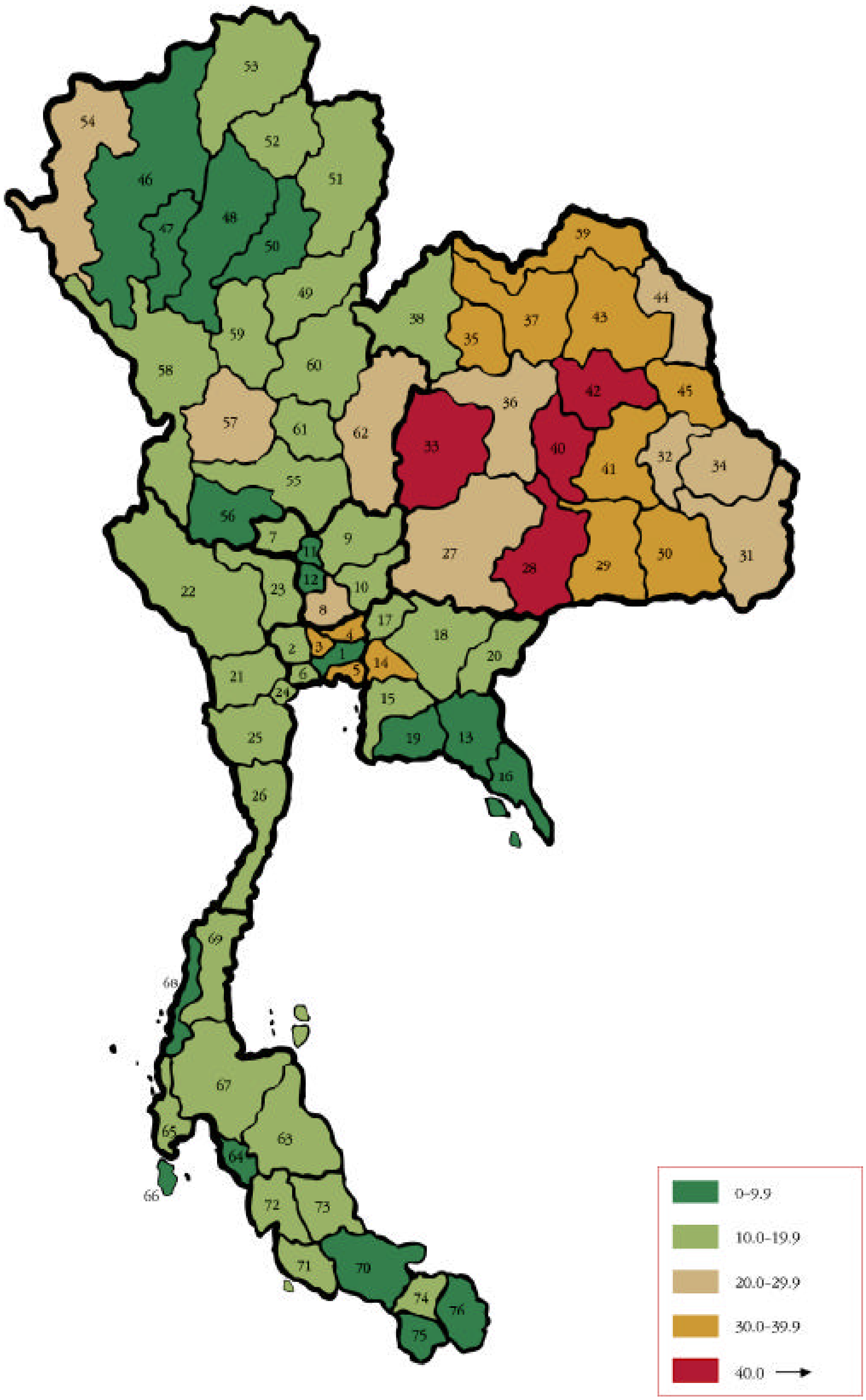
Map 26. Persons per Telephone, 1992

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



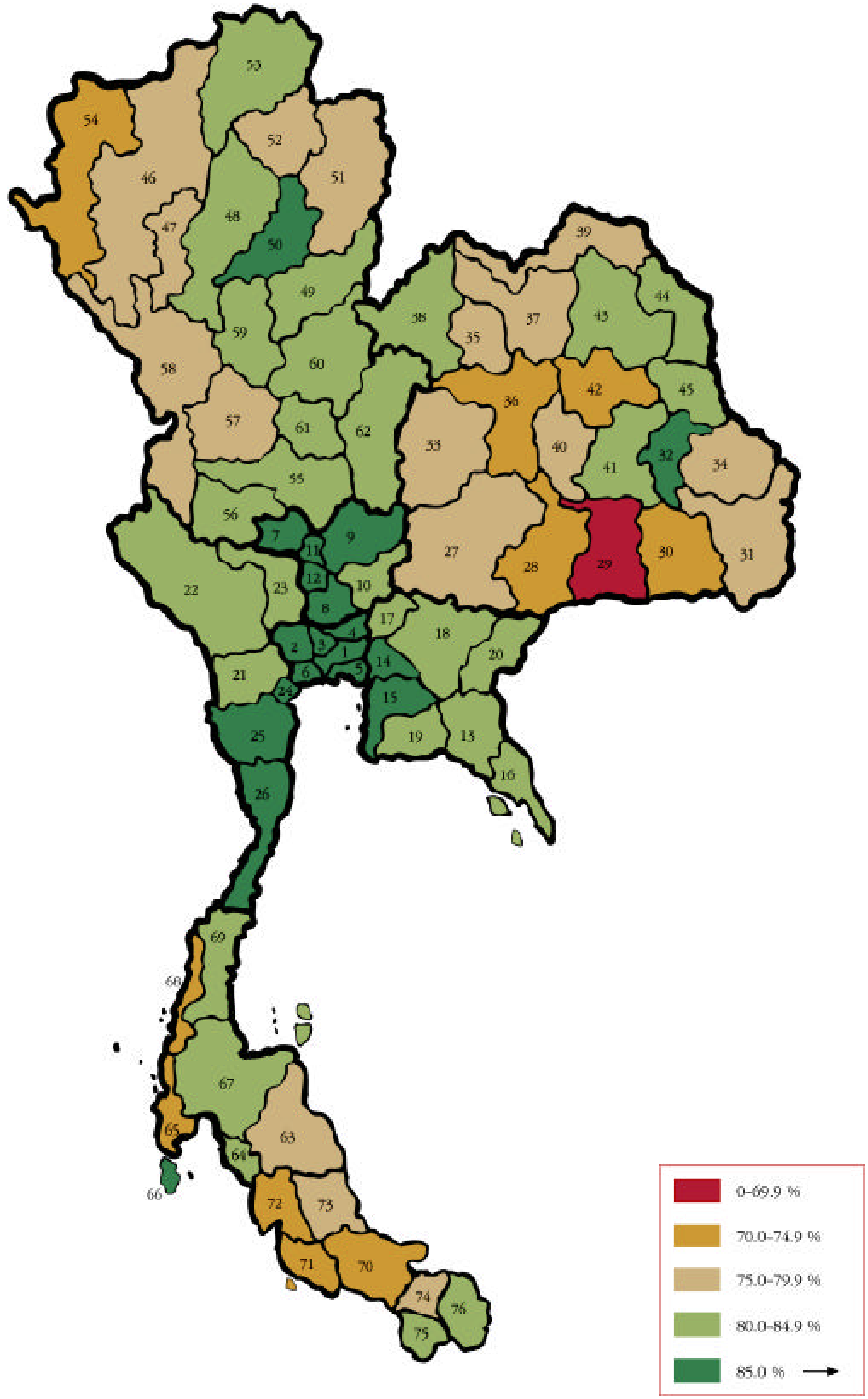
Map 27. Persons per Motorcycle, 1992

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



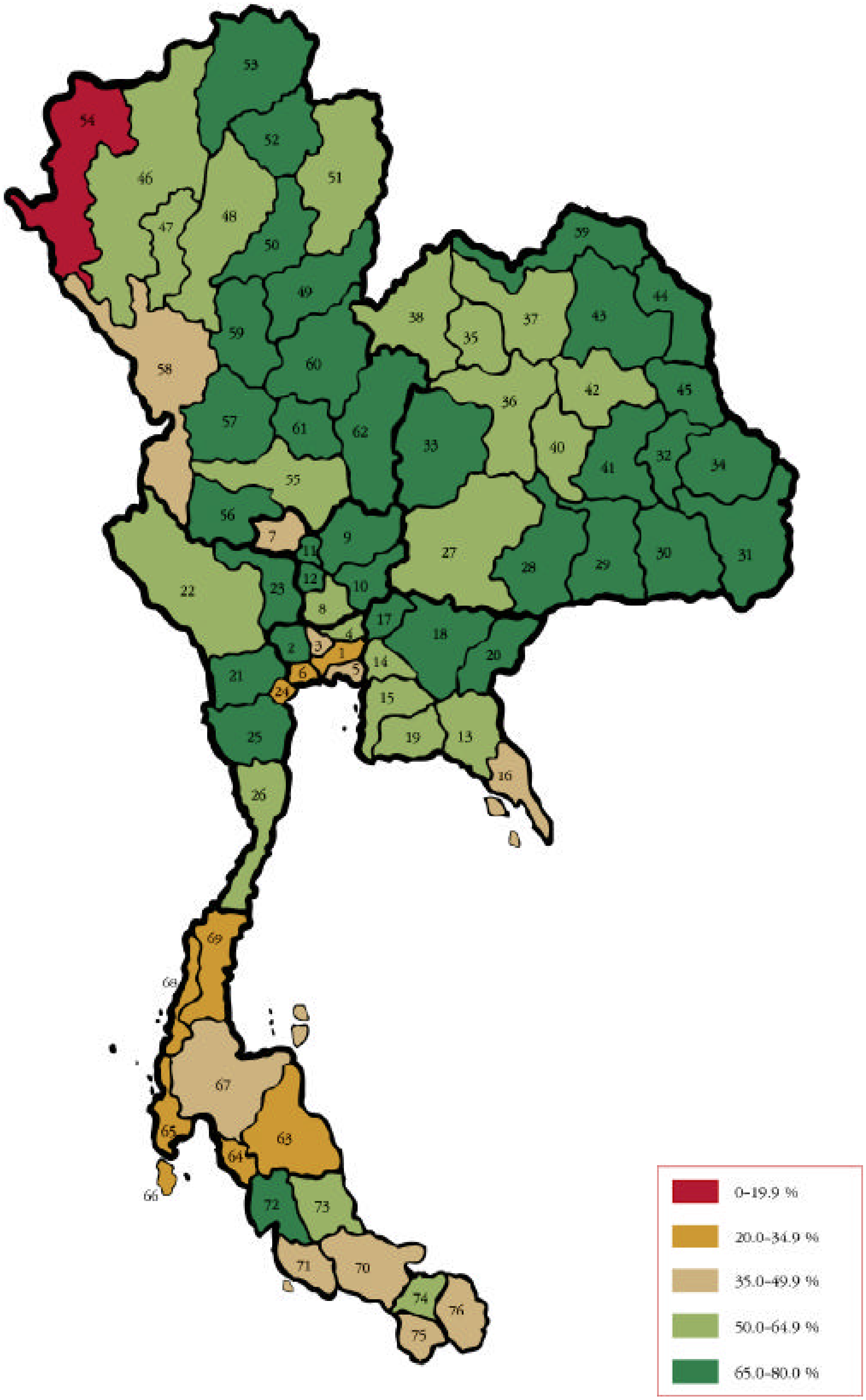
Map 28. Percentage of Households with Access to a Radio, 1990

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



Map 29. Percentage of Households with Access to a Bicycle, 1990

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



The 'best' and 'worst' cases for each of these indicators are summarized in Table 3.9. It reveals disparities in ownership that range from a high of 7:1 in the case of a refrigerator to a low of 3:1 in the case of ownership of an electric fan. Maps 30-33 show the provincial distributions for the each of the four indicators that constitute the consumer goods index.

Table 3.9

Consumer Goods Indicators

Indicator	Unit	Best			Worst			Disparity
		Figure	Province	Region	Figure	Province	Region	
HHs with colour TV	%	81.5	Bangkok	Bangkok	17.0	Si Saket	Northeast	5:1
HHs with refrigerator	%	76.0	Nonthaburi	BV	10.6	Si Saket	Northeast	7:1
HHs with sewing machine	%	33.2	Nonthaburi	BV	8.3	Surin	Northeast	4:1
HHs with electric fan	%	96.1	Bangkok	Bangkok	36.7	M. Hong Son	Northern	3:1

The distribution of provinces by index ranking in Figure 3.7 shows that nearly 50 of the 76 provinces have high rates of ownership of consumer durables, and thus have a good quality of life. However, there are also approximately a third of all provinces that can be said to have a relatively low quality of life, five of which receive a maximum penalty score. These provinces are Buri Ram, Surin and Si Saket in the Northeast and Mae Hong Son and Uthai Thani in the North. These provinces are closely followed by Ubon Ratchathani, Chaiyaphum, Amnat Charoen, Nong Khai and Mukdahan in the Northeast, Nan and Kamphaeng Phet in the North. These provinces thus have a comparatively high level of deprivation in terms of ownership of consumer durables associated with good quality of life.

Figure 3.7

Consumer Goods Index:

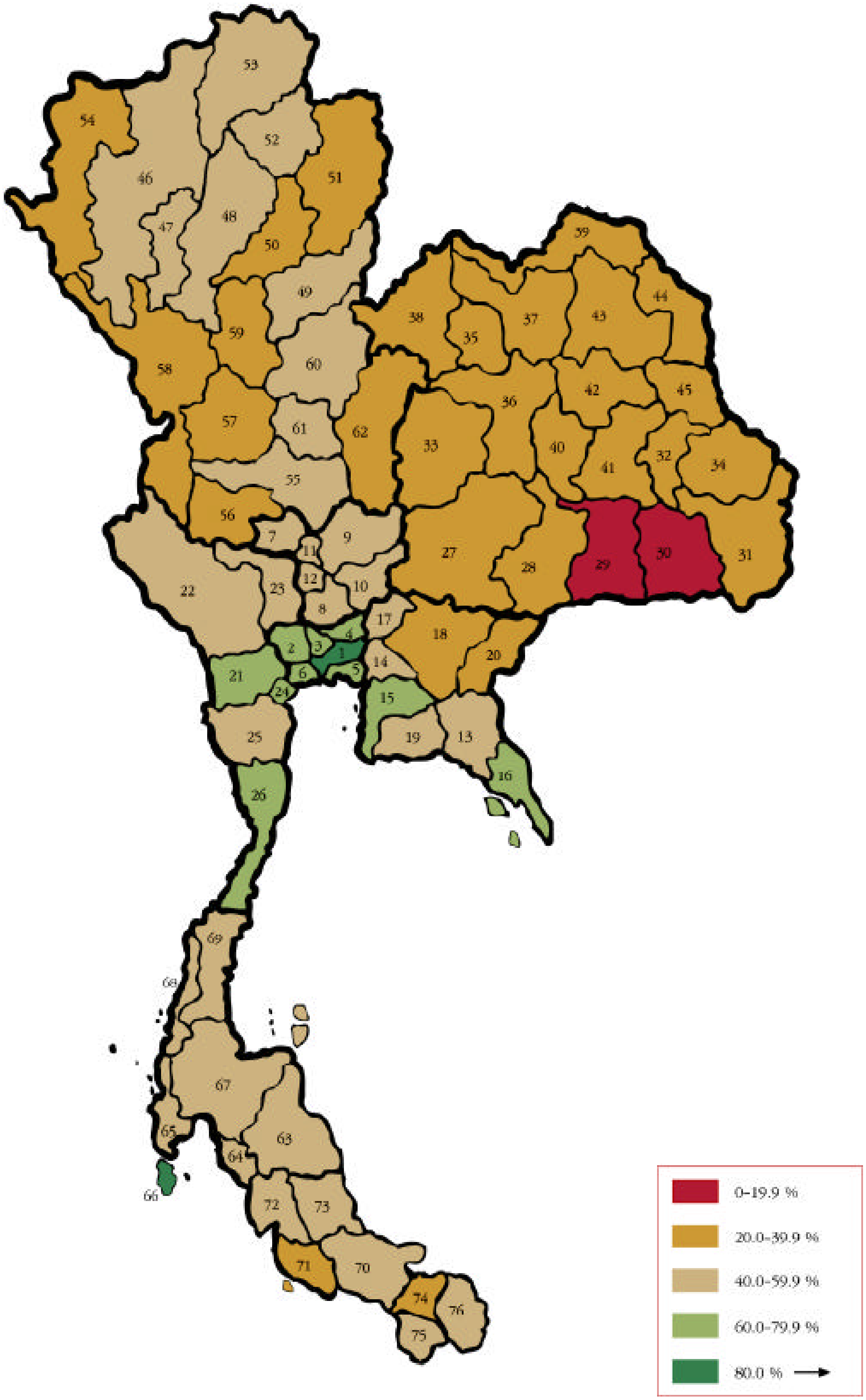
Distribution of Provinces by Index Ranking

8. Women's Index

Human development is a concept that is strongly gender dimensioned. For this reason, a Women's Index was compiled that seeks to measure the relative position of women at the provincial level and the various obstacles to their full emancipation. The construction of a such an index is, however, greatly frustrated by the absence of data that give real expression to the practical problems encountered by women and which prevent them from occupying their full place in the nation's social and economic development. Following a review of available province-based information, an index was developed that is based upon 12 indicators, grouped within components that cover women's involvement in economic activity, education, reproductive health, and family and marriage. The 12 indicators with their justification are summarized in Table 3.10.

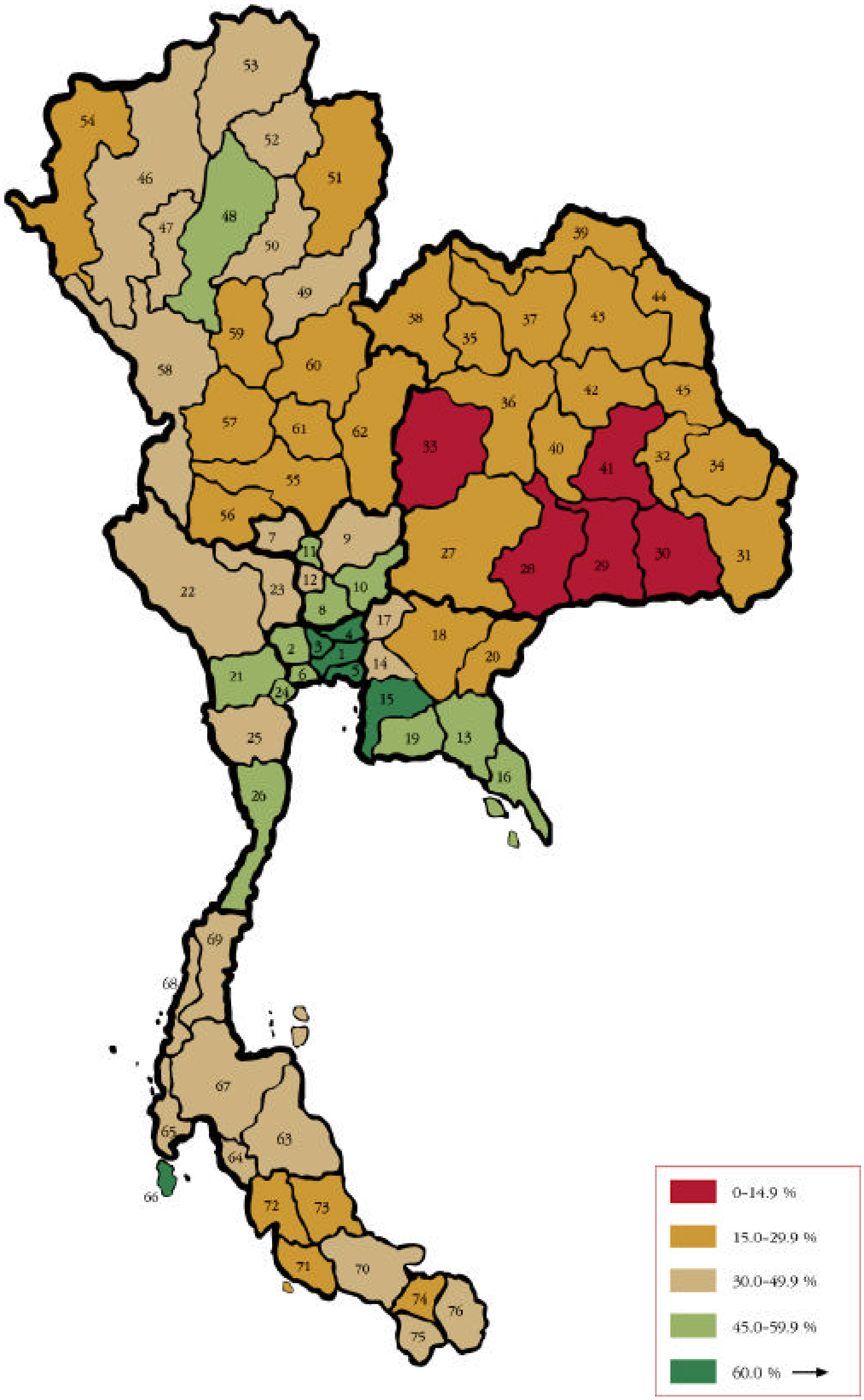
Map 30. Percentage of Households with a Colour TV, 1990

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



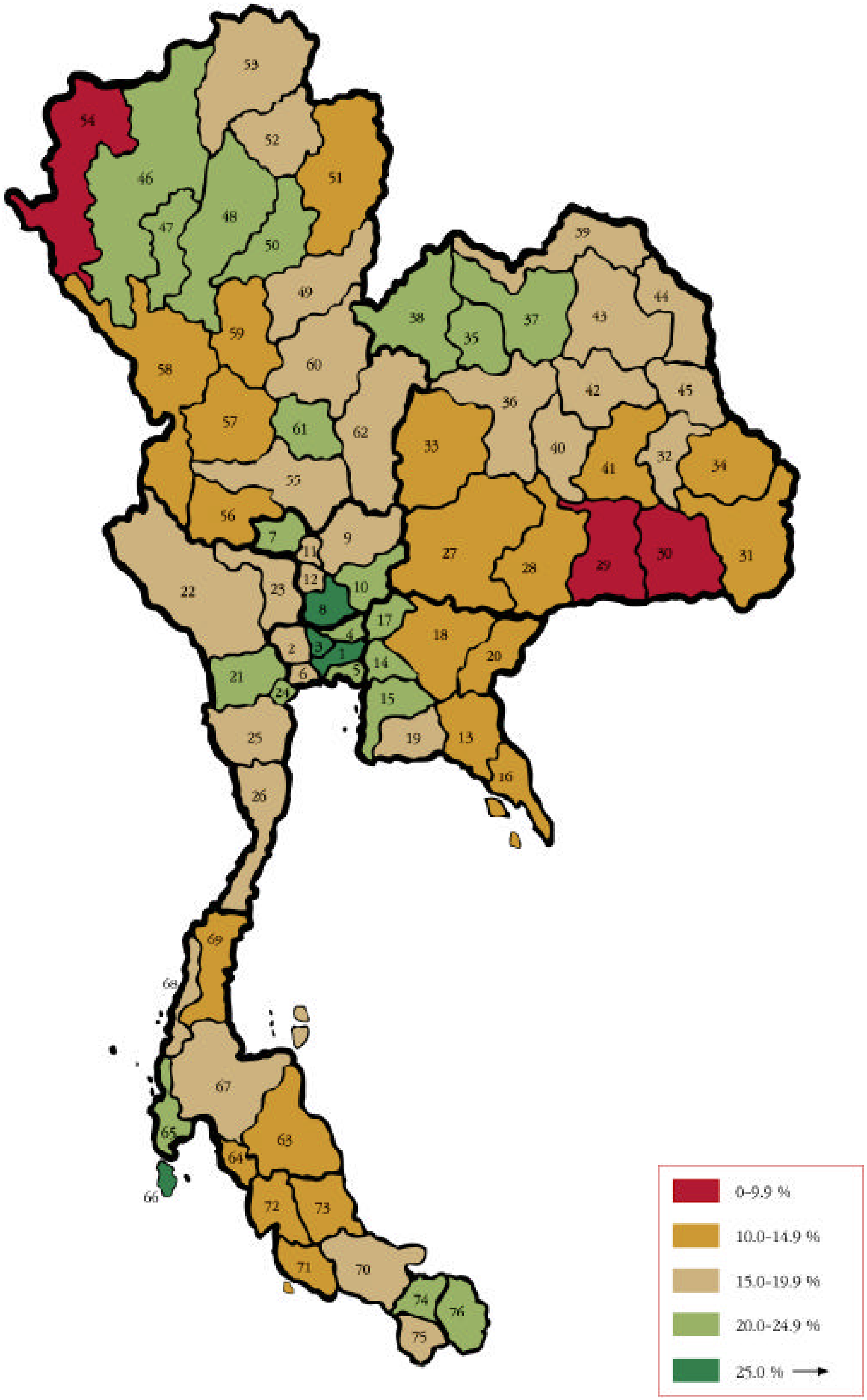
Map 31. Percentage of Households with a Refrigerator, 1990

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



Map 32. Percentage of Households with Access to a Sewing Machine, 1990

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



Map 33. Percentage of Households with an Electric Fan, 1990

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat

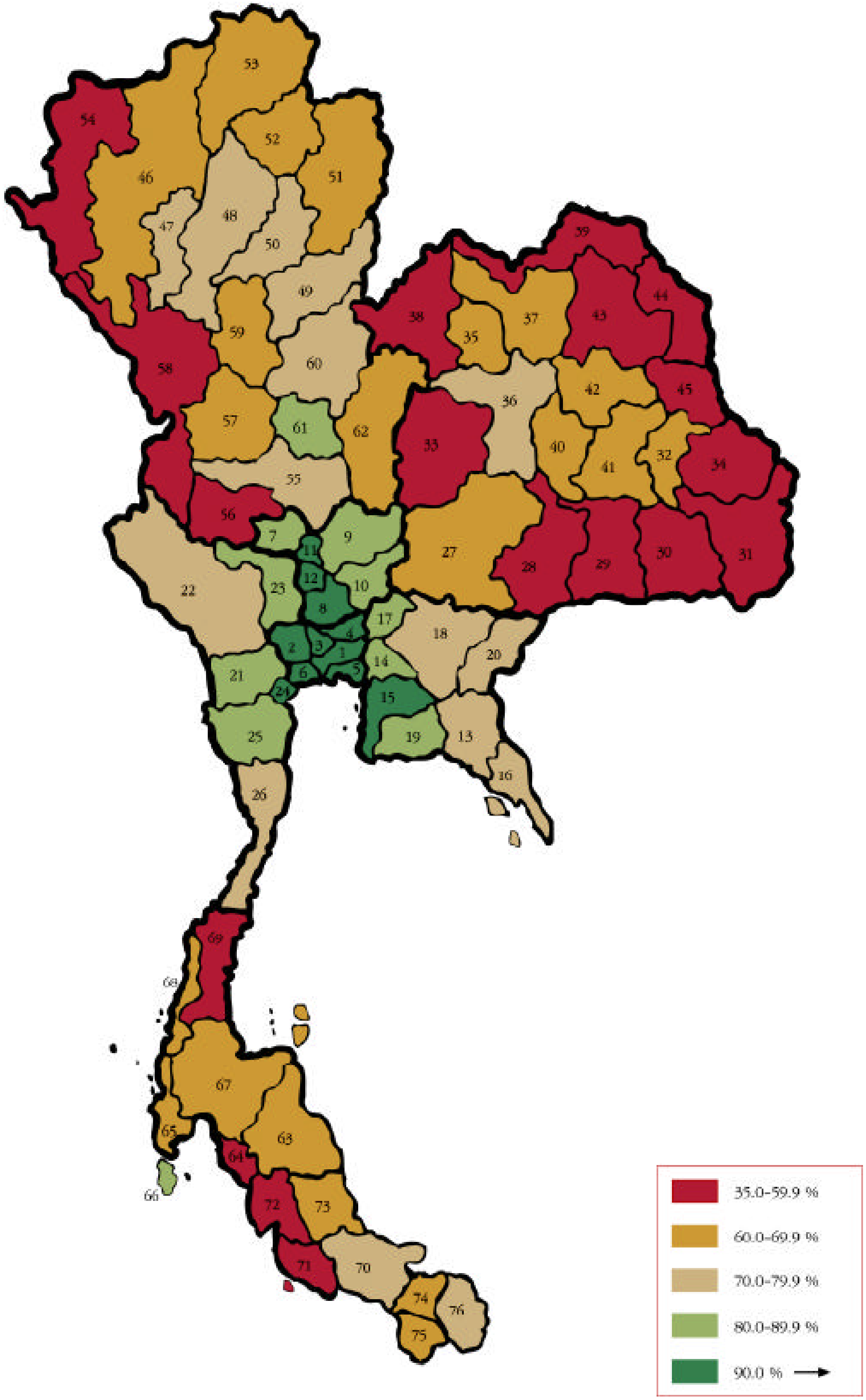


Table 3.10

Selection of Women's Indicators

Component	Indicator	Justification
Economic Activity	Women in the labour force	Greater female participation in the labour force is indicative of economic emancipation.
	Women's unemployment	High unemployment rates demonstrate the existence of major obstacles to economic emancipation.
Education	Educational attainment levels	The absence of formal education seriously curtails the opportunities of women and greatly adds to their disadvantages. Women should have the same opportunities as men to acquire the knowledge and skills required for their own development as well as the development of their families, communities and the nation. The index has four indicators: (i) women without formal education; (ii) percentage of women who have completed primary school; (iii) percentage completing lower secondary school; and (iv) percentage completing secondary education.
	Educational enrollment	Lower enrollment rates for girls are indicative of lost opportunities and curtailed chances. The index has two indicators: (I) percentage of girls enrolled in lower secondary education; and (ii) percentage of girls enrolled in secondary and vocational education.
Reproductive Health	Contraceptive prevalence rate	Higher CPRs are indicative of conscious decision-making on reproductive health and child bearing.
	Maternal Mortality Rate	High MMRs are indicative of health situations that are insufficiently responsive to the particular needs of women.
	Incidence of STDs	Women are particularly vulnerable to sexually transmitted diseases which can have long as well as short term implications not only for their health but also for their ability to take full advantage of social and economic opportunity.
Family and Marriage	Number of children	Given their multiple roles in society, women with large families are more disadvantaged than those with smaller numbers of children.

In many respects, the above indicators can be regarded as traditional indicators of the position of women and the girls. As such they provide little evidence of the quality of the life and work of women and of the extent of their empowerment. Data that would have made it possible to include more qualitative assessments are unavailable in sufficiently disaggregated form. While the Women's Index fails to capture some of the important dimensions of gender and development, it is never-theless composed of 12 different indicators. For this reason, it can be expected to throw additional light on the position of women and girls at the province level.

The best and worst cases for each indicator are summarised in Table 3.11. It should be noted that the table compares the situation between women in different provinces and not the relationship between men and women, which would have entailed a departure from the methodology used for the calculation of other indices. However, Table 3.11 reveals very significant disparities in the position of women in different provinces. These differences establish a justification for women and development policies that are guided by the need to correct disparities existing between women (in addition to those existing between men and women) at the provincial level. Maps 34-43 show the provincial distributions for each of the indicators that have been used for the calculation of the Women's Index.

Table 3.11

Women's Indicators

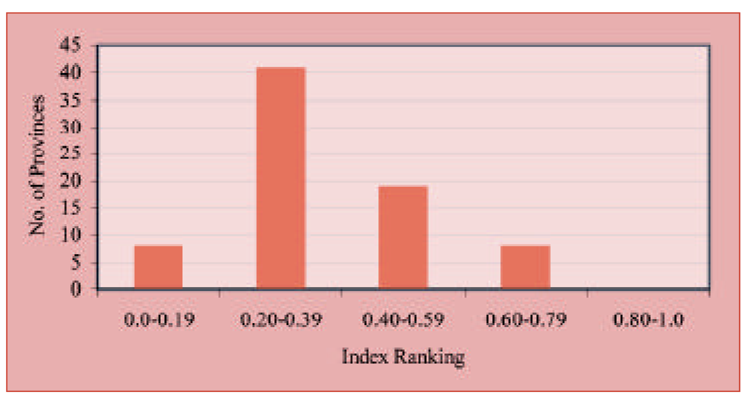
Indicator	Unit	Best			Worst			Disparity
		Figure	Province	Region	Figure	Province	Region	
Labour force participation	(%)	60.49	Yasothon	Northeast	32.02	Surin	Northeast	2:1
Female unemployment rate	(%)	1.44	Trat	Eastern	33.99	Nakhon Phanom	Northeast	24:1
Without formal education	(%)	4.54	Bangkok	--	40.70	M. Hong Son	Northern	9:1
Completed primary school	(%)	39.48	N.B. Lam Phu	Northeast	8.23	Nonthaburi	BKK	5:1
Comp. lower secondary	(%)	26.54	Sam. Sakon	BV	2.75	Uthai Thani	Northern	10:1
Comp. Secondary	(%)	17.76	Pathum Thani	BV	1.52	Si Saket	Northeast	12:1
Enrollment rate lower secondary	(%)	101.16	Pathum Thani	BV	61.15	M. Hong Son	Northern	2:1
Enrollment rate secondary	(%)	89.59	Phuket	Southern	22.08	N.B. Lam Phu	Northeast	4:1
CPR	(%)	68.00	Lamphun	Northern	21.40	Phatthalung	Southern	3:1
Number of children	No.	2.32	Sam. Prakan	BV	3.60	Surin	Northeast	1.6:1
Maternal mortality rate	Per 100,000	0.00	Several	--	174.20	N.B. Lam Phu	Northeast	--
Incidence of STDs	Per 1,000	0.010	Sakon Nakhon	Northeast	1.438	Lampang	Northern	144:1

The distribution of provinces by index rankings in Figure 3.8 shows that eight provinces could be considered the most 'women unfriendly' provinces in Thailand. The highest score is recorded by Narathiwat in the South, followed by Pattani, also in the South, and Surin in the Northeast. Five provinces have relatively better conditions: Sakon Nakhon, Kamphaeng Phet, Tak, and Phangnga and Yala, two of which are found in the South, two in the North and one in the Northeast. The eight which could be regarded as the most 'women friendly' provinces, are to be found evenly distributed in all the regions. They are Samut Prakan in the Bangkok Vicinity, Ang Thong in the Central region, Chachoengsao and Sa Kaeo in the East, Prachuap Khiri Khan in the West, Nakhon Ratchasima and Chaiyaphum in the Northeast, and Phrae in the North.

Figure 3.8

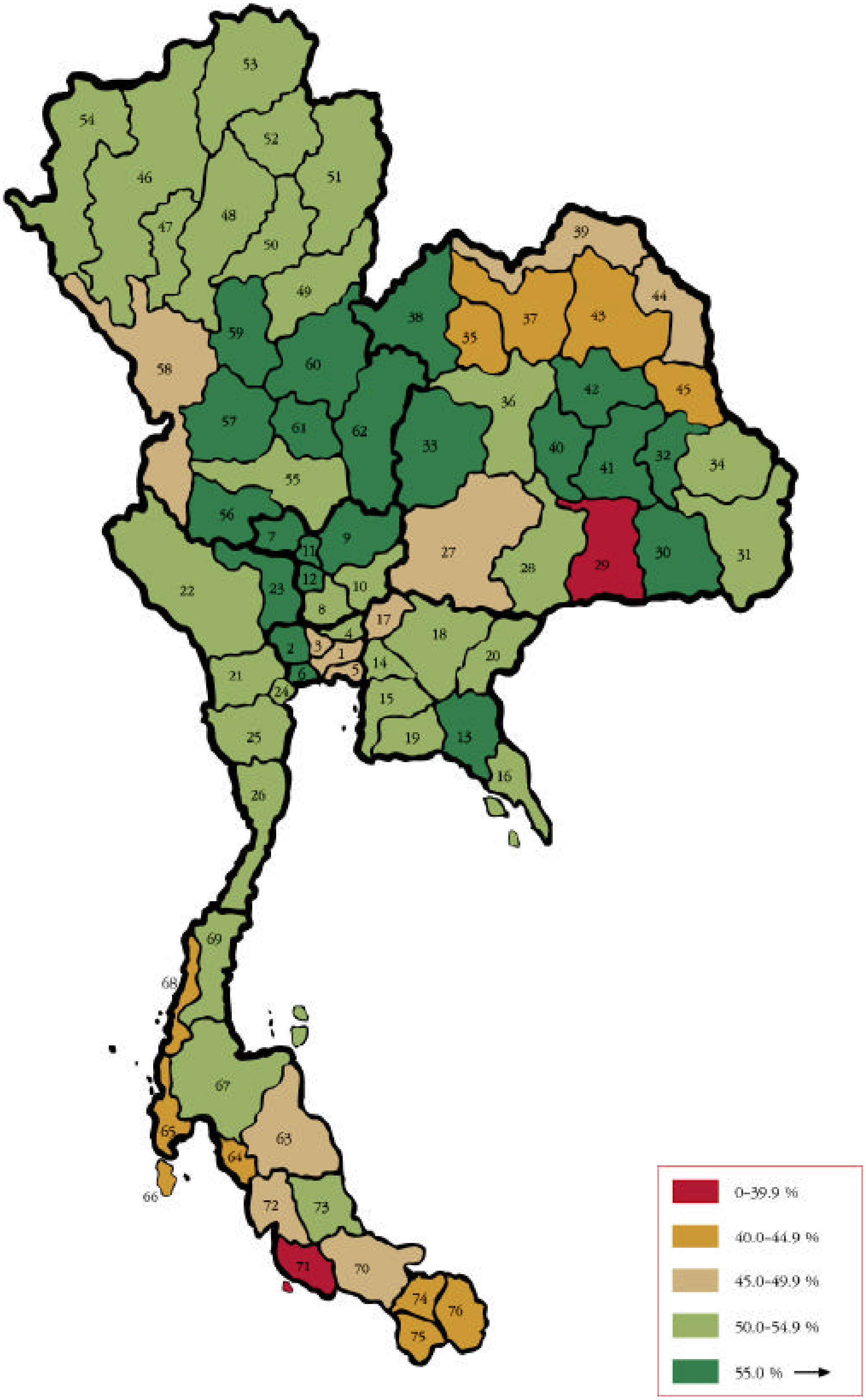
Women's Index:

Distribution of Provinces by Index Ranking



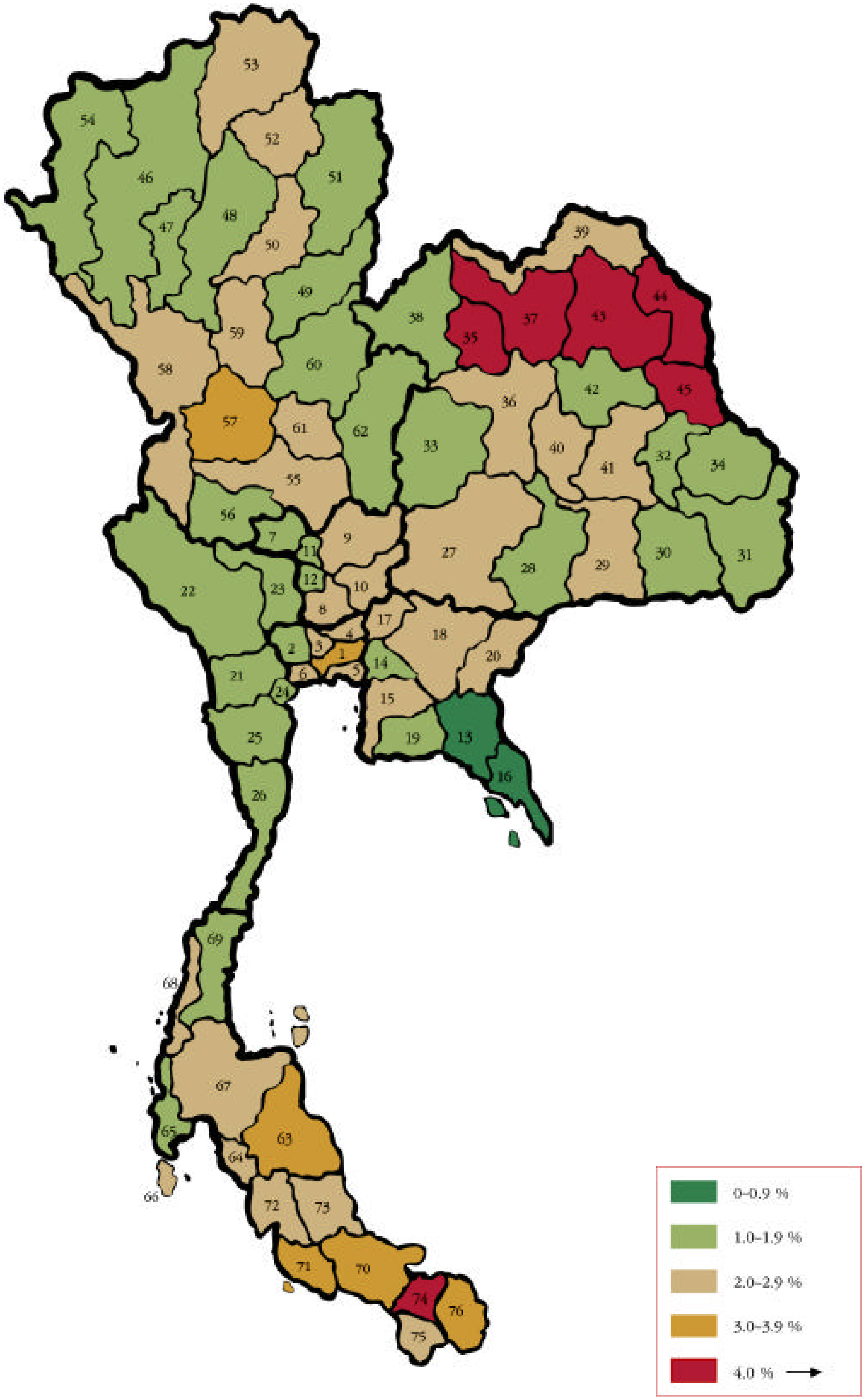
Map 34. Female Labour Force Participation Rate, 1998

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



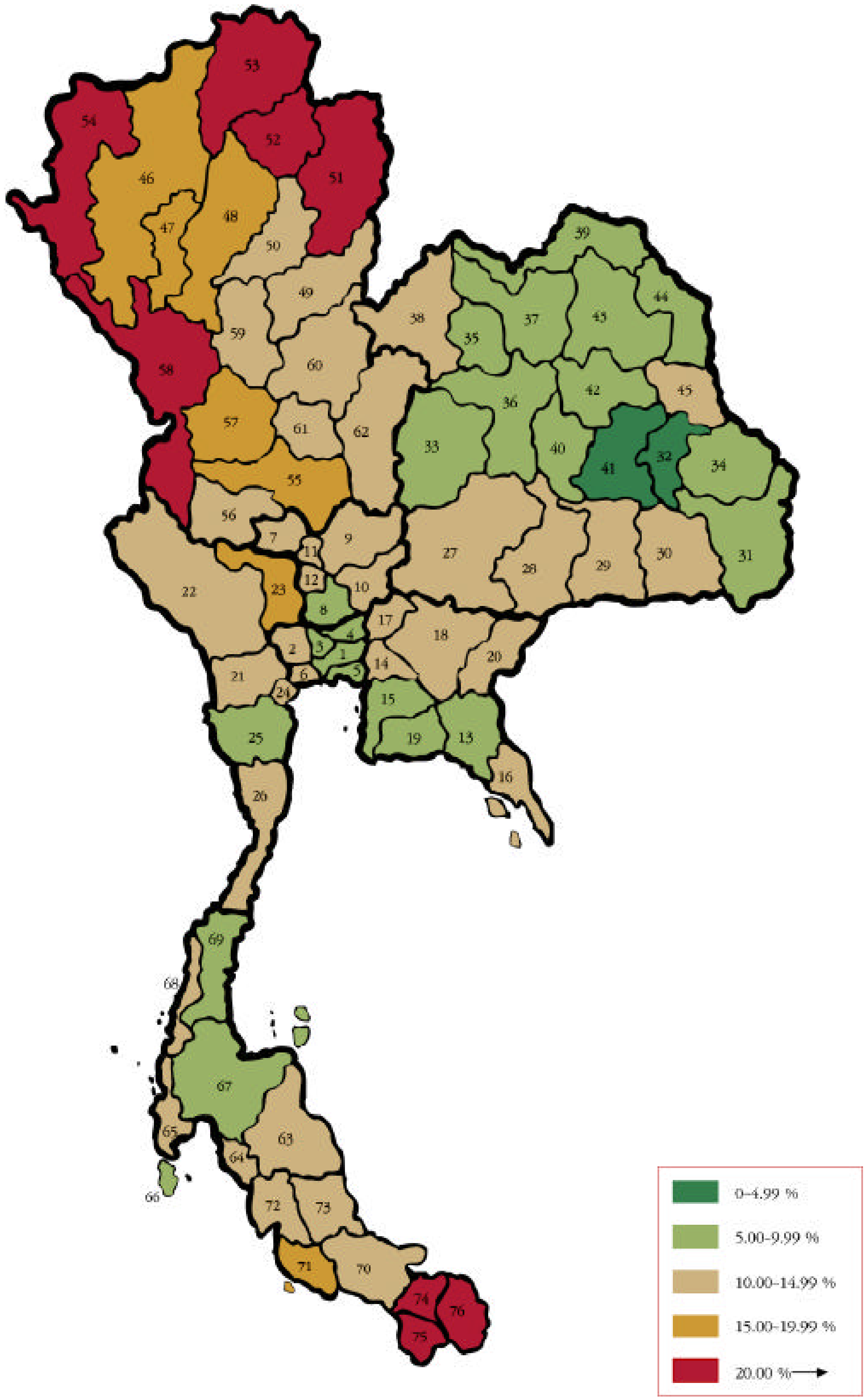
Map 35. Women Looking for Job, 1998

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



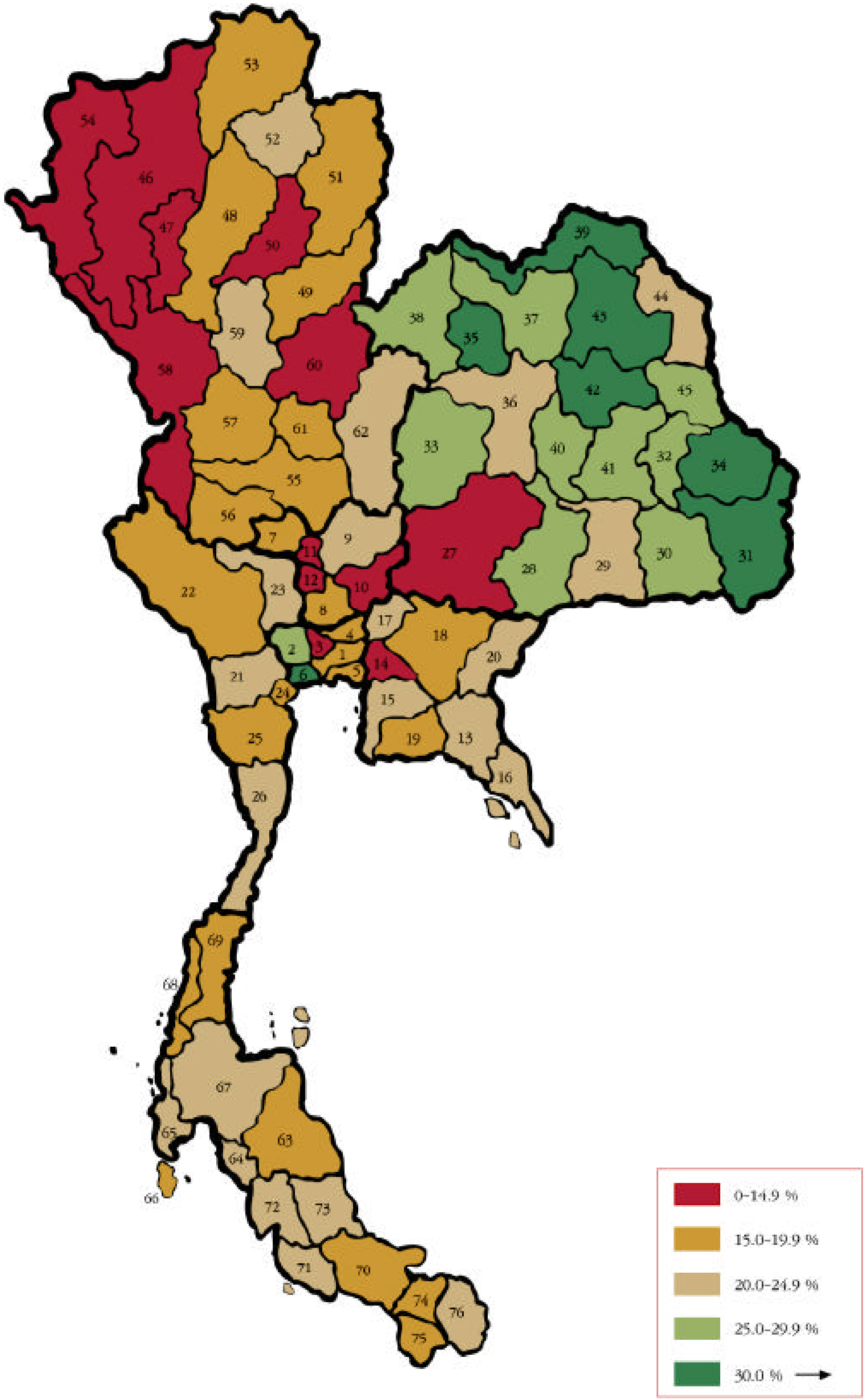
Map 36. Percentage of Women without Formal Education, 1998

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



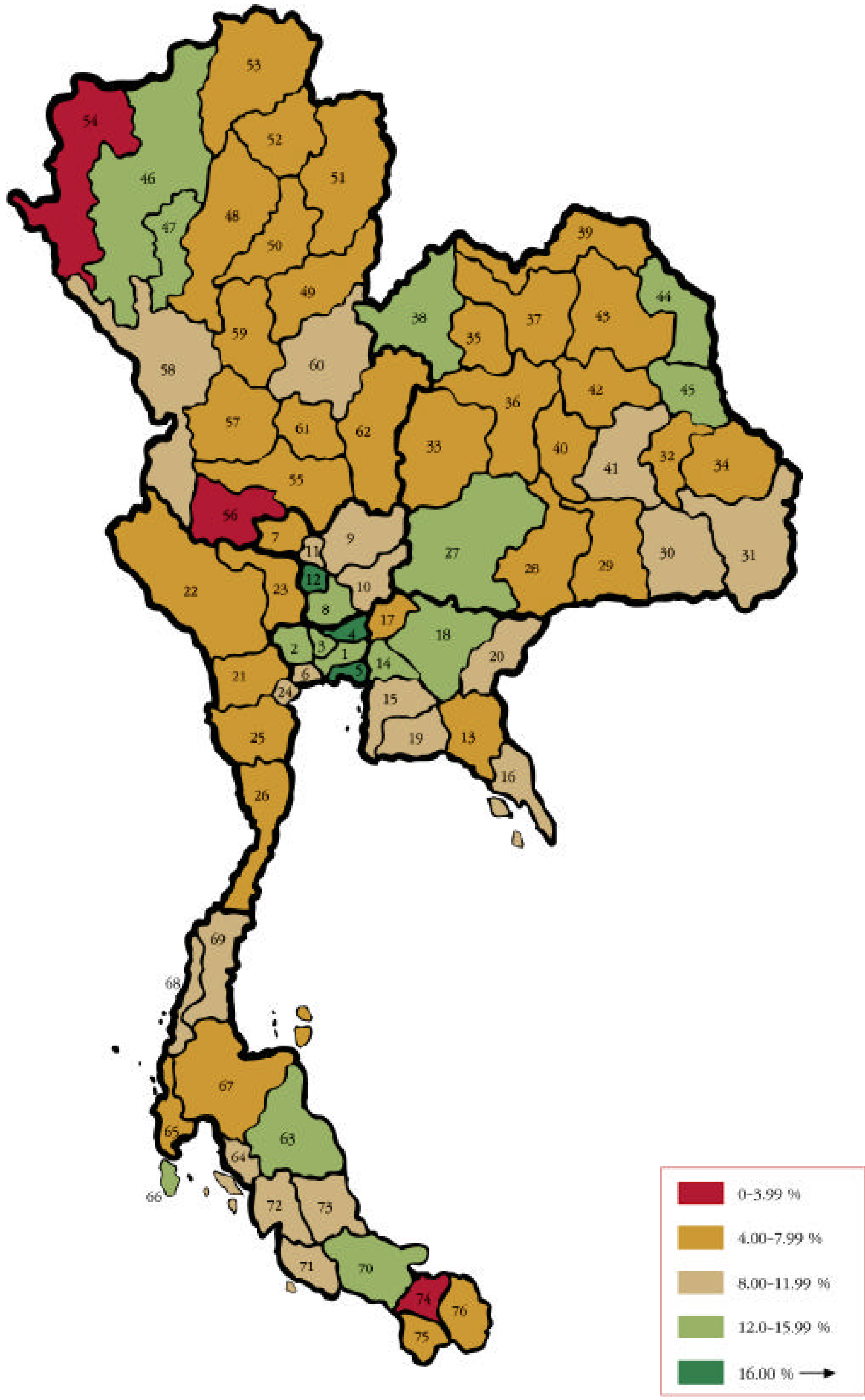
Map 37. Percentage of Women who have Completed Primary School, 1998

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



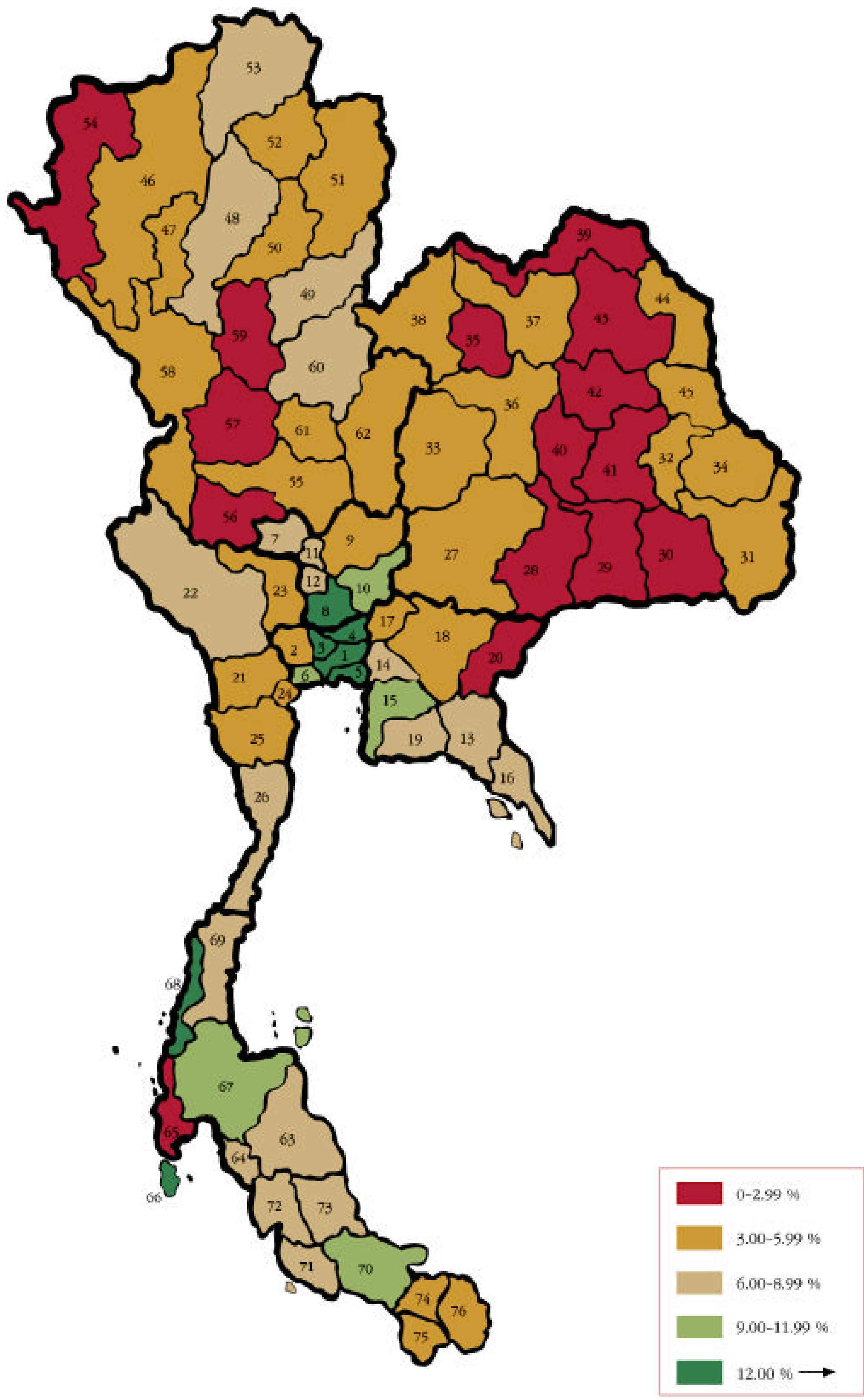
Map 38. Percentage of Women who have Completed Lower Secondary School, 1998

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



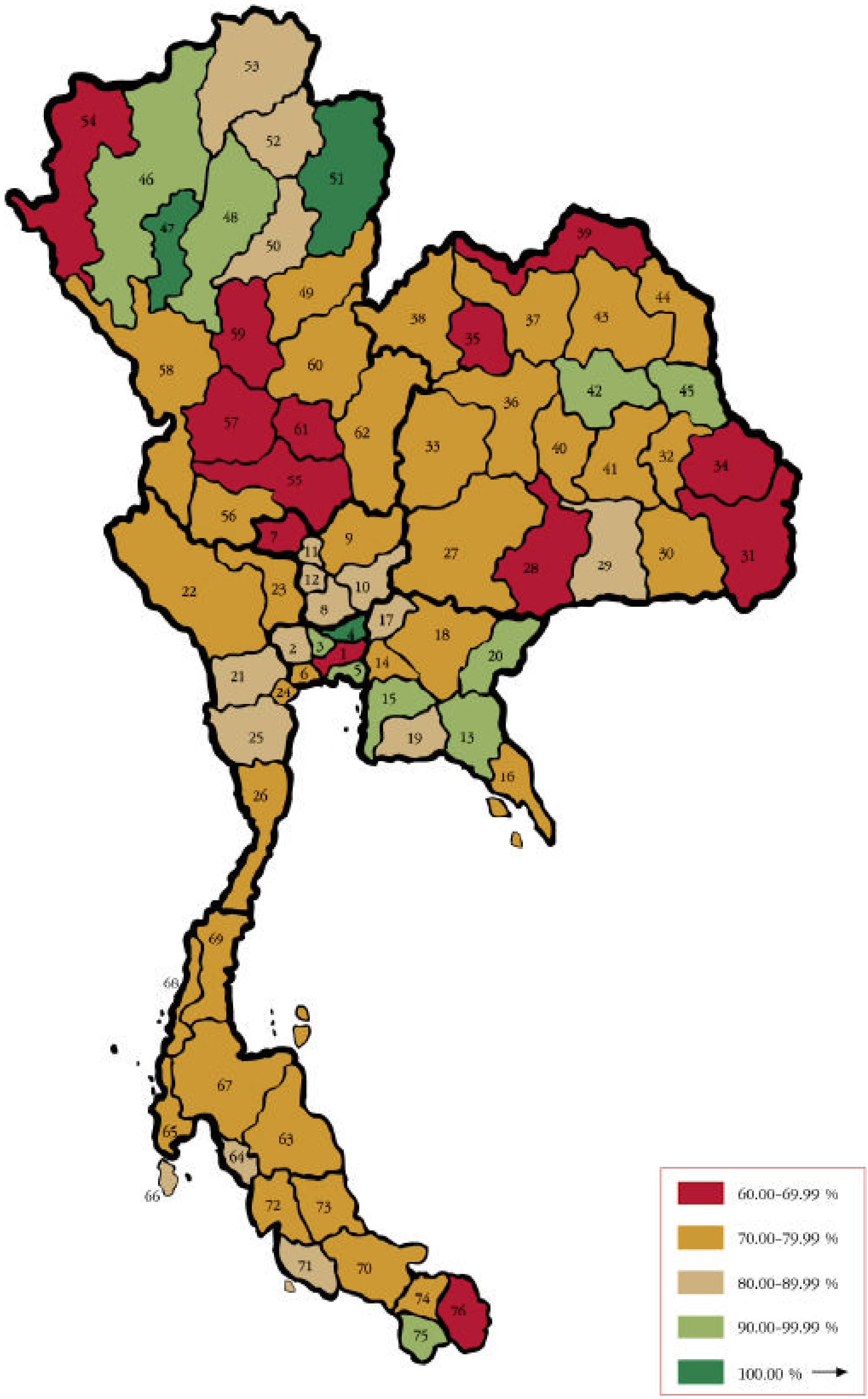
Map 39. Percentage of Women who have Completed Secondary School, 1998

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



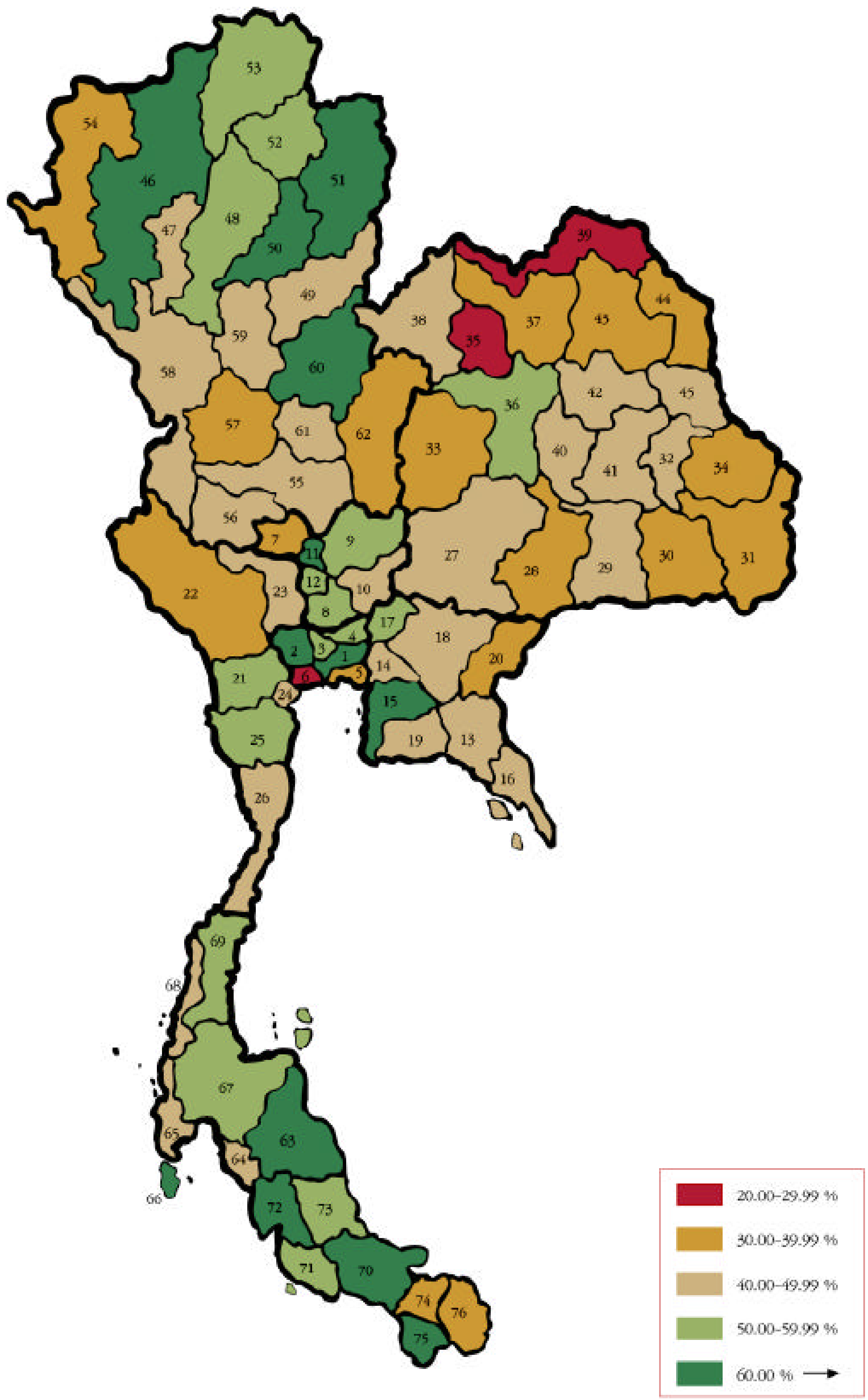
Map 40. Female Enrollment Rate in Lower Secondary School, 1997

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



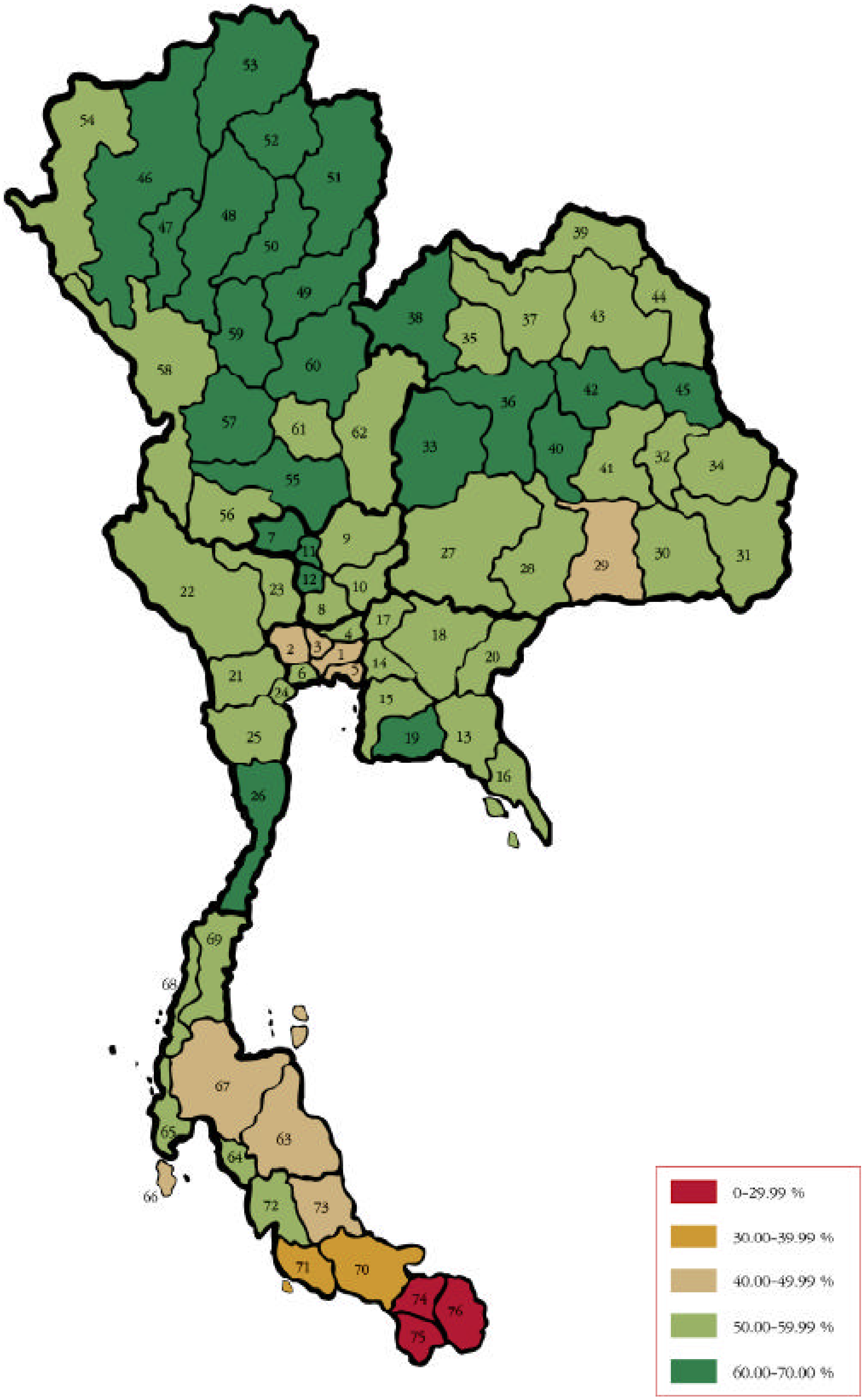
Map 41. Female Enrollment Rate in Secondary School, 1997

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



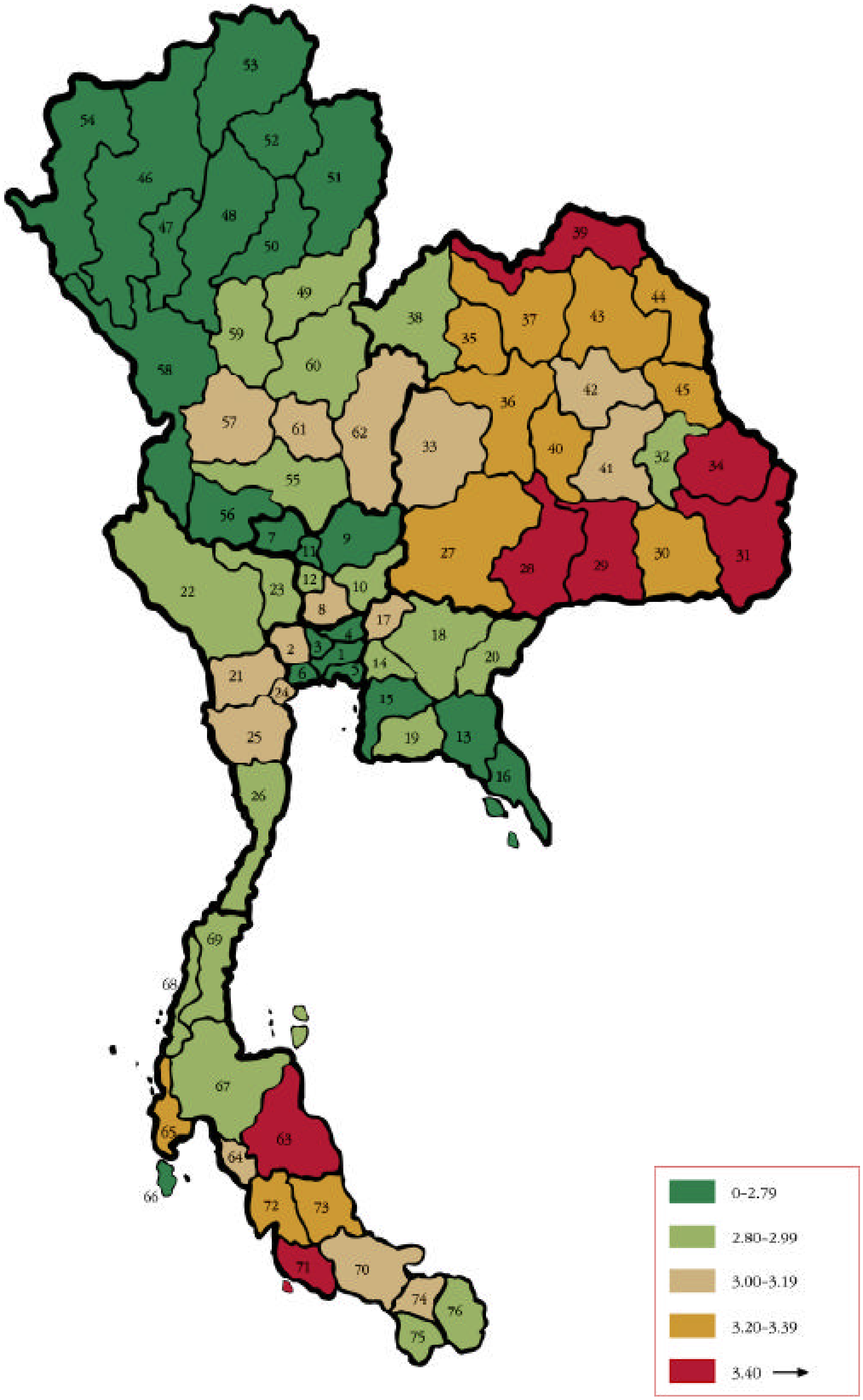
Map 42. Contraceptive Prevalence Rate, 1990

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



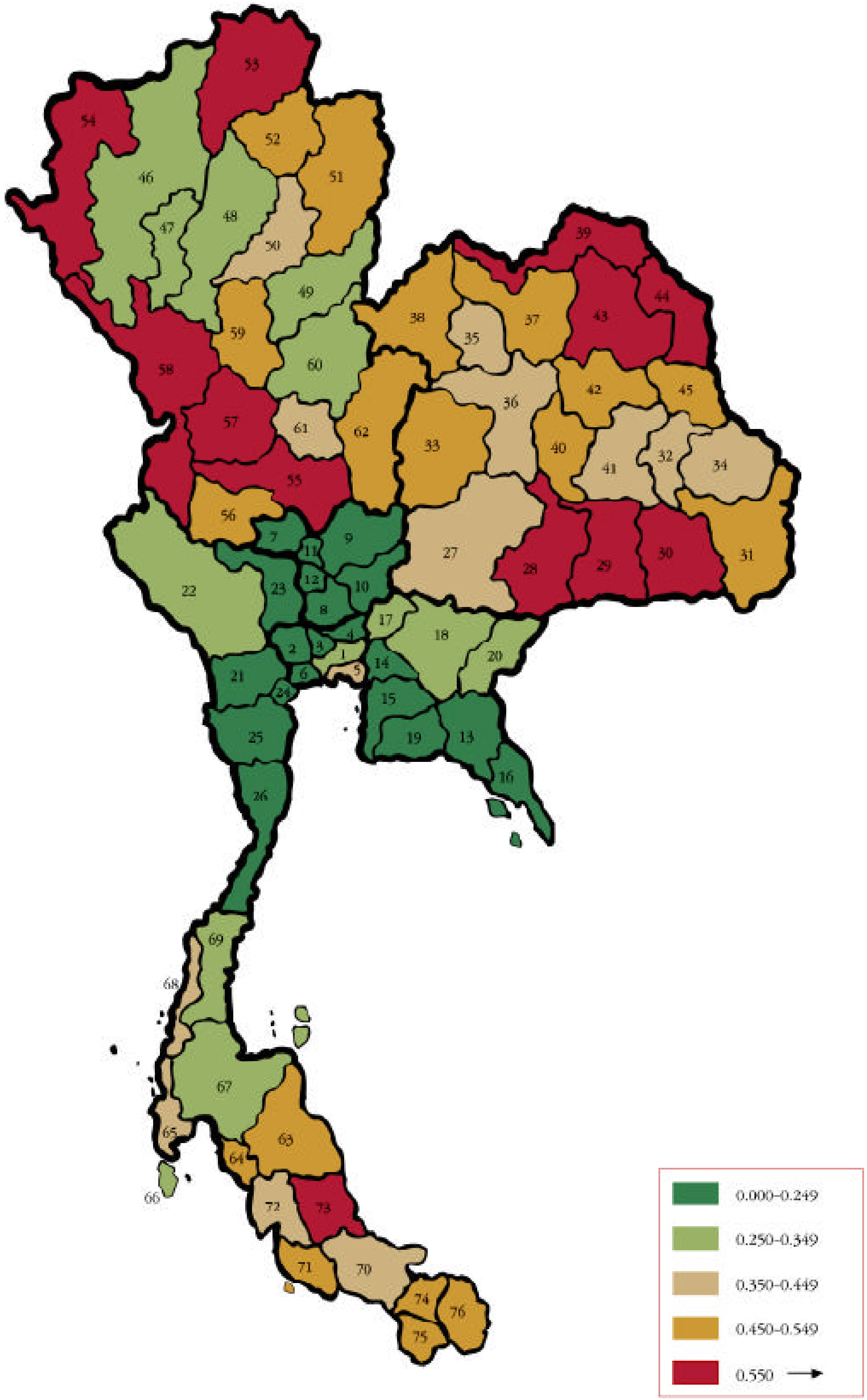
Map 43. Average Number of Children per Woman, 1990

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



Map 44. Composite Index of Human Deprivation

1. Bangkok
2. Nakhon Pathom
3. Nonthaburi
4. Pathum Thani
5. Samut Prakan
6. Samut Sakhon
7. Chai Nat
8. Pra Nakhon Si Ayutthaya
9. Lop Buri
10. Saraburi
11. Sing Buri
12. Ang Thong
13. Chanthaburi
14. Chachoengsao
15. Chon Buri
16. Trat
17. Nakhon Nayok
18. Prachin Buri
19. Rayong
20. Sa Kaeo
21. Ratchaburi
22. Kanchanaburi
23. Suphan Buri
24. Samut Songkhram
25. Phetchaburi
26. Prachuap Khiri Khan
27. Nakhon Ratchasima
28. Buri Ram
29. Surin
30. Si Saket
31. Ubon Ratchathani
32. Yasothon
33. Chaiyaphum
34. Amnat Charoen
35. Nong Bua Lam Phu
36. Khon Kaen
37. Udon Thani
38. Loei
39. Nong Khai
40. Maha Sarakham
41. Roi Et
42. Kalasin
43. Sakon Nakhon
44. Nakhon Phanom
45. Mukdahan
46. Chiang Mai
47. Lamphun
48. Lampang
49. Uttaradit
50. Phrae
51. Nan
52. Phayao
53. Chiang Rai
54. Mae Hong Son
55. Nakhon Sawan
56. Uthai Thani
57. Kamphaeng Phet
58. Tak
59. Sukhothai
60. Phitsanulok
61. Phichit
62. Phetchabun
63. Nakhon Si Thammarat
64. Krabi
65. Phangnga
66. Phuket
67. Surat Thani
68. Ranong
69. Chumphon
70. Songkhla
71. Satun
72. Trang
73. Phatthalung
74. Pattani
75. Yala
76. Narathiwat



III. THE COMPOSITE INDEX OF HUMAN DEPRIVATION

1. Composite Index by Province

The composite Index of Human Deprivation (IHD) brings together and synthesizes the results of the eight separate indices. Its component parts are summarized and ranked by composite index in Table 3.12 and the same indices are grouped by province in Table 3.13. The composite IHD is produced in map form in Map 44. Both the tables and the map represent the main results of the exercise to map deprivation and disadvantage in Thailand.

Table 3.12

Summary of Indices, ranked by composite index

Province	Income index	Health index	Education index	Employ-ment index	Housing index	Transp.& Comm. Index	Consumer good index	Women's index	Composite index
1 Sing Buri	0.333	0.050	0.188	0.000	0.000	0.250	0.000	0.083	0.113
2 Saraburi	0.000	0.150	0.125	0.250	0.000	0.250	0.000	0.250	0.128
3 Ayutthaya	0.000	0.300	0.125	0.250	0.000	0.125	0.000	0.292	0.136
4 Pathum Thani	0.000	0.300	0.313	0.250	0.000	0.125	0.000	0.167	0.144
5 Suphan Buri	0.167	0.350	0.313	0.000	0.000	0.125	0.000	0.208	0.145
6 Lop Buri	0.167	0.150	0.125	0.250	0.000	0.125	0.125	0.292	0.154
7 Nakhon Pathom	0.000	0.350	0.188	0.000	0.200	0.125	0.000	0.375	0.155
8 Nonthaburi	0.000	0.150	0.250	0.250	0.000	0.250	0.000	0.375	0.159
9 Phetchaburi	0.333	0.200	0.000	0.000	0.500	0.125	0.125	0.167	0.181
10 Ang Thong	0.167	0.200	0.125	0.000	0.400	0.250	0.125	0.208	0.184
11 Ratchaburi	0.000	0.250	0.313	0.000	0.500	0.125	0.000	0.292	0.185
12 Chai Nat	0.500	0.050	0.375	0.000	0.000	0.250	0.000	0.333	0.189
13 Samut Sakhon	0.000	0.250	0.375	0.000	0.100	0.375	0.125	0.292	0.190
14 Rayong	0.000	0.500	0.313	0.000	0.100	0.500	0.000	0.167	0.197
15 Samut Songkhram	0.333	0.400	0.250	0.000	0.100	0.250	0.000	0.333	0.208
16 Prachuap Khiri Khan	0.500	0.200	0.250	0.000	0.200	0.250	0.125	0.167	0.211
17 Chon Buri	0.000	0.300	0.313	0.250	0.300	0.250	0.000	0.333	0.218
18 Chachoengsao	0.167	0.450	0.250	0.250	0.100	0.250	0.000	0.292	0.220
19 Trat	0.167	0.400	0.250	0.000	0.000	0.500	0.250	0.208	0.222
20 Chantaburi	0.167	0.350	0.188	0.000	0.400	0.375	0.250	0.125	0.232
21 Lamphun	0.000	0.700	0.313	0.000	0.200	0.500	0.000	0.292	0.251
22 Lampang	0.333	0.350	0.313	0.000	0.300	0.375	0.000	0.333	0.251
23 Chiang Mai	0.167	0.300	0.375	0.000	0.300	0.500	0.125	0.250	0.252
24 Phitsanulok	0.333	0.300	0.313	0.250	0.200	0.125	0.250	0.250	0.253
25 Sa Kaeo	0.000	0.450	0.500	0.250	0.100	0.250	0.375	0.208	0.267
26 Prachin Buri	0.000	0.450	0.375	0.250	0.200	0.250	0.375	0.417	0.290
27 Chumphon	0.500	0.300	0.063	0.000	0.300	0.375	0.625	0.292	0.307
28 Surat Thani	0.167	0.300	0.125	0.250	0.600	0.500	0.250	0.292	0.310
29 Kanchanaburi	0.667	0.500	0.625	0.000	0.000	0.250	0.000	0.500	0.318
30 Bangkok	0.167	0.200	0.438	0.500	0.300	0.500	0.000	0.458	0.320
31 Uttaradit	1.000	0.250	0.188	0.250	0.200	0.250	0.375	0.125	0.330
32 Phuket	0.000	0.400	0.250	0.500	0.600	0.500	0.000	0.458	0.339
33 Nakhon Nayok	1.000	0.250	0.125	0.500	0.100	0.250	0.125	0.375	0.341

34 Ranong	0.000	0.200	0.313	0.250	0.700	0.750	0.250	0.417	0.360
35 Samut Prakan	0.667	0.400	0.375	0.500	0.300	0.250	0.000	0.500	0.374
36 Phangnga	0.667	0.300	0.500	0.250	0.100	0.500	0.125	0.625	0.383
37 Khon Kaen	0.333	0.350	0.250	0.750	0.300	0.375	0.500	0.292	0.394
38 Songkhla	0.000	0.000	0.563	0.500	0.800	0.750	0.125	0.458	0.399
39 Amnat Charoen	0.333	0.250	0.500	0.500	0.300	0.375	0.875	0.250	0.423
40 Nong Bua Lam Phu	0.333	0.350	0.688	0.750	0.200	0.375	0.375	0.417	0.436
41 Phrae	0.667	0.450	0.188	0.750	0.600	0.375	0.125	0.333	0.436
42 Roi Et	0.500	0.500	0.188	0.500	0.400	0.375	0.750	0.292	0.438
43 Phichit	1.000	0.500	0.375	0.250	0.500	0.250	0.250	0.375	0.438
44 Yasothon	0.833	0.350	0.375	0.500	0.300	0.250	0.750	0.167	0.441
45 Trang	0.333	0.250	0.438	0.500	0.300	0.625	0.750	0.333	0.441
46 Nakhon Ratchasima	0.333	0.300	0.438	0.500	0.400	0.500	0.625	0.500	0.449
47 Ubon Ratchathani	0.333	0.450	0.563	0.500	0.200	0.375	0.875	0.333	0.454
48 Sukhothai	0.833	0.350	0.313	0.500	0.600	0.125	0.625	0.333	0.460
49 Nan	0.333	0.450	0.375	0.500	0.200	0.625	0.875	0.375	0.467
50 Kalasin	0.500	0.550	0.375	0.500	0.400	0.500	0.625	0.292	0.468
51 Phetchabun	1.000	0.350	0.438	0.250	0.600	0.375	0.375	0.417	0.476
52 Udon Thani	0.333	0.400	0.438	0.750	0.600	0.375	0.375	0.542	0.477
53 Nakhon Si Thammarat	0.333	0.250	0.438	0.500	0.800	0.625	0.500	0.458	0.488
54 Chaiyaphum	0.667	0.350	0.313	0.500	0.500	0.500	0.875	0.250	0.494
55 Loei	0.833	0.650	0.313	0.250	0.700	0.250	0.750	0.208	0.494
56 Krabi	0.500	0.400	0.375	0.250	0.600	0.750	0.750	0.375	0.500
57 Yala	0.500	0.500	0.563	0.500	0.700	0.500	0.125	0.625	0.502
58 Maha Sarakham	0.500	0.450	0.375	0.500	0.500	0.625	0.750	0.333	0.504
59 Pattani	0.167	0.550	0.750	0.500	0.600	0.375	0.375	0.833	0.519
60 Phayao	0.833	0.600	0.375	0.750	0.500	0.500	0.250	0.375	0.523
61 Narathiwat	1.000	0.450	0.875	0.500		0.500	0.125	0.792	0.530
62 Satun	0.167	0.400	0.563	0.500	0.700	0.750	0.750	0.500	0.541
63 Mukdahan	0.333	0.650	0.438	0.750	0.500	0.375	0.875	0.458	0.547
64 Uthai Thani	1.000	0.250	0.375	0.500	0.500	0.375	1.000	0.375	0.547
65 Nakhon Phanom	0.500	0.650	0.375	1.000	0.400	0.250	0.750	0.542	0.558
66 Chiang Rai	1.000	0.750	0.563	0.750	0.800	0.250	0.125	0.333	0.571
67 Phatthalung	1.000	0.300	0.375	0.750	0.600	0.625	0.625	0.292	0.571
68 Sakon Nakhon	0.667	0.300	0.500	1.000	0.500	0.250	0.750	0.625	0.574
69 Si Saket	0.667	0.450	0.688	0.500	0.500	0.500	1.000	0.333	0.580
70 Buri Ram	0.500	0.550	0.688	0.500	0.500	0.500	1.000	0.417	0.582
71 Nong Khai	0.833	0.400	0.625	0.750	0.300	0.375	0.875	0.542	0.588
72 Nakhon Sawan	0.833	0.400	0.500	0.500	0.600	0.125	0.375	0.417	0.594
73 Kamphaeng Phet	0.667	0.650	0.563	0.500	0.800	0.375	0.875	0.625	0.632
74 Mae Hong Son	1.000	0.600	0.688	0.250	0.400	0.750	1.000	0.667	0.669
75 Surin	0.667	0.550	0.563	1.000	0.500	0.500	1.000	0.667	0.681
76 Tak	1.000	0.650	0.625	1.000	0.600	0.375	0.750	0.625	0.703

Table 3.13

Summary of Indices by Region

Province	Income index	Health index	Education index	Employ-ment index	Housing index	Transp.& Comm. Index	Consumer good index	Women's index	Composite index
Bangkok Vicinity									
Bangkok	0.167	0.200	0.438	0.500	0.300	0.500	0.000	0.458	0.320
Nakhon Pathom	0.000	0.350	0.188	0.000	0.200	0.125	0.000	0.375	0.155
Nonthaburi	0.000	0.150	0.250	0.250	0.000	0.250	0.000	0.375	0.159
Pathum Thani	0.000	0.300	0.313	0.250	0.000	0.125	0.000	0.167	0.144
Samut Prakan	0.667	0.400	0.375	0.500	0.300	0.250	0.000	0.500	0.374
Samut Sakhon	0.000	0.250	0.375	0.000	0.100	0.375	0.125	0.292	0.190
Central Region									
Chai Nat	0.500	0.050	0.375	0.000	0.000	0.250	0.000	0.333	0.189
Ayutthaya	0.000	0.300	0.125	0.250	0.000	0.125	0.000	0.292	0.136
Lop Buri	0.167	0.150	0.125	0.250	0.000	0.125	0.125	0.292	0.154
Saraburi	0.000	0.150	0.125	0.250	0.000	0.250	0.000	0.250	0.128
Sing Buri	0.333	0.050	0.188	0.000	0.000	0.250	0.000	0.083	0.113
Ang Thong	0.167	0.200	0.125	0.000	0.400	0.250	0.125	0.208	0.184
Eastern Region									
Chantaburi	0.167	0.350	0.188	0.000	0.400	0.375	0.250	0.125	0.232
Chachoengsao	0.167	0.450	0.250	0.250	0.100	0.250	0.000	0.292	0.220
Chon Buri	0.000	0.300	0.313	0.250	0.300	0.250	0.000	0.333	0.218
Trat	0.167	0.400	0.250	0.000	0.000	0.500	0.250	0.208	0.222
Nakhon Nayok	1.000	0.250	0.125	0.500	0.100	0.250	0.125	0.375	0.341
Prachin Buri	0.000	0.450	0.375	0.250	0.200	0.250	0.375	0.417	0.290
Rayong	0.000	0.500	0.313	0.000	0.100	0.500	0.000	0.167	0.197
Sa Kaeo	0.000	0.450	0.500	0.250	0.100	0.250	0.375	0.208	0.267
Western Region									
Ratchaburi	0.000	0.250	0.313	0.000	0.500	0.125	0.000	0.292	0.185
Kanchanaburi	0.667	0.500	0.625	0.000	0.000	0.250	0.000	0.500	0.318
Suphan Buri	0.167	0.350	0.313	0.000	0.000	0.125	0.000	0.208	0.145
Samut Songkhram	0.333	0.400	0.250	0.000	0.100	0.250	0.000	0.333	0.208
Phetchaburi	0.333	0.200	0.000	0.000	0.500	0.125	0.125	0.167	0.181
Prachuap Khiri Khan	0.500	0.200	0.250	0.000	0.200	0.250	0.125	0.167	0.211
Northeastern Region									
Nakhon Ratchasima	0.333	0.300	0.438	0.500	0.400	0.500	0.625	0.500	0.449
Buri Ram	0.500	0.550	0.688	0.500	0.500	0.500	1.000	0.417	0.582
Surin	0.667	0.550	0.563	1.000	0.500	0.500	1.000	0.667	0.681
Si Saket	0.667	0.450	0.688	0.500	0.500	0.500	1.000	0.333	0.580
Ubon Ratchathani	0.333	0.450	0.563	0.500	0.200	0.375	0.875	0.333	0.454
Yasothon	0.833	0.350	0.375	0.500	0.300	0.250	0.750	0.167	0.441
Chaiyaphum	0.667	0.350	0.313	0.500	0.500	0.500	0.875	0.250	0.494
Amnat Charoen	0.333	0.250	0.500	0.500	0.300	0.375	0.875	0.250	0.423
Nong Bua Lam Phu	0.333	0.350	0.688	0.750	0.200	0.375	0.375	0.417	0.436
Khon Kaen	0.333	0.350	0.250	0.750	0.300	0.375	0.500	0.292	0.394
Udon Thani	0.333	0.400	0.438	0.750	0.600	0.375	0.375	0.542	0.477
Loei	0.833	0.650	0.313	0.250	0.700	0.250	0.750	0.208	0.494
Nong Khai	0.833	0.400	0.625	0.750	0.300	0.375	0.875	0.542	0.588
Maha Sarakham	0.500	0.450	0.375	0.500	0.500	0.625	0.750	0.333	0.504
Roi Et	0.500	0.500	0.188	0.500	0.400	0.375	0.750	0.292	0.438
Kalasin	0.500	0.550	0.375	0.500	0.400	0.500	0.625	0.292	0.468
Sakon Nakhon	0.667	0.300	0.500	1.000	0.500	0.250	0.750	0.625	0.574

Nakhon Phanom	0.500	0.650	0.375	1.000	0.400	0.250	0.750	0.542	0.558
Mukdahan	0.333	0.650	0.438	0.750	0.500	0.375	0.875	0.458	0.547
Northern Region									
Chiang Mai	0.167	0.300	0.375	0.000	0.300	0.500	0.125	0.250	0.252
Lamphun	0.000	0.700	0.313	0.000	0.200	0.500	0.000	0.292	0.251
Lampang	0.333	0.350	0.313	0.000	0.300	0.375	0.000	0.333	0.251
Uttaradit	1.000	0.250	0.188	0.250	0.200	0.250	0.375	0.125	0.330
Phrae	0.667	0.450	0.188	0.750	0.600	0.375	0.125	0.333	0.436
Nan	0.333	0.450	0.375	0.500	0.200	0.625	0.875	0.375	0.467
Phayao	0.833	0.600	0.375	0.750	0.500	0.500	0.250	0.375	0.523
Chiang Rai	1.000	0.750	0.563	0.750	0.800	0.250	0.125	0.333	0.571
Mae Hong Son	1.000	0.600	0.688	0.250	0.400	0.750	1.000	0.667	0.669
Nakhon Sawan	0.833	0.400	0.500	0.500	0.600	0.125	0.375	0.417	0.594
Uthai Thani	1.000	0.250	0.375	0.500	0.500	0.375	1.000	0.375	0.547
Kamphaeng Phet	0.667	0.650	0.563	0.500	0.800	0.375	0.875	0.625	0.632
Tak	1.000	0.650	0.625	1.000	0.600	0.375	0.750	0.625	0.703
Sukhothai	0.833	0.350	0.313	0.500	0.600	0.125	0.625	0.333	0.460
Phitsanulok	0.333	0.300	0.313	0.250	0.200	0.125	0.250	0.250	0.253
Phichit	1.000	0.500	0.375	0.250	0.500	0.250	0.250	0.375	0.438
Phetchaburi	1.000	0.350	0.438	0.250	0.600	0.375	0.375	0.417	0.476
Southern Region									
Nakhon Si Thammarat	0.333	0.250	0.438	0.500	0.800	0.625	0.500	0.458	0.488
Krabi	0.500	0.400	0.375	0.250	0.600	0.750	0.750	0.375	0.500
Phangnga	0.667	0.300	0.500	0.250	0.100	0.500	0.125	0.625	0.383
Phuket	0.000	0.400	0.250	0.500	0.600	0.500	0.000	0.458	0.339
Surat Thani	0.167	0.300	0.125	0.250	0.600	0.500	0.250	0.292	0.310
Ranong	0.000	0.200	0.313	0.250	0.700	0.750	0.250	0.417	0.360
Chumphon	0.500	0.300	0.063	0.000	0.300	0.375	0.625	0.292	0.307
Songkhla	0.000	0.000	0.563	0.500	0.800	0.750	0.125	0.458	0.399
Satun	0.167	0.400	0.563	0.500	0.700	0.750	0.750	0.500	0.541
Trang	0.333	0.250	0.438	0.500	0.300	0.625	0.750	0.333	0.441
Phatthalung	1.000	0.300	0.375	0.750	0.600	0.625	0.625	0.292	0.571
Pattani	0.167	0.550	0.750	0.500	0.600	0.375	0.375	0.833	0.519
Yala	0.500	0.500	0.563	0.500	0.700	0.500	0.125	0.625	0.502
Narathiwat	1.000	0.450	0.875	0.500		0.500	0.125	0.792	0.530

Map 44 shows that twenty of the seventy-six provinces are to be found with IHD scores in the range of 0.0–0.249 and thus have the lowest level of disadvantage and deprivation. All provinces in the Central region and almost all provinces in the Western region and Bangkok vicinity are within this category.

Twelve provinces score above 0.550 on the composite IHD, six of which are in the North and five of which are in the Northeast. This indicates that the North and the Northeast can be considered as very deprived and disadvantaged regions. Out of the twelve, four of which score above 0.600 and thus they emerge from the survey as extremely disadvantaged and deprived. Three of these provinces – Tak (0.703), Mae Hong Son (0.669) and Kamphaeng Phet (0.632) are in the North and one – Surin (0.681) is in the Northeast. Tak and Mae Hong Son are border provinces and the composite IHD appears to confirm that provinces with a large number of minorities are among those with the highest degree of human deprivation.

Taking a different look at the data. If we were to consider those provinces that have the index between 0.500 and 0.549 as poor. The South can be considered the most deprived and disadvantaged, with 43 percent of all provinces scoring above 0.500. This is because nearly a third of all Southern provinces have index between 0.500 and 0.549. The provinces that emerge from the survey as least deprived and disadvantaged are all to be found in the Bangkok Vicinity, Central and Western Regions.

This picture changes when the relative populations of the provinces are taken into account. In this case, nearly 39 percent of the population (7.4 million) of the Northeast Region is to be found in provinces that score above 0.500 on the composite IHD, followed by 36 percent (4.7 million) in the case of the Northern Region and 35 percent (2.7 million) in the case of the Southern Region. Overall, 14,795,000 are to be found in provinces that emerge from the survey as the most deprived and disadvantaged. This accounts for one in four of all Thais.

It is of interest to compare these figures with those pertaining to income poverty as presented in Chapter 2. It was noted in the chapter that an estimated eleven percent of the population- some seven million people- could be considered as living below the poverty line. The IHD presents another side of the poverty situation in Thailand. It is a picture of relative poverty,' also one that is not only based on income, but takes into account various aspects of human development.

2. Regional Indices

Weighted regional IHDs were calculated for each of the eight indices.[9] These are reproduced in Table 3.14 and shown graphically in Figure 3.9.

Table 3.14

IHD by Region

Region	Income Index	Employ Index	Health Index	Education and HR Index	Housing & Environ. Index	Trans.& Comn. Index	Con. Goods Index	Women's Index	Composite IHD
Bangkok	0.167	0.000	0.200	0.440	0.000	0.500	0.000	0.458	0.221
Bangkok V	0.189	0.233	0.302	0.295	0.148	0.217	0.148	0.342	0.234
Central	0.151	0.174	0.171	0.162	0.013	0.186	0.044	0.243	0.143
Eastern	0.119	0.193	0.392	0.287	0.199	0.309	0.135	0.266	0.238
Western	0.303	0.000	0.322	0.324	0.201	0.174	0.032	0.278	0.204
Northeast	0.502	0.625	0.436	0.453	0.384	0.422	0.749	0.393	0.500
Northern	0.666	0.379	0.450	0.404	0.444	0.337	0.335	0.382	0.425
Southern	0.360	0.441	0.287	0.460	0.557	0.587	0.381	0.482	0.444

[9] Regional indices are weighted to take account of the size of the populations in each province within the region.

Figure 3.9

Composite IHDs by Region

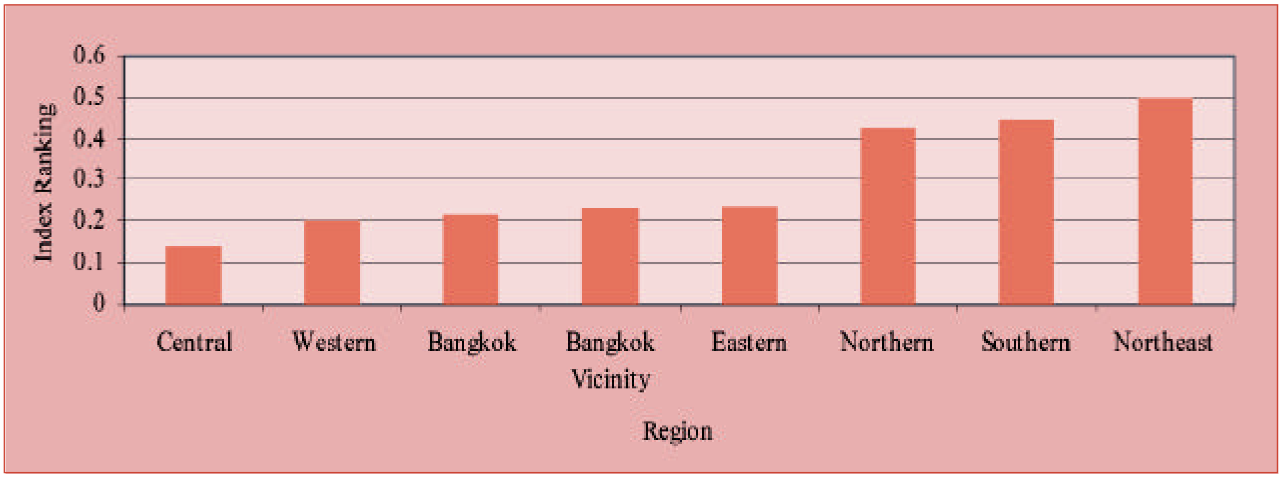


Figure 3.11 clearly shows that the 8 regions can be clearly divided into two main groups: those with low overall scores and those with high scores. The first group, consisting of Bangkok, Bangkok Vicinity and the Central, Eastern and Western Regions, all score around 0.200 on the IHD, with the Central Region emerging as the least deprived and disadvantaged of all regions within the Kingdom with a score of 0.143. The three remaining regions – the Northeast, Northern and Southern Regions – all score above 0.400 on the IHD, with the Northeast emerging as the most seriously deprived and disadvantaged region with an overall score of 0.500. At the level of individual regions, the IHD indicates that these Northeast, Northern and Southern Regions are twice as deprived and disadvantaged as other regions in the Kingdom, with the disparity being greatest at 3.5:1 between the Central Region and the Northeast Region.

These regional rankings are the combination of 8 separate indices that are weighted to give expression to the population size of the provinces within the regions.

Table 3.14 cautions against the value of generalizations on levels of human deprivation at the regional level. It shows that while some regions, notably the Central Region, score well on all indices, and some regions, such as the Northeast, Northern and Southern Regions, score badly on most indices, there are marked regional variations in relation to individual indices. Particularly notable is the variation recorded by Bangkok, especially the high scores on the Education and Human Resource Index and the Transport and Communications Index. The first is due to the relatively large number of persons in Bangkok who have low levels of educational attainment (especially failure to complete primary education) and the relatively high student/teacher and student/classroom ratios in the capital's sometimes overcrowded schools. The high score on the Transport and Communications Index is due entirely to the fact that ownership of cycles and motorcycles is relatively low, with the indicators being more suitable for use in rural areas. This high score should thus be regarded as an aberration on the index.

IV. COMPARISON WITH OTHER INDICES

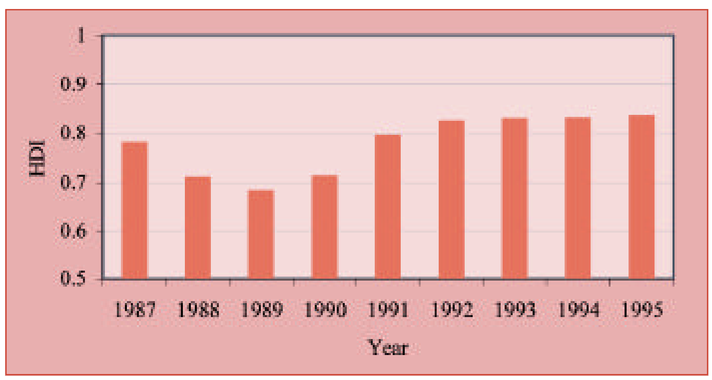
The results of the indices presented above have been compared with two other indices: UNDP's Human Development Index (HDI) and the Thai government's Village Basic Minimum Needs Indicators.

1. Human Development Index

As noted in section I, the HDI was developed by UNDP as a synthetic index of a nation's overall level of development, being composed of three main indicators covering life expectancy at birth, educational attainment measured by a combination of adult literacy (two-thirds weight) and combined first, second and third level gross enrollment ratios (one-third weight) and the standard of living as measured by an adjusted measure of real GDP per capita. The index is expressed on a scale of zero to one, with 0 representing the worst possible case and 1 the best possible case.

UNDP first published estimates of the HDI for 115 countries in 1990, with the index based on data for 1987. Thailand scored 0.783 on the first HDI and was ranked 52nd of 115 countries. This placed Thailand behind Korea and Malaysia but ahead of Indonesia and Philippines. As indicated in Figure 3.10, UNDP's annual Human Development Reports suggest that the HDI recorded a slight deterioration in the period 1987-92, as it did in most countries in South and Southeast Asia. Since 1992, Thailand's HDI recorded a steady improvement, increasing to 0.838 in 1995 (the 1998 Human Development Report). This HDI ranked Thailand 59th of 174 countries and placed it in the category of 'high human development' countries. According to the 1998 Human Development Report, Thailand continued to trail Korea and Malaysia but remains ahead of both Indonesia and Philippines. In the 1999 Human Development Report, the methodology for calculating HDI was changed. As a result, Thailand dropped in rank. Ranked at 67th, Thailand now belongs to the countries of medium human development with the HDI value of 0.753. Without methodological changes, Thailand's ranking would have improved. Since the most recent HDI value is based on 1997 data, the index does not reflect the impacts of the crisis and is thus still relatively high.

Figure 3.10
Thailand's Human Development Index, 1987-95



Regional HDIs for Thailand were calculated by using the old methodology advocated by UNDP using the data presented in the Statistical Annex, all of which are based on government sources.[10]

[10] For a description of the methodology, see UNDP, Human Development Report 1998, Technical Note Computing the Indices, p.107.

The results obtained are reproduced in Table 3.15 and Figure 3.11. It should be noted that since the data below was calculated using government sources of information there are discrepancies with the UNDP's HDI figures that use the UN agency data for the calculation. Thus, the data is suitable for inter-provincial comparisons within the country, not for international comparison.

Table 3.15

Human Development Index by Region

Region	Life Expectancy Index	Educational Attainment Index	Adjusted Real GDP per Capita (PPPS) Index	Human Development Index
Bangkok	0.883	0.866	0.989	0.912
Bangkok Vicinity	0.817	0.940	0.978	0.912
Central	0.817	0.917	0.884	0.873
Eastern	0.817	0.907	0.967	0.897
Western	0.817	0.017	0.718	0.817
Northeast	0.767	0.870	0.329	0.655
Northern	0.800	0.886	0.464	0.717
Southern	0.767	0.880	0.650	0.766
Kingdom	0.800	0.880	0.961	0.880

2. Village Basic Minimum Needs Indicators

The government has developed indicators that are used to measure the extent of well-being and welfare at the village level.[11] The methodology used distinguishes between 8 main components (called 'units') of well-being and welfare, covering health, education, housing, household income, family life, community participation, moral standards, and environmental care. As shown in Table 3.16, some 39 indicators are used to measure the extent to which the minimum needs of villages are being met, with provinces ranked on the basis of the extent to which villages within the province are achieving the indicators.

Figure 3.11

Comparison of HDIs by Region

[11] The Village Basic Minimum Needs Indicators are compiled as a monitoring tool by the Ministry of the Interior using its own data as well as data supplied by other government agencies.

Table 3.16

Village Basic Minimum Needs Indicators

Unit	Indicators
Unit 1: Good Health	1. Pregnant women should receive health care before delivery
	2. Pregnant women should be attended at birth
	3. Weight of new born baby should not be less than 2,500 grammes
	4. New born baby should be breast fed for the first 4 months
	5. Children younger than 1 year should receive vaccines
	6. Five-year children should grow at standard rate
	7. 6-15 year olds should grow at standard rate
	8. 6-12 year olds should receive vaccines
	9. Household members should not consume raw meat
	10. Household members should consume iodized salt
	11. Household members should consume safe food
	12. Household members should know about the use of medicines
Unit 2: Housing Conditions	13. Households should occupy a house that will last at least five years
	14. Households should have access to and use a toilet
	15. Households should have access to safe water for drinking and other uses
	16. Households should be managed healthily
	17. Households should be free from pollution
Unit 3: Educational Attainment	18. 2-5 year olds should have access to care services
	19. 6-12 year olds should complete compulsory education
	20. Students completing compulsory level education should continue on to secondary school
	21. Students not continuing on to secondary education should receive occupational training
	22. 14-50 year olds should be able to read and write Thai
	23. Households should receive beneficial information at least 3 times per week
	24. Households should possess basic knowledge of the risks of AIDS
Unit 4: Family Life	25. The wife of couples in the 14-50 year age group should use family planning services
	26. Relationships within the family should be warm
	27. Households should be safe from accidents
	28. Households and their property should be secure
Unit 5: Household Income	29. Household income should not be less than BT 20,000 per person per annum
Unit 6: Participation	30. Households should be members of local groups
	31. Households should exercise their right to vote
	32. Households should maintain public property
Unit 7: Moral Standards	33. Households should practice religious activities at least once per week
	34. Household members should not be alcoholics
	35. Household members should not be addicted to tobacco
	36. Households should take part if traditional activities
	37. Old and disabled people should receive care
Unit 8: Environmental Care	38. Households should participate in natural resource conservation
	39. Households should protect and conserve the environment

Source: Community Development Department, Ministry of the Interior

The village indicators seek to measure the extent of basic needs satisfaction and are not directly comparable with those used in the composite IHD. They are applied to villages within a province and to communities in rural areas within a province, thereby excluding more urbanized areas. However, given that close to 60 percent of the population are to be found in rural areas, some level of agreement between the findings of the composite IHD and the government's Village Basic Minimum Needs Indicators could be expected.

Such a comparison has been made and the level of 'fit' was found to be approximate for the mid-1990s. Of the 30 provinces scoring highest on the composite IHD, 21 are included in the Village Indicators list as having the largest shortfall in meeting basic needs. These provinces are summarized in Table 3.17.

Table 3.17

Comparison of Composite IHD and Village Basic Minimum Needs Rankings by Province

Province	Composite IHD Index Ranking	Village Minimum Needs Ranking
Tak	1	2
Mae Hong Son	3	1
Kamphaeng Phet	4	6
Si Saket	6	25
Phatthalung	7	17
Buri Ram	8	25
Chiang Rai	8	4
Nong Khai	10	25
Sakon Nakhon	12	25
Satun	15	17
Chaiyaphum	18	25
Krabi	20	10
Kalasin	21	25
Narathiwat	21	3
Nakhon Si Thammarat	23	6
Phetchabun	24	10
Yala	24	6
Nan	26	5
Yasothon	26	25
Sukhothai	28	10
Pattani	29	25

However, there are as many cases of provinces that differ in their respective rankings by more than 20 places. Given the scorings and rankings obtained from the composite IHD, it is particularly notable that Surin (ranked 50 in the Basic Minimum Needs list), Nakhon Sawan (46), Uthai Thani (50), Nakhon Phanom (48), Mukdahan (41), Phayao (37), Loei (41), and Maha Sarakham (41) do not figure more prominently on the list of provinces with villages that record large shortfalls in meetings basic needs.

These differences should not be interpreted as deficiencies in either the composite IHD or the government's Village Basic Minimum Needs Indicators. They involve different methodologies, are constructed for different purposes and their substantive and geographical coverage is different.

Poverty line, the Village Basic Minimum Needs Indicators and the IHD should therefore be used for different purposes. Alternatively, in combination, they provide a broad-base basis for targetting the poor and the disadvantaged in order to allocate resources to alleviate human deprivation and inequalities.

Chapter 4

The Crisis and its Impacts on Human Development

I. INTRODUCTION

The previous chapters have described the situation that prevailed in Thailand up to 1996 and took note of the enormous progress recorded in the field of human development in the past three decades. The year 1997 brought an abrupt end to this period of sustained growth that – directly and indirectly – made possible the improvements in human development. The difficulties brought about by the crisis have been and are being experienced in virtually every sector of the economy, by every household in the nation, and in every corner of the country. It necessarily gives rise to fears that it will not only prove difficult to maintain progress but also that the progress recorded may be seriously eroded.

Although the crisis that has afflicted Thailand since mid-1997 is not the first setback experienced by the nation, it is without doubt the most serious and far-reaching. When the baht went into freefall in July, few anticipated how serious and severe it would become. Like the proverbial stone cast into a pool, the ripples have travelled far beyond the nation's boundaries, helping to plunge other economies into recession and, eventually, impinging upon the prosperity of the industrialized countries, providing tangible evidence of the economic threads that bind together the destinies of nations in an age of globalization.

In the months that have followed the onset of crisis, virtually every aspect of Thailand's development process has been subjected to detailed scrutiny. Hindsight has made it possible to identify structural impediments that have over time contributed to the current difficulties as well as the more immediate failures of policy, especially in the area of macroeconomic management. In this situation there is a risk of attributing to the crisis long-standing problems that failed to receive the attention they should have been given in the period of high incomes and growing welfare.

In this chapter we will examine some of the dimensions of the crisis, focusing on its impacts on and implications for human development.[1] The analysis presented will be used to identify the main items that must be included in the policy agenda, the subject of the final chapter.

[1] The literature on Thailand's crisis is already voluminous and continues to grow. This chapter draws principally upon: A. Siamwalla and O. Sobchokchai, Responding to the Thai Economic Crisis, UNDP Working Paper, UNDP, Bangkok, 1998; World Bank, Thailand Social Monitor, Bangkok, January 1999; World Bank, Thailand Economic Monitor, Bangkok, March 1999; D. Boonyoen et al., The Impact of the Crisis on Population and Reproductive Health in Thailand, Institute of Population Studies, Chulalongkorn –

II. CAUSES OF THE CRISIS

The seeds of Thailand's present predicament were sown in the process of financial liberalization that gathered pace in the early 1990s with the aim of enlarging access to the capital required to maintain growth momentum. In May 1990 the government announced its acceptance of the obligations under Article 8 of the IMF Articles of Agreement to further liberalize the country's current account transactions. Building on these measures, The Bangkok International Banking Facility (BIBF) was established in 1992, allowing local and foreign banks to engage in onshore and offshore lending and to accept deposits and to lend in foreign currencies. This enabled more financial institutions to set up operations in Thailand, opening the way to more foreign funds, more competition in the financial system, and for Bangkok to become a regional financial centre. BIBF dollar loans soon became the main conduit for the foreign capital flowing into the country, estimated at around US$ 50 billion over a three-year period.[2]

A stable exchange rate, with the baht pegged to the US dollar, combined with large discrepancies between domestic and international interest rates, encouraged private companies to engage in offshore borrowing without hedging, with many financial institutions and large manufacturing firms accumulating significant foreign debts. Although the Bank of Thailand implemented a tight monetary policy to control inflation, the high interest rates in the domestic financial market only led to larger capital inflows. This not only led to an enormous inflow of the foreign funds required for investment but also to overborrowing for speculation in non-productive sectors, such as real estate, private hospitals and the stock market, which was driven sharply upwards. This conferred upon Thailand the status of an 'emerging market' that only succeeded in attracting still more foreign capital. The combination of high economic growth, an overvalued currency, and cheap money also encouraged overconsumption of imported luxury items - Bangkok reportedly has the second largest number of Mercedes Benzes of any city in the world.

At the same time, Thailand began to lose its competitiveness in some traditional industries. Wages went up faster than would be considered appropriate for levels of productivity and the skills of the Thai labour force, with production increases achieved through investment rather than

University, Bangkok, October 1998; S. Tambunlertchai, 'The Social Impact of the Crisis in Thailand and Policy Responses', in UNDP/Korea Development Institute, Social Implications of the Asian Financial Crisis, EDAP Joint Policy Studies, Seoul, 1998; S. Wibulpolprasert et al., The Economic Crisis and Responses by Health Sector in Thailand, Health Systems Research Institute/Ministry of Public Health, April, 1998; The Brooker Group, Impact of Thailand's Economic Crisis on the Social Sector, Final Report, Asian Development Bank, March 13 1998; UNFPA and the Australian National University, Southeast Asia Populations in Crisis, Bangkok and Canberra; and N. Kakwani, Impact of Economic Crisis on Employment, Unemployment and Real Income, Development Evaluation Division, NESDB, September 1998; S. Mehrotra, 'Mitigating the Social Impact of the Economic Crisis: A Review of the Royal Thai government's Responses', UNICEF, Bangkok, August 1998 (mimeo); T. Karnjanauksorn and V. Charoenloet, The Impact of the Economic Crisis on Women Workers in Thailand: Social and Gender Dimensions, International Labour Organization, Bangkok, 1998; S. Kittipas and C. Intraravitak, 'Impacts of the Asian Economic Crisis: Case of Thailand', Thailand Development Research Institute, Bangkok, November 1998 (mimeo).

[2] See N. Bullard et al., 'Taming the Tigers: The IMF and the ASEAN Crisis', in K.S. Jomo (ed.), Tigers in Trouble: Financial Governance, Liberalization and Crises in East Asia, Zen Books, London, 1998, viz. p.87.

productivity gains. The higher wage rates made labour-intensive industries, such as textiles, garments and footwear, less competitive in world markets, reflected in a loss of market share to a new generation of competitors like China, Bangladesh and Vietnam. Higher technology industries, many of which are import dependent, were unable to fill the gap. The trade and current account deficits shot up to reach 8 per cent of GDP in 1995 and 1996, compared with 3.6 per cent in 1989. Export performance, the motor that had driven the economic engine, became sluggish, and in 1996 failed to record any growth at all.

Dark clouds began to gather on the economic horizon. The combination of a ballooning government deficit and sharp export decline led foreign speculators as well as local businessmen to conclude that the devaluation of the Baht was becoming inevitable. Persistent rumours of devaluation made many foreign currency dealers increasingly nervous. Two massive attacks on the Baht occurred in the first six months of 1997. It soon became apparent that the gateways to foreign capital were no less effective as exits for capital flight. The government, with the encouragement of financial companies, banks and many large enterprises with large debts denominated in foreign currencies, sought to defend the dollar-pegged Baht and to contain capital outflows, with the Bank of Thailand having to draw heavily upon the nation's foreign reserves.

Many financial institutions, especially those overextended in the real estate and property sectors that were suffering from oversupply - 20 per cent of office space was vacant and 378,000 residential units were for sale towards the end of 1997 - became illiquid as an increasing share of their loans became non-performing. The rumours that some commercial banks and finance companies could be forced to close down further eroded confidence and led to a spree of withdrawals. Despite reassurances from the Bank of Thailand that everything was under control, 10 finance companies were ordered by the Bank to raise their capital. This only confirmed suspicions that all was not well and the run on the banks and finance companies continued, requiring the Bank to lend heavily to them just to enable them to meet their obligations. Things came to a head when, in June 1997, 16 finance companies were ordered to suspend their operations for 30 days.

With the situation becoming increasingly untenable and foreign reserves becoming rapidly depleted, the Bank of Thailand announced a 'managed float' policy on 2 July 1997. This marked the first day of the crisis. It had immediate impacts in the rest of the sub-region, pushing the Indonesian rupiah and the Korean won over the edge. The Baht led them in a freefall. Within six months the Baht had plummeted to 57 to the dollar, a depreciation of some 50 per cent, a level that had been unimaginable to the architects of the 'managed float'.

The depreciation of the Baht wreaked havoc on the balance sheets of the corporate sector, many enterprises having large loans denominated in foreign currency. The percentage of non-performing loans sky-rocketted. The deterioration of their balance sheets made them poor credit risks. Banks were unable to lend them the money they required and the banks did not have. All of which led to a severe credit crunch that contributed further to contraction and deflation. Industrial production plummeted, retail sales slumped, and many enterprises, especially small ones, lost all access to credit lines. Thailand was in deep crisis.

The crisis cost the country dearly. The Bank of Thailand spent $23.6 billion in what proved to be a futile defence of the Baht, while loans amounting to a staggering Bt 430 billion had been extended to banks and finance companies. To these costs must be added the costs of restructuring loans held by finance companies and banks and writing off shareholder equities. This is estimated to cost some US$ 40-45 billion.[3] These costs together amount to some US$ 80 billion - equivalent to around 70 percent of GDP - which will need to be met by the taxpayer and by recourse to external borrowing, with the latter made difficult by the sharp rise in the nation's debt service obligations due to the baht depreciation (see box 4.1).

Box 4.1

The Growth of External Debt

As shown in the figure below, the depreciation of the Baht has had a major effect on external indebtedness. With an exchange rate of 40 Baht to the dollar, the level of outstanding debt stands at close to US$ 80 billion. This compares with a GNP level of US$ 110 billion. Although the government and the IMF have agreed on a lifting on the ceiling of foreign debt, any major increase would clearly be incompatible with prudent macroeconomic policies.

With the onset of crisis, Thailand lost several places in its international credit rating. Now that the economy has been stabilized, the rating is expected to be upgraded in mid-1999.

The rapid depletion of foreign reserves and ballooning external debt led the Government to seek help from the IMF for a structural adjustment loan. The IMF agreed to provide a stand-by credit of US$17.2 billion.[4] Most of the loan was aimed at stabilizing volatile currency markets, calming foreign creditors, and restoring confidence in the economy. Like IMF packages for other nations,

[3] See L. Luridesen, 'Thailand: Causes, Conduct, Consequences', in ibid., p.157.

[4] The lenders were Japan (US$4 billion), the central banks of Australia, China, Hong Kong, Malaysia and Singapore (US$ 1 billion each), the central banks of South Korea and Indonesia (US$ 500 million each), the World Bank (US$ 1.5 billion) and the Asian Development Bank (US$ 1.2 billion). Japan subsequently took over the contributions of South Korea and Indonesia.

restrictive conditions were imposed. In the case of Thailand they included restrictions on government expenditure, increases on government revenues through an increase in VAT from 7 per cent to 10 per cent and an increase in the excise tax on gasoline. Performance criteria were also formulated relating to money supply, the size of the deficit, asset disposal of closed and failed finance companies, the restructuring and privatization of banks and remaining finance companies, and the divestiture of public enterprises, with disbursement of the credit facility linked to progress in all these areas.[5] The restrictions made the package an austerity programme that contributed to further contraction, driving the nation into deeper recession.

The IMF package was inevitably attacked and condemned by well-organized groups, especially those representing farmers and the poor, that argued that the Thai population as a whole was being requested to foot the bill left by the failures of a discredited government and the indiscretions of a greedy minority. Although the government sought to comply with the conditions imposed, the IMF package was found to be too restrictive and some of the conditions were subsequently relaxed. The 1 per cent fiscal surplus requirement specified in the first Letter of Agreement has, for example, been eased to a 3 per cent fiscal deficit in the fourth letter, and ceilings on foreign debt have been relaxed.

III. GOVERNMENT RESPONSE TO CRISIS

The crisis has severely tested the nation's political resolve. In the past, a crisis of such proportions could have given rise to political instability - as it has in other countries in the region affected by crisis - even the possibility of a coup d'etat. However, political institutions, although sometimes criticized for indecision, have demonstrated not only stability but also great determination in responding to the crisis. Just a few months into the crisis the Parliament adopted the new Constitution, which introduced many radical reforms on the relationship between state and civil society. It also changed the government to strengthen the nation's capacity to deal with the crisis.

The government has, where necessary with the assistance of the nation's development partners, executed a wide range of measures in response to the crisis. Given the severity of the crisis, many measures have necessarily been mitigatory in character. However, it is accepted that the crisis has exposed serious weaknesses in the nation's economy, such as declining export competitiveness and the quality of the human resources required to advance the process of economic transformation, and these are also being addressed. The measures can be grouped broadly under four main headings.

[5] This was not the first time that Thailand had been compelled to conclude a standby agreement with the IMF. It did so in the mid-1980s when economic performance was derailed by a sharp increase in oil prices. However, the situation then was not as serious, as complicated or as large as the 1997 crisis. The 1985 SAP credit line was around US$1.5 billion, equivalent to US$3.6 billion at current prices, or around one-fifth of the 1997 standby facility.

- Measures aimed at stabilizing the economy, restructuring financial institutions, restoring investor confidence, and establishing the monetary and macroeconomic conditions required to reactivate growth, especially in the real sector.

- Measures to reduce and redirect overall levels of expenditures in the light of sharply reduced government revenues, while seeking to safeguard investments in especially the social sectors.

- Measures aimed at providing protection to the unemployed and vulnerable groups, with initiatives that can be grouped under four main headings: (i) employment creation and income generation; (ii) protection and targetting of public expenditures; (iii) income security schemes; and (iv) community capacity building. Some of the measures seek to take advantage of new opportunities created by the new Constitution and Eighth Plan, especially provisions concerning participation and empowerment.

- Measures aimed at addressing longer-term structural impediments in the Thai economy.

Although coordination still leaves much to be desired and government agencies have been criticized for delays in formulating responses to the crisis, there is a very wide range of initiatives in all these areas. In a real sense, the crisis has mobilized and galvanized the government bureaucracy in ways that may have appeared unimaginable only a few years ago, providing it with both the need and opportunity to demonstrate its relevance and its capacity for reform and institutional innovation. Virtually every ministry and government agency is involved in the formulation and implementation of the initiatives, which cover a broad spectrum of activities that range from the local level to the national level and, in the case of some, beyond the Kingdom's boundaries. Some public agencies have adopted an almost military style approach to the crisis, creating 'intelligence units' that are able to keep their fingers on the pulse of a changing situation and to monitor and assess the impacts of their interventions.

While civil society organizations hold government institutions and 'money politics' responsible for the crisis and have been critical of some reform proposals, they have demonstrated a remarkable readiness to join hands with the new government in seeking to find a way out of nation's predicament. Civil society organizations have themselves organized a variety of programmes, some of them temple-based, aimed at helping those most seriously affected by the crisis, suggesting that the generalization that Thailand can best be conceived as one large family is not entirely without foundation. The social homogeneity in the face of crisis stands in sharp contrast to the situation prevailing in other countries in the sub-region affected by crisis. While some appear to be unraveling at the seams, Thailand has demonstrated a remarkable degree of unity and social cohesion in responding to the crisis.

An overview of all government and civil society initiatives is beyond the scope of this report. Instead, the focus is on those that have a direct bearing on human development. These include:

- The revision of the Eighth Plan to enable it to better respond to the crisis through the introduction of three new guidelines aimed at: (i) minimizing the effects arising from unemployment through measures to alleviate unemployment in urban areas and promote employment generation in rural areas to absorb returning migrants; (ii) assisting the under-privileged groups and those affected by the crisis through assistance measures in the areas of social welfare, education and health; and (iii) preventing and alleviating social problems, especially drug use and crime, as well as to promote desirable social values.

- The setting up of a Centre for Assistance to Laid Off Workers (CALOW) in August 1997 immediately after the crisis broke to serve as a one-stop service centre to help workers in the area of severance pay, social security, placement, counselling services, training and low-interest loans. CALOW has offices in all provinces.

- The establishment of National Committee on Unemployment Alleviation in December 1997, chaired by the Prime Minister, that has drawn up a national action plan for employment creation.

- The establishment of a new and broad-based National Social Policy Committee (NSPC) in June 1998 in response to public demand for increased coordination of social policy, greater attention for the social reform agenda, and new initiatives in respect of community empowerment.

- The initiation of far-reaching educational reforms aimed at decentralizing responsibility for primary and secondary education to local authorities and local communities, with output performance-based management rather than input control, to achieve improvements in the relevance and quality of compulsory and basic education.

- The expansion of the Public Assistance Scheme in the health sector to cover additional 3 million disadvantaged persons and the expansion of the Voluntary Health Card Scheme to cover 9 million persons.

Particularly notable was the statement of His Majesty King Bhumibol Adulyadej on 5 December 1997. His Majesty urged the nation to apply the concept of "The New Theory' which he had initiated as a new agricultural strategy to the way of life of the people with an aim to achieving a 'self-sufficient economy' - one that stresses the importance of agriculture, the traditional backbone of the nation, and of households that enjoy a large measure of self-sufficiency.

The international donor community has also come to the nation's assistance with several projects they are actively supporting. Principals among these are:

- The Social Sector Loan. This loan of up to US$ 500 million from the Asian Development Bank is to support the economic restructuring programme agreed between the government and the IMF and its disbursement is subject to the conditions agreed between the parties.[6] It covers three broad sectors: labour and social welfare, health, and education. Loan priorities in the area of labour and social welfare are: (i) support to laid-off workers and the unemployed; (ii) support to the poor in the informal sector and rural areas, especially through the improved targeting of assistance programmes; (iii) the promotion of private sector investment in training; and (iv) achieving improvements in the competitiveness of the labour force (see box 4.2).

- The Social Investment Project, financed by loans of US$ 280 million from the World Bank, US$ 105 million from OECF, Japan, and US$ 33 million from government and community counterpart funds, which has two main objectives: (i) to ease the impact of economic crisis on the poor through employment creation, protection of government services used by the poor and unemployed, and training programmes for the unemployed; and (ii) to support important reforms, particularly in the area of decentralization, community empowerment, and the formation of development partnerships with civil society. Support is delivered through two main channels, the first focusing on short-term interventions linked to the programmes of different government agencies, the second to finance two new programmes - the Social Investment Fund and the Regional Urban Development Fund (see box 4.3).

- The Miyazawa Fund Loan of Bt 53 billion to be used for investments in five main areas: (i) job creation (Bt 26 billion); (ii) improving living standards and the quality of life (Bt 5.9 billion); (iii) infrastructure development (Bt 7.1 billion); (iv) improving the competitiveness of industries, especially in provincial and border areas (Bt 960 million); (v) and improving management efficiency in the public sector (Bt 6.7 billion).

- The UN system, mainly UNDP, UNICEF, WHO, ILO, UNESCO and UNFPA, has initiated with government agencies and other partners a special response aimed at combating the social impacts of the economic crisis that provides for support in three main areas: (i) policy dialogue and development; (ii) the formulation and implementation of quick response action programmes and projects; and (iii) community empowerment initiatives and programmes. Specific UNDP activities include support for the elaboration of an overall strategy for the Social Policy Committee, established within the Office of the Prime Minister, which oversees the national social recovery programme, and support for the formulation of a Community Empowerment for Response to Crisis Action Plan (CERCAP).

[6] Not all the loan has been committed. Some US$ 200 million is held in reserve.

Box 4.2

The Social Sector Loan

Financed by a US$ 500 million loan from ADB, the loan is used to support initiatives in three main areas: (i) education and human resources development; (ii) health; and (iii) labour and social welfare. As of April 1999, 8 projects had been approved for a total of Bt 4.0 billion, while disbursements amounted to around Bt 2.0 billion.

Project	Approved (Bt millions)	Disbursed (Bt millions)
1. Assistance to students	1,000.00	835.05
2. Voluntary health card scheme	1,200.00	531.17
3. Computer training	85.00	85.00
4. Study of unemployment and employment in a crisis situation	10.03	5.98
5. Job creation for community empowerment		
Rubber latex extraction training	20.8	6.96
Employment of new graduates in village crisis centres	852.00	417.75
Promotion of sub-contracting work	15.09	5.37
New Theory agriculture	777.00	37.50
6. Pre-school lunches and milk	27.49	27.49
7. Unemployment data development	5.63	5.63
8. Pre-school and disadvantaged children in urban areas	7.30	7.30
Total	**4,000.34**	**1,965.20**

Source: Prime Minister's Office

IV. IMPACTS OF THE CRISIS ON HUMAN DEVELOPMENT

1. Impact Pathways

The economic crisis has been transmitted to the Thai population through three main pathways.[7]

The exchange rate pathway. First, there is the exchange rate pathway. The depreciation of the Baht set off rapid price increases for imported goods and pushed domestically produced goods towards the export market. Between July 1997 and late 1998, prices of all commodities rose faster than they had prior to the crisis. Overall, inflation jumped from 4.4 per cent in June 1997 to a peak of 10.7 per cent in June 1998. The price of food and beverages increased by 10.2 per cent year on in the first 10 months of 1998, while the price of electricity, fuel and water increased by more than 18 per cent. Higher VAT and gasoline taxes also impacted negatively on prices, while an El Nino-induced drought in the northern regions - the worst in 30 years - fuelled upward pressures on the price of rice and other agricultural commodities, with the price of rice almost doubling at one point. Agricultural households that produced surpluses - one third of all households are headed by rice farmers - benefited from this development, although the benefits were partially offset by higher prices for other products.

[7] The terminology is borrowed from A. Siamwalla and O. Sobchokchai, Responding to the Thai Economic Crisis, UNDP Working Paper, UNDP, Bangkok, 1998.

The depreciation of the Baht did not provide a positive stimulus to the exports of all agricultural commodities, as might have been expected. This was particularly so in the case of rubber, produced mainly in the Southern Region. Producers were unable to take advantage of the Baht depreciation since the currencies of main export competitors were similarly sharply down.

Although the exchange rate pathway has benefited some farming communities, it has brought higher prices for many basic necessities. Although the inflationary spiral was held at around 10 per cent, a figure that compares extremely well with other countries affected by crisis – in Indonesia the inflation rate increased to 50 per cent in some regions – it was still sufficient to place some products beyond the reach of the poorest and most affected groups.

The employment pathway. The sharp contraction of the economy has brought a reduction in the demand for labour. This has resulted in a sharp fall in employment – the second pathway through which the crisis is transmitted to the poor. Falling employment means greater unemployment and higher underemployment, both of which translate into reduced incomes.

Estimates of the number of persons affected by the crisis vary considerably. The estimates must take account of those who have lost their jobs (retrenched workers in blue collar and white-collar occupations), those who are unable to find them (graduates and school dropouts), and those who are working less as a consequence of the crisis. The total number of unemployed was estimated at 1.6 million in May 1998, 1.14 million in August 1998, and 1.46 million in November 1998.

The Fiscal pathway. Third, there is the fiscal pathway. As shown in Table 4.1, the crisis led to very sharp fall in government revenues that impacted on expenditures in all sectors. In FY 1997-98, the revenues collected by the Revenue Department were down 3.8 per cent from the previous year mainly due to falling company profits and corporate income tax, while the revenues of the Excise Department slumped 13.7 per cent, due mainly to falling sales of cars and durable goods.

Table 4.1

Changes in Government Revenues, 1996-97

Year	Quarter	Percentage Change over Previous Quarter
1996	First	14.01
	Second	13.89
	Third	9.27
	Fourth	4.27
1997	First	−0.13
	Second	−3.45
	Third	−6.37
	Fourth	−0.78

Source: Bank of Thailand

Box 4.3

The Social Investment Project (SIP)

The SIP, financed by loans of US$ 280 million from the World Bank and US$ 105 million from OECF, and US$ 33 million from government and community counterpart funds, with grant support from UNDP and AusAID, has two main objectives:

1.To ease the impact of economic crisis on the poor through employment creation, protection of government services used by the poor and unemployed, and training programmes for the unemployed;

2.To support important reforms, particularly in the area of decentralization, community empowerment, and the formation of development partnerships with civil society.

It provides for two main channels of support:

First Channel (fast track)

Provides support to existing government programmes (5 major ministries involved in programmes), focusing on short-term interventions. Projects are selected on the basis of three main criteria: (i) they should be well-targeted at poor ands unemployed; (ii) they can be expanded rapidly without efficiency losses; and (iii) they should be labour intensive or should provide direct social benefits to targeted beneficiaries.

The first channel covers programmes in eight main areas:

1. **Health Services**: (US$ 32.23 million). Two main components covering: (i) support for the AIDS Care and Prevention component of health budget; and (ii) the financing of a Low-Income Health Card scheme.

2. **Labour Force Training** (US$ 32.78 million). 4 components covering job training for: (i) disadvantaged women and disabled; (ii) women and youth; (iii) unskilled unemployed; and (iv) reemployment

3. **Small Weirs Construction** (US$ 18.93 million), covering labour-intensive construction of small weirs and foreground dredging in rural areas with high numbers of returnees.

4. **Village Road Construction** (US$ 26.04 million) aimed at creating employment and improving the basic road network through financing of construction of small (within village) roads in 75 provinces, including related drainage facilities.

5. **Rural Industrial Promotion** (US$ 3.71 million). Main components covering: (i) NGO services to facilitate industrial site location and rural industrial development; and (ii) matching industrial sites with potential investors; (iii) training of the local labour force; and (iv) facilitating arrangements between investors and community leaders.

6. **Bangkok Metropolitan Area Improvements** (US$ 14.30 million) covering: (i) labour-intensive civil works (school rehabilitation and repair, city footpaths and sidewalks); and (ii) vocational training for the unemployed.

7. **Recreational, Cultural and Historic Sites** (US$ 73.69 million) covering labour-intensive site improvements of park facilities, roads, visitor service centers cultural sites, etc.

8. **Rehabilitation of Small-Scale Irrigation Works** (US$ 42.68 million) covering labour-intensive rehabilitation of selected irrigation works.

Second Channel

The second channel is used to finance two new programmes, both managed by the Government savings Bank:

1. **Social Investment Fund** (US$ 125.13 million). Provides grant support (give-away fund) for small-scale projects in multiple sectors proposed by NGOs and community-based groups on the basis of pre-determined eligibility criteria. Fund aims to improve the access of the poor and unemployed to basic social and economic infrastructure, services and employment opportunities, and to promote the decentralization process by strengthening decision-making and implementation capacities at the local level.

2. **Regional Urban Development Fund** (US$ 30 million). Provides long-term credit (revolving fund) and capacity-building support to participating local municipalities for priority investment projects. As such, the fund aims to improve basic infrastructure, facilities and services as well as to create employment in urban centres outside Bangkok while at the same time enhancing municipal capabilities in administration, investment, planning, project implementation, and financing. All the projects selected to date have positive rates of return, with 100% or more cost recovery.

As the severity of the crisis made its presence felt, the government was compelled to revise its budget downwards as revenue forecasts became gloomier. The FY 1997/98 budget was submitted to Parliament in July 1997, which is just before the crisis broke. It was revised in August, October and November. By November, the budget approved was 18.5 per cent lower than the July pre-crisis submission.

Although concerted efforts have been made to safeguard expenditures in the social sectors, the budgets of all government ministries and agencies have been cut (a cut in the budget appropriation for the Fiscal Year), some more than others. In FY 1998 the budget of Ministry of Interior was cut by 24.2 per cent, the Ministry of Communications by 16.2 per cent, the Ministry of Agriculture and Cooperatives by 23.5 per cent. The cut in the budget of the Ministry Education amounted to 5.9 per cent, while the Ministry of Public Health's budget was down by 9.9 per cent. Reductions in the budgets of virtually all government ministries will impact negatively on human development. Both the Ministry of Interior and Ministry of Agriculture and Agricultural Cooperatives, for example, have extensive community development programmes.

In addition to being reduced, budgets were also reoriented. It proved, for example, easier to cut capital expenditure than recurrent expenditures. The cancellation or postponement of investment projects in all sectors means that the effects of the crisis will be long-lasting, reducing the nation's capacity to address emerging qualitative issues of development strategy.

2. Impacts on Employment and Wages

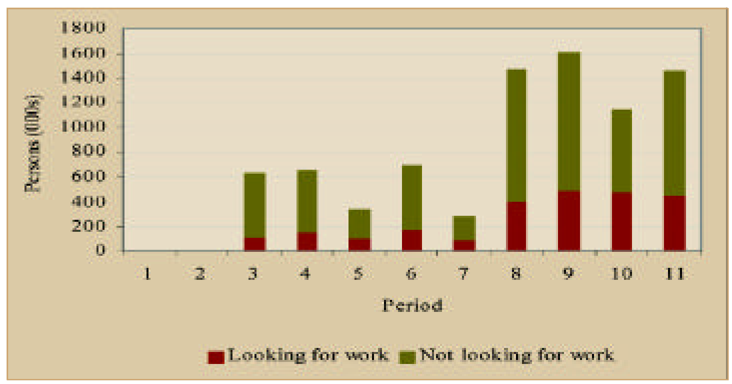
Unemployment. It is difficult to arrive at precise estimates of the number of persons who have lost their job as a direct consequence of the crisis. The main source of data is NSO's Labour Force Survey which is conducted several times a year (typically February, May and August). The survey distinguishes between persons who are 'looking for work' and persons who are 'not looking for work but available for work'. These two groups are assumed to form the unemployed. The survey also enumerates persons who are 'seasonally inactive' due mainly to the requirements of agriculture. The difficulties arising in estimates of unemployment relate to the extent to which persons who are available for work but not looking for work should be regarded as unemployed and to the commuting that takes place between the agricultural and non-agricultural sectors, with workers engaged in farming when demands are high (planting and harvesting seasons) and taking up jobs in urban areas, typically as construction workers or manual labourers, when agricultural demands are low.

NSO data for the last eight employment rounds are summarized in Figure 4.2. They show that the number of unemployed persons in February 1997, the last month before the crisis for which figures are available, was 697,000. The number of unemployed rose sharply with the onset of the crisis to reach 1,613,00 in May 1998. In August 1998, the number of unemployed had fallen to 1,134,000. The November 1998 round, the last month for which figures are available, enumerated the number of unemployed at 1,463,000, a substantial increase. The figure of 1,613,000 unemployed in May 1998 was a record for Thailand.

However, a study by N. Kakwani in 1998 has shown that seasonal changes contribute significantly to the pattern of unemployment in Thailand[8]. The dry season on average contributes to a reduction in employment by 3.02 million. Female employment is subject to considerably larger seasonal influences than male employment. During the cultivation season, a large number of women are drawn into the labour force and then in the dry season, they withdraw from the labour force. The seasonally adjusted unemployment figures are also represented in Figure 4.2. The first persons to lose their jobs were typically those involved in unskilled occupations, such as construction workers. This is confirmed by the estimate that the majority of unemployed are in the age group of 20-29 years, with only primary or lower secondary school education. Large numbers of those who lost their jobs returned to their rural homes. In the period up to January 1998, two-thirds returned to the Northeast Region, the region with the highest poverty incidence. About half of all returnees came from the Bangkok area and two-thirds of them were unskilled workers.

Figure 4.1

Unemployment February 1997-November 1998



Source: NSO, Labour Force Surveys

Although some manufacturing establishments were unable to withstand the immediate effects of the crisis, manufacturing employment held up remarkably well until early 1998, recording only a 1.1 per cent decline. However, the modest decline may have part of its explanation in the introduction by the government of a system of severance pay for workers employed for 3 years or longer. Some enterprises may have been unable or reluctant to make such payments, preferring instead to retain their work force on, if necessary, reduced wages. When the government upgraded the severance pay requirement, e.g. increasing the maximum payment from 6 months to 10 months, some employers chose to shed their work force rather than meet the new requirements, which came into effect in August 1998. This gave rise a second wave of redundancies, with an average of 1,337 closures per month in the period June-August 1998, compared with an average of 743 per month in the preceding two months. The longer and more protracted the recession becomes, the more likely it is that further unemployment rounds will follow.

Wages. The number of job losses provides an imperfect indicator of the impacts of the crisis on wages and incomes. Many of those who have retained their jobs are receiving lower wages, working reduced hours, and have had their benefits cut. In the period February 1997-February 1998, money wages of male construction workers declined by 15 per cent, while the wage of males working in the service sector declined by 4 percent. In rural areas, male wages in the service sector fell by 9.5 per cent. Declines in female wage rates were 4 per cent in manufacturing and 15 per cent in rural transport, storage and communications.

[8] See N. Kakwani, 'Impact of Economic Crisis on Employment, Unemployment and Real Income' Development Evaluation Division/ NESDB and Asian Development Bank, 1998

Underemployment. The crisis has also exacerbated problems of underemployment, especially in the urban informal sector, driving many workers and their dependents into still more marginal positions. The number of persons working less than 20 hours per week increased from 550,000, or 1.7 per cent of the work force, to around 1,470,000 in February 1998, or 4.6 per cent of the labour force. The relative increase in underemployment was particularly dramatic in Bangkok, especially in the industrial sector and among women workers, and in the Southern region, probably as a consequence of the low price for rubber.

Repatriation of illegal workers. The relative high levels of unemployment have reduced pressures on the labour market and resulted in demands to repatriate foreign workers, estimated at between 760,000 to 1,260,000, the majority of them illegal, to create jobs that can be filled by Thais. The government set the target of repatriating 300,000 workers by June 1998. However, many of the jobs occupied by foreign workers are shunned by the Thais and some enterprises remain in dire need of foreign labour. Many rice mills staged protests on the announcement of the target by shutting down their operations, arguing that they were unable to find Thais who were ready to undertake dirty and physically demanding work. The government was compelled to extend the deadline for repatriation by one year, although it insisted that foreign workers be formally registered and undergo medical check-ups. Employers of foreign workers were also required to pay a fee to subsidize the Thai Labour Development Fund.

3. Impacts on Poverty

As noted in Chapter 2, poverty analysis in Thailand tend to draw heavily on the results of the Social Economic Surveys (SES) conducted by NSO every two years. The data for 1998 are now available and comparison of the figures for 1996 and 1998 provides an important opportunity to determine the extent to which the crisis has impacted on the incomes of different groups in different parts of the country. Such an analysis has been undertaken by N. Kakwani and NESDB.[9] Although this analysis provides the basis for this section, it should be stressed that the results are still considered in some respects provisional and are the subject of debate.

Kakwani's analysis incorporates the concept of a Crisis Index. The index is based upon a comparison of the observed situation with what could have been expected had the crisis not occurred, with the latter based upon the extrapolation of past trends. The greater the difference between the observed and expected, the higher the crisis index. The results of his analysis, the most detailed examination of the income impacts of the crisis, are disturbing.

The main findings of his analysis can be summarized as follows:

[9] See N. Kakwani , 'Poverty and Inequality During the Economic Crisis in Thailand', Indicators of Well-Being and Policy Analysis, NESDB newsletter, Volume 3, Number 1, January 1999.

Impacts on per capita incomes. The average per capita real income of the Thai population in 1998 was Bt 3,753 compared with Bt 3,830 in 1996. Had the income trends observed in the period 1988-96 continued, the average income would have been about Bt 4,000. The actual figure for 1998 is 6.2 per cent less (see box 4.4).

Overall impacts on poverty reduction. As shown in Figure 4.3, the trend in poverty reduction came to an end in 1997-98. The total number of people living below the poverty line increased from 6.8 million to 7.9 million, with the poor as a percentage of the total population increasing over the two year period from 11.4 to 12.9. Had the crisis not occurred, the poverty incidence could have been expected to decline to 6.4 million, indicating that the crisis has added 1.5 million people to the nation's poor population.

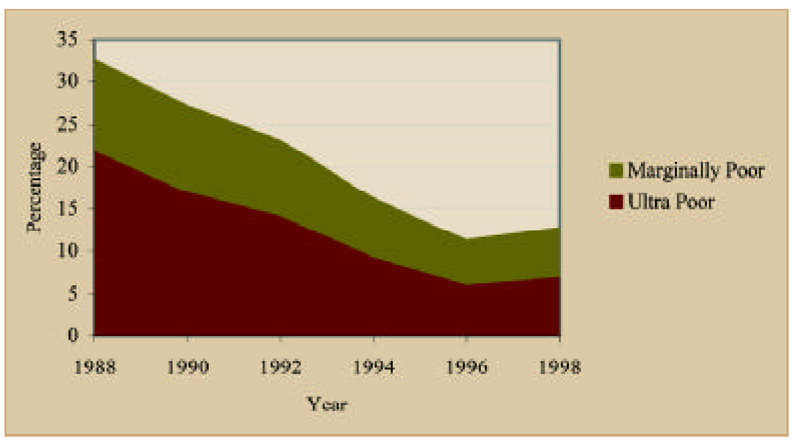
Impacts on the poorest. In his analysis Kakwani distinguishes between three groups of poor: (i) the ultra poor with an income below 80 per cent of the official poverty line; (ii) the marginally poor with incomes falling within 80-100 per cent of the poverty line; and (iii) the nearly poor, with incomes that fall within 100-120 per cent of the poverty line. The impacts of the crisis on these three groups are summarized in Table 4.2.

The table shows an increase in the number of all three groups. The increase in the number of ultra poor was the most pronounced, with the figure rising from 3.7 million in 1996 to 4.3 million in 1998. This increase of 14.3 per cent compares with decreases of more than one-third in the previous two periods. The increase in the numbers of marginally poor and nearly poor was less pronounced 11.3 per cent, and 1.8 per cent respectively.

These increases are thrown into sharper relief by the crisis index, the real measure of the impacts of the crisis. Kakwani's estimates suggest that the crisis resulted in an increase in the number of ultra poor by 24.4 per cent, the marginally poor by 17.7 per cent and the near poor by 5.8 per cent. These estimates confirm the view that the crisis has impacted most severely on the incomes of the poorest - the ultra poor - and that there must be many who have the greatest difficulties in meeting basic subsistence needs[10].

Figure 4.2

Poverty Incidence 1988-98



Source: N. Kakwani , 'Poverty and Inequality During the Economic Crisis in Thailand', Indicators of Well-Being and Policy Analysis, NESDB newsletter, Volume 3, Number 1, January 1999.

[10] Kakwani is more emphatic on this point. He notes that 'The ultra poor are in extremely desperate situation. They would require urgent help in order to barely survive' (p.5)

Table 4.2

Changes in the Number of Poor, 1990-98

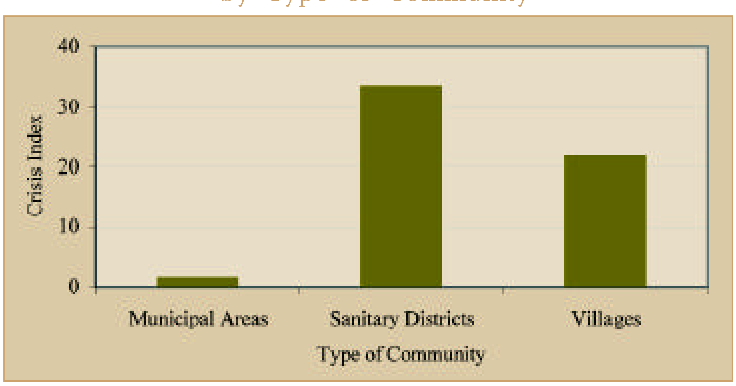
Period	Ultra Poor		Marginally Poor		Near Non-Poor	
	Number (millions)	Percentage of Poor	Number (millions)	Percentage of Poor	Number (millions)	Percentage of Poor
1990	9.5	17	5.7	10.2	4.8	8.6
1992	8.2	14.2	5.2	9.0	4.9	8.3
1994	5.5	9.3	4.1	7.0	3.9	6.6
1996	3.7	6.1	3.2	5.3	3.7	6.1
1998	4.3	7	3.6	5.9	3.8	6.2
Percentage Change						
1990-92	−13.8	−16.7	−8.9	−11.9	0.9	−2.5
1992-94	−33.1	−34.2	−20.9	−22.2	−19.7	−21.1
1994-96	−33.4	−34.3	−23.6	−24.7	−5.9	−7.2
1996-98	16.6	14.3	13.5	11.3	3.9	1.8

Source: N. Kakwani , 'Poverty and Inequality During the Economic Crisis in Thailand', Indicators of Well-Being and Policy Analysis, NESDB newsletter, Volume 3, Number 1, January 1999.

Impacts on urban and rural areas. The impacts of the crisis on incomes appear to have been most severe in rural areas. As shown in Figure 4.4, negative impacts, measured with the crisis index, have been far more pronounced in sanitary districts and villages than in municipal (urban) areas. Although the crisis had its origins in Bangkok, the impacts have been transmitted to rural areas and become more acute in the process, bringing to an end a sustained period of poverty reduction in rural Thailand. As a consequence of these developments, poverty in Thailand has become even more a rural phenomenon. Some 17.2 per cent of village populations are estimated as living below the poverty line in 1998 compared with 14.9 per cent in 1996, while the poverty incidence in sanitary districts increased from 5.8 per cent to 7.2 per cent over the same period.

Figure 4.3

Impacts of the Crisis on the Poverty Incidence by Type of Community



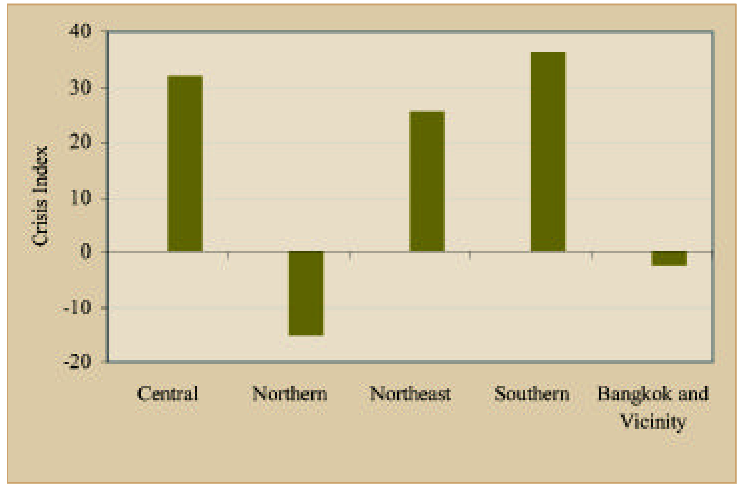
Source: N. Kakwani , 'Poverty and Inequality During the Economic Crisis in Thailand', Indicators of Well-Being and Policy Analysis, NESDB, Volume 3, Number 1, January 1999.

Regional impacts. Kakwani's analysis suggests that the income impacts of the crisis have differed between regions. As shown in Figure 4.5, the increase in poverty, as expressed by the crisis index, has been sharpest in the Southern Region, with the increase apparently linked to poor prices obtained by the region's rubber producers. Overall, the percentage of the population living below the poverty line increased from 11.5 to 14.8 per cent between 1996 and 1998. Without the crisis, a reduction in the poverty incidence by around 11 per cent could have been expected, with the actual figure representing 36.3 per cent deterioration measured by the crisis index. The Southern Region is followed by the Northeast Region, which already had the greatest absolute number of poor people. Between 1996 and 1998 the poverty incidence increased from 19.4 per cent of the population to 23.2 per cent. Without the crisis, the incidence could have been expected to fall by 18.5 per cent. This gives the region a crisis index of 25.5 per cent.

Of particular interest are the figures for the Northern Region. Kakwani's analysis indicates that the poverty situation actually improved between 1996 and 1998, with the poverty incidence falling from 11.2 per cent to 9.0 per cent. The reasons why the Northern region should have escaped the crisis may be linked to higher prices obtained by the region's rice producers and by region-specific changes in food prices, which have been shown to be a main determinant of poverty.

Figure 4.4

Impacts of Crisis on Poverty by Region



Source: N. Kakwani , 'Poverty and Inequality During the Economic Crisis in Thailand', Indicators of Well-Being and Policy Analysis, NESDB newsletter, Volume 3, Number 1, January 1999.

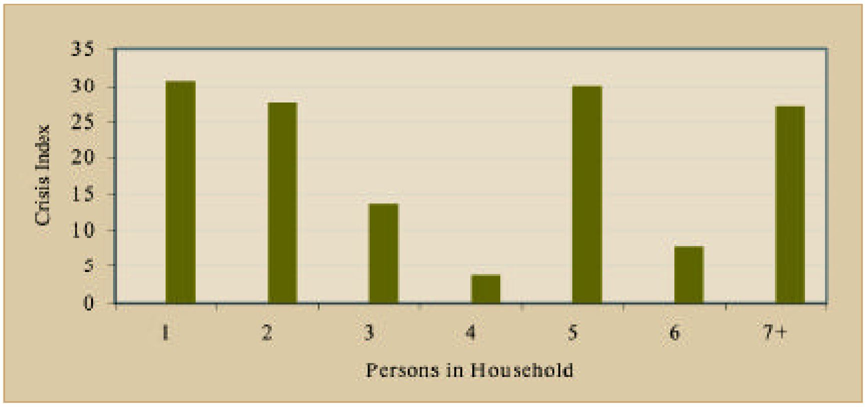
Impacts on rural households by size of land holdings. As observed in Chapter 2, households with small land holdings figure prominently among the poorest groups in Thailand. The SES data for 1998 indicate that their situation has deteriorated, with an increase in the poverty incidence. The poverty incidence of households with less than 5 rai (0.8 ha) was 37.2 per cent in 1996. Without the crisis, this could have been expected to fall to 36.2 per cent in 1998. However, the poverty incidence of such households increased to 41.9 per cent, giving a crisis index of 36.2 per cent, one of the highest index figures recorded in the analysis of SES data.

Impacts by household characteristics. It was observed in Chapter 2 that poverty in Thailand is correlated with household size and, to a lesser extent, with the age of the head of the household. Although Kakwani's analysis indicates that households of all sizes have been affected by the crisis, the effects have been particularly pronounced among households with five or more members, as shown in Figure 4.6. Since household size is principally determined by the number of children, the findings imply that the negative impacts of the crisis have been greatest for children than adults.

On the age of the household head, the analysis of 1998 SES data, summarized in Figure 4.7, reveals that the increase in the incidence of poverty has been greatest in the case of households headed by persons in the 50-59 age group, followed by households headed by a person 70 years or older. The latter is a particularly disturbing finding since it suggests that households with a high degree of vulnerability have become even more vulnerable as a consequence of the crisis.

Figure 4.5

Impacts of Crisis on Poverty by Household Size



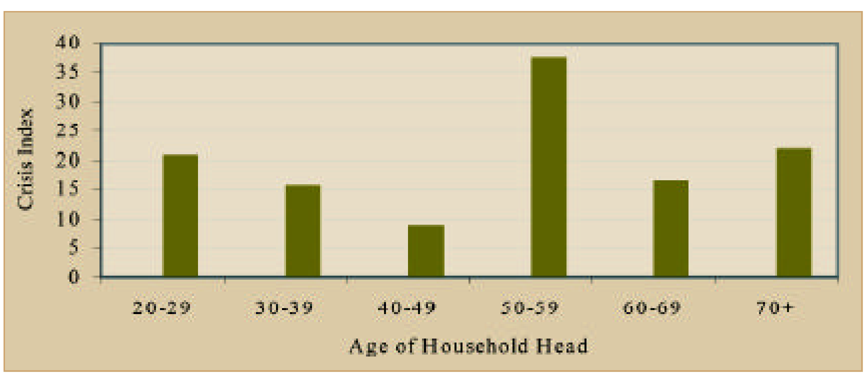
Source: N. Kakwani , 'Poverty and Inequality During the Economic Crisis in Thailand', Indicators of Well-Being and Policy Analysis, NESDB newsletter, Volume 3, Number 1, January 1999.

Impacts on income inequality. The analysis of the 1998 SES data is inconclusive on the question of whether the crisis has impacted significantly on income distribution. The Gini coefficient for 1998 is estimated at 0.481 compared with 0.477 in 1996. While this points to a worsening, the difference is only 0.8 per cent and may be too small to be statistically significant. Because the analysis indicates virtually unchanging shares in the different quintile groups, it provides no tangible evidence of an increase in income inequality that could be attributed to the crisis.

However, it is possible that impacts on income distribution will be lagged, emerging only at a later date. Available evidence suggests that income inequalities in Thailand must in part be explained by access to and the quality of education, which is driving a wedge between the better educated and highly skilled and those with only primary education, and by the spatial distribution of prosperity, especially between urban and rural areas.[11] Because the crisis may increase inequality in access to education and its effects are more pronounced on the rural poor, it may aggravate skills- and geography-based differentials that will eventually find expression in income inequalities.

Figure 4.6

Impacts of Crisis on Poverty by Age of Household Head



Source: N. Kakwani , 'Poverty and Inequality During the Economic Crisis in Thailand', Indicators of Well-Being and Policy Analysis, NESDB newsletter, Volume 3, Number 1, January 1999.

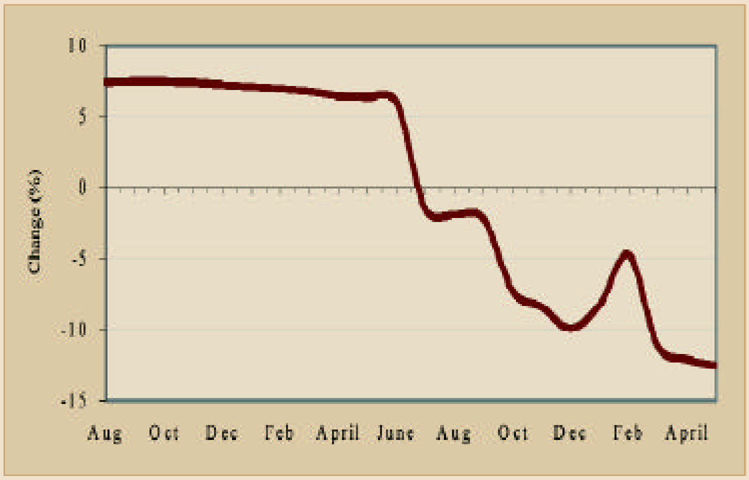
4. Impacts on Health

Impacts on health arise from the vicious combination of increased costs of medicine, reduced household incomes and reductions in government expenditures on health, all of which conspire to affect both access to and the quality of health services.

[11] See Chapter 1. See also T. Manuelyan Atinc and M. Walton, Social Consequences of the East Asian Financial Crisis, World Bank, Washington, D.C., 1998.

Box 4.4
GDP Contraction and its Impacts on Incomes

The strong growth performance of the Thai economy has been the engine that has powered improvements in human development and increases in disposable incomes. As shown in the illustration below, the strong growth performance came to an abrupt end in July 1997. Since then it has remained in deep recession, with negative rates of growth continuing up to May 1998. Although the macroeconomic situation has stabilized, there are, at the time of writing, few indications of growth in the real economy.



Source: International Economic Policy Division, Fiscal Policy Office

The impacts of the recession on real incomes are already being felt. In 1998, average monthly per capita incomes were in the order of Bt 3,753 compared with Bt 3,830 in 1996. This decrease compares with an increase of 12.4 per cent in the two-year period 1994-96.

Access to health services. Health costs have increased as a direct consequence of the depreciation of the Baht. By November 1997 the price of domestically produced drugs had increased by 12-15 per cent, while the cost of imported drugs had increased by 18-20 per cent. Although those in urgent need of medical care can still receive it free of charge, the increases restrict the access of poor and vulnerable groups to basic health services, especially when treatment may be required for non-life threatening illnesses. Available evidence suggests that poor households especially are postponing medical attention as well as turning to lower cost alternatives, such as self-medication (see box 4.5).

Quality of health services. Although the government has made determined efforts to maintain its commitment to health, the reduction in the health budget is bound to impact negatively on the quality of basic health services as well as the government's capacity to meet the many challenges arising from the changing morbidity pattern. Cuts have already affected some programmes, such as those related to HIV/AIDS. However, there are substantial evidences that such cuts cannot be blamed completely on the crisis. In the recent 'Thailand Social Monitor', World Bank claims that the cut in the budget for HIV/AIDS programmes may have been due to a policy decision regarding the low cost-effectiveness of double therapy rather than the economic crisis. Also, some cuts in the public health budget may have been caused by a policy decision that was made before the crisis to promote cost-sharing, this is shown by the cut in the budget for condoms initiated before the crisis. However, one cannot deny that the higher costs of imported medicines have placed HIV/AIDS drugs beyond the reach of some suffers and placing still greater burdens on family budgets.

Distortion in use of public and private health systems. Private hospitals have increased rapidly and prior to the onset of crisis it was estimated that overcapacity in private medical care was in the order of 200 per cent. The crisis has placed many of these new institutions under great pressure. Increasing numbers of patients have turned to lower cost public hospitals, making some of the private institutions uneconomic. Although many private hospitals have sought to reduce their costs, some may be required to close down in the near future, leading to the destruction of high cost health infrastructure. The same development has placed mounting pressures on the staff of public hospitals, leading to the fear that the increased demand for their services may contribute to a reduction in the quality of services available through the public system of health care.

Mental health. Although the Thai approach to life, captured in the saying 'Moderation, middle way of living, thinking and doing things', provides an automatic stabilizer in times of crisis, there is little doubt that economic hardship and business failure have contributed to emotional problems and psychological disorders. The suicide rate, the most dramatic of all indicators of mental well-being, doubled in 1998, with surveys indicating that the number of persons contemplating suicide is twice as high among retrenched workers and failed businessmen than among the population as a whole. However, there has been no noticeable growth in the number of in-patients and out-patients at the nation's mental institutions.[12] Many of those affected appear to prefer more traditional coping mechanisms. A telephone surveys of businessmen affected by business failure, for example, indicates that the most common mechanisms are acceptance of the problems (81 per cent of respondents), hobbies (78 per cent), sharing problems with family and friends (68 per cent), giving alms to monks and recourse to religious practices, and physical exercise (57 per cent).[13]

5. Impacts on Education and Human Resources Development

The crisis has exposed structural weaknesses in the quality of human resources in Thailand which are negatively affecting the nation's transition from a labour-intensive to a knowledge-intensive producer of goods and services. Overall levels of educational attainment are lower than those of the nation's direct competitors, with the majority of the work force having no more than primary or lower secondary school education. This makes education and human resources development a

[12] According to Ministry of Public Health data, the number of persons treated as out-patients at mental hospitals in the first 10 months of 1998 was 519,335 compared with 686,664 in the whole of 1997. The number of reported in-patient cases in the first 10 months of 1998 was 18,459 compared with 26,524 in 1997. Figures for 1996 are not available.

[13] Quoted in S. Wibulpolprasert et al., The Economic Crisis and Responses by Health Sector in Thailand, Health Systems Research Institute/Ministry of Public Health, April 1998.

major development priority. However, the crisis has only added to the difficulties in meeting quantitative and qualitative challenges in this key issue of development strategy.

School dropouts. There is increasing evidence that households under pressure from the crisis are withdrawing their children from school either because they can no longer afford to meet the costs of schooling or because the children are required to work in order to supplement the family's income. Although the government has introduced various measures to reduce the costs of schooling for poor and disadvantaged families, including free school uniforms, books and lunches, these measures are far from extensive and are still unavailable to some poor families.[14] Transport costs are a particular burden for families in rural areas, with the costs of transport cited most often by rural families as being the principal reason for withdrawing children from school.

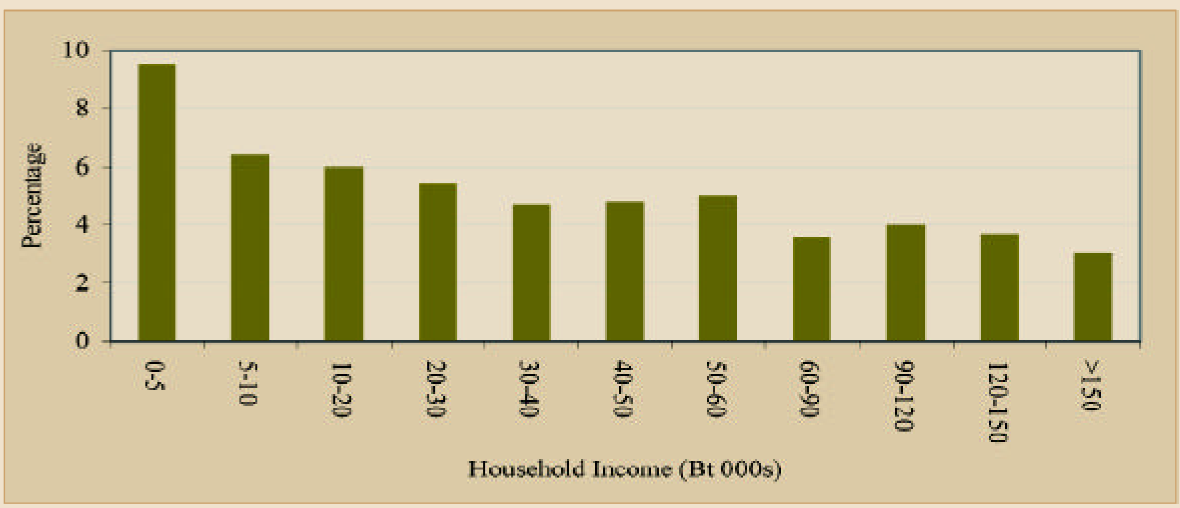
Box 4.5

Household Expenditures on Health

The increased costs of essential medicines have increased the costs of medical care. Poor households already devote a larger share of their income to health services. As shown below, a family with an average household income of less than 5,000 baht per month typically must devote nearly 10 per cent of its income to such care compared to the 3 per cent of a wealthy household.

As the budgets of poor families are under stress, there is a real risk that poorer families will have little choice but to reduce their expenditures on health. This will affect all family members and young children in particular.

Share of Household Income Devoted to Health Care, 1992



Source: D. Mongkolsamai 1998, reproduced in S. Wibulpolprasert et al, The Economic Crisis and Responses by Health Sector in Thailand, 1977-98, Health Systems Research Institute/Ministry of Public Health, April 1998.

[14] See S. Mehrotra, 'Mitigating the Social Impact of the Economic Crisis: A Review of the Royal Thai Government's Responses', UNICEF, Bangkok, August 1998 (mimeo)

Table 4.3

Estimate of the Number of School Dropouts, 1997 and 1998

Type of Education	1997			1998		
	Students	Dropouts		Students	Dropouts	
		Number	%		Number	%
Primary	5,927,940	144,185	2.4	5,936,174	148,819	2.5
Lower Secondary	2,462,631	77,536	3.2	2,426,905	89,523	3.6
Secondary & Vocational	1,620,434	121,862	8.2	1,676,974	146,214	9.0
Total	**10,011,005**	**343,583**	3.4	**10,040,053**	**384,556**	3.8

Source: Office of the National Educational Commission, 1995-98, 1996-98

Estimates of the number of school dropouts are given in Table 4.3. The total number of dropouts has been estimated by the Ministry of Education at 343,600 in 1997 and 384,600 in 1998. In both years, the dropout rate for primary education was lowest, at an estimated 2.4 per cent in 1997 and 2.5 per cent in 1998, and highest in the case of secondary and vocational education, with dropout rates of 8.2 per cent and 9.0 per cent in 1997 and 1998 respectively. While some caution is required in interpreting these figures since it cannot be assumed that the crisis is the sole reason for the dropouts, it does appear that the majority of dropouts in lower secondary and secondary and vocational education are the children of laid-off workers. Many now have to find ways of helping their parents to make ends meet, or have followed their parents back to rural areas.

The latest Ministry of Education data provides a mixed picture on school dropouts. A survey conducted in February 1999 indicates that the number of dropouts in primary education had increased to 171,000, equivalent to a dropout rate of 2.9 per cent compared with rates of 2.4 and 2.5 per cent in 1997 and 1998 respectively. However, the number of dropouts in lower secondary education appeared to have fallen to 51,500, equivalent to a dropout rate of 2.1 per cent, compared with 3.6 per cent in the previous year.[15]

Private education. As in the case of the health sector, the crisis has had a particularly severe effect on the Kingdom's many private educational institutions. Private schools all over the country are recording overdue admission fees - Bt 923 million for the second semester of the 1997 academic year alone. The delay in the payment of fees and the method of payment (increasingly by installments) are having a serious effect on the cash flow of schools. A survey by the Ministry of Education indicates that more than 8 per cent of all students studying for the Por-Vor-Chor (Certificate of Vocational Education) were extremely late in paying their tuition fees and that, overall, nearly 5 per cent of students in the general education stream and nearly 7 per cent in the vocational stream had not paid.[16] The prolongation of the crisis and the decision of increasing numbers of parents to make use of lower cost public schools will bring private institutions into still greater difficulties, with the possibility that some may be compelled to close.

[15] For alternative analysis see, 'Two Years Later - Education and Health Responses to the Crisis', Thailand Social Monitor, World Bank, 1999.

[16] Reported in The Brooker Group, Impact of Thailand's Economic Crisis on the Social Sector, Final Report, Asian Development Bank, March 13, 1998, chapter 2.

Overseas training. Overseas training has provided a means for Thailand to acquire specialized skills in a number of areas. The crisis has seriously curtailed this avenue of human resources development. The government has been required to drastically reduce its budget for overseas training, requiring some students to return home before completing their studies, while many of those who were financed from private sources have been compelled to return home by the depreciation of the baht.

Quality of education. The crisis is impacting on the quality of education in a variety of ways. Reductions in the education budget, especially the capital budget, will lead to the postponement or cancellation of new programmes and projects aimed at fostering educational innovation and enlarging the nation's capacities to meet qualitative challenges. Although all schools are affected by the reductions in the education budget, the effects are likely to be greatest in rural areas since the needs of rural schools tend to be greatest and they have fewer non-budgetary resources at their disposal. It is also affecting teacher motivation. An ONEC conducted survey in October 1997 found that most (87 per cent) of the 2,990 teachers surveyed were deeply shocked by the seriousness of the recession and by the speed at which it was affecting all aspects of Thai society. Once respected members of the community, their status has declined as their position has been eroded by falling real incomes. Nearly half of all teachers are in debt and the need for them to take second jobs appears to be reducing the time they are able to spend at school. There are also reports of declining levels of motivation and of increased drug use by teachers. None of these developments augurs well for the quality of education available in Thailand's schools. The crisis is also affecting the motivation and morale of students. School officials have a reduced eagerness to learn among their students, possibly as a result of the lower morale of teachers and concern for the families at a time of economic hardship.[17]

Graduate unemployment. Each year about half a million students graduate from schools and universities and enter the work force. When the economy was growing rapidly they had little difficulty in finding a job, irrespective of the quality of the training received. The job market is at present closed to most of them. Studies indicate that 86 per cent of the 424,656 students who graduated in 1998 with a bachelor's degree and lower educational qualifications will be unable to find work and that the number of unemployed graduates could reach 1,364,000 by 2001.[18]

The Ministry of University Affairs has enacted several measures to create jobs for recent graduates. One scheme involves hiring students to work in village administration across the country. Students help conduct surveys on the quality of life of the underprivileged, with regional universities acting as coordinators. Other measures include the dissemination of information on employment opportunities, schemes to encourage unemployed graduates to pursue higher studies, and the provision of short-term training for graduates to acquire the skills required for self-employment. However, it is clear that such initiatives are unlikely to have a major impact on the growing problem of graduate unemployment.

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[17] ibid.

[18] See Thailand Development Research Institute, Economic Crisis and the Role of Technical Assistance, TDRI, Bangkok, 1998.

6. Impacts on Social Relations

The economic crisis has posed major challenges to Thai society and to the coping mechanisms of individuals, families and communities. Both have responded well to the crisis, providing evidence of the cohesion existing in Thai society and the strength of traditional family and community networks, which have worked to cushion the negative impacts. The strength of these networks has been demonstrated in a variety of ways. Returning migrants with no immediate relatives are, for example, being taken in by extended family or local temples, which are supported by the community. Employment in non-farm enterprises is being rationed to maximize the number of people who can benefit. Farmers are offering loans to families and relatives. Group loans are reportedly being repaid ahead of individual loans, even in cases where additional high interest loans are necessary to meet the group obligation. The return of migrants to their rural homes has had the positive effect of reuniting families, helping to reverse a negative trend that had its origins in the boom.

At the same time, economic hardship and uncertainties are placing severe strains on family and community relations as well as on adjustment and coping mechanisms. The fear has been expressed that these stresses and strains, because they contribute to the erosion of social values, may pose a threat to the long-standing cohesion of Thai society.

Family and community breakdown. There is increasing anecdotal evidence of family stress and strains. The crisis has added to the survival pressures of poor families, driving some of them below the poverty line and giving rise to psychological disorders as well as physical hardships. There are a growing number of reports documenting increased conflicts between family members, a higher incidence of divorce, children under pressure, and of elderly persons being compelled to work so as to earn their keep. However, it is not yet clear whether the stress placed by the crisis on families are any greater or more severe than the stress that were occasioned by the boom years that were characterized by migration-induced separations.

Family stress and strain are being accompanied by community breakdown in both urban and rural areas. A World Bank study of an urban slum in Khon Kaen, for example, has documented the erosion of community trust, rooted in the increased competition for jobs among neighbours. Similar problems are also reported in villages far removed from the epicentre of the crisis (see box 4.6).

Increased crime. Evidence suggests that the crisis is beginning to have a measurable impact on the incidence of crime. As shown in Table 4.4, all main cases of reported crime have recorded an increase since 1996, although it is not yet clear whether the increase can be attributed entirely to the impacts of the crisis, although increases recorded in poverty-related crime points to the existence of a relationship. Reported cases of theft, for example, recorded one of the sharpest increases, rising from 43,688 cases in 1996 to 53,327 in 1998, while cases of extortion and kidnapping increased from 203 to 301 and from 7 to 15 respectively over the same period. Car thefts were sharply up as were cases of cattle theft and the theft of agricultural equipment.

Box 4.6

The Impacts of the Crisis at the Community Level

Although the crisis has served to demonstrate the strength of traditional family and community coping mechanisms, there is evidence that it is placing mounting pressure on traditional community networks in both urban and rural areas. A World Bank study of Teparak, an urban slum in Khon Kaen, the capital of the Northeast Region, has documented the erosion of community trust. Families that once cooperated are increasingly at each other's throat, especially in the competition for jobs. Theft, violence and other crimes are on the increase. Some children have been taken out of school to guard the family home because both parents are working outside the house and break-ins had increased. Neighbours were often the main culprits.

The crisis has left the community confused and disoriented, with a general feeling of uncertainty and isolation, Many members of the community blamed the rich for the crisis and were unable to understand why the poor should have to carry the burden. A community leader is quoted as saying: 'The crisis has happened too quickly and has left us confused, puzzled and let down. We have been laid off but given no explanation'.

Another study of villages in Phayao and Nong Bua Lum Phu provinces has also confirmed that the crisis is affecting the community in a variety of ways. Although all were aware of the crisis, they were less familiar with some of the measures that have been introduced to combat it, such as the increase in VAT and changes in regulations concerning free medical services, including the exclusion of drugs that were once part of the essential drugs list.

Given a list of 'situations' the respondents were asked whether they were getting better, worse or have remained the same since the economic crisis. The majority responded by saying that almost all were getting worse. No difference was found in the responses of the poor, middle and richer households in the communities investigated.

The study's findings include: the increased costs of consumer goods, agricultural inputs and transport; lay-offs from work; the growing number of return migrants; the need for parents to withdraw their children from school; the neglect of the elderly, with the elderly having to work longer and harder to earn their keep; the growing rate of alcohol consumption; family problems and breakdowns; child neglect and child work; more fighting within some villages; more psychosomatic symptoms (anxiety, stress, frequent headaches and digestion problems); the out-migration of women to big cities; and the greater involvement in sex work, with some families who were not poor encouraging their daughters to become involved in the commercial sex business because they 'wanted easier lives'.

Sources: World Bank rapid social assessments undertaken by Bank staff in collaboration with NGOs in Thailand, Philippines, Indonesia and Cambodia in the period January-April 1998, reported in T. Manuelyan Atinc and M. Walton, Social Consequences of the East Asian Financial Crisis, World Bank, Washington, D.C., 1998; Chanin Charoenkul and Chitra Thamborisut et al, Impacts of Recent Economic Turmoil on Rural Poor of Thailand, Faculty of Public Health, Mahidol University, no date.

Table 4.4

Reported Cases of Selected Crimes, 1996-98

Type of Crime	1996	1997	1998
Violent crime[1]	8,065	8,400	8,669
Crime against life[2]	27,917	29,381	29,547
Crime against property[3]	52,931	55,688	62,923

Source: The Royal Thai Police

Notes:

[1]Includes murder, gang robbery, kidnapping and arson

[2]Includes murder, manslaughter, death by negligence, attempted murder, assault and rape

[3]Includes theft, snatching, blackmail, extortion, robbery, gang robbery, receiving stolen property and vandalism.

The crisis has certainly contributed to a growth in illegal gambling. The sale of tickets for illegal lotteries has increased sharply, with such tickets figuring prominently as key elements of the risk aversion strategies of the rural and urban poor.

Drug dealing. There is evidence that growing numbers of persons are turning to drugs dealing as a way of earning quick money, taking advantage of Thailand's strategic location as a transit centre for the illegal trade in narcotics. There is a clear risk that drug use will increase among vulnerable groups, such as school-age children. The number of reported cases of drug dealing increased from 168,641 in 1996 to 188,866 in 1998, with the numbers of persons arrested for narcotics crimes increasing more sharply from 178,994 to 224,642, an increase of 25 per cent in two years.

7. Impacts on Women

The participation rate of women in the work force in Thailand is high. At 64 per cent in 1996 it is considerably higher than other countries in the region, such as Indonesia with 38 per cent, Korea with 50 per cent, and Philippines with 49 per cent. However, as observed in chapter 1, the high participation rate must be seen within the context of a segmented labour market, reflected in the concentration of women in a relatively narrow range of occupations, for the most part low-skilled, low-status, and low paid, with fewer opportunities for upward mobility. Many women are engaged in irregular forms of employment, especially in the informal sector, and operate at the margins of subsistence, placing many women beyond the reach of formal labour legislation and social protection.[19] Women's wages in virtually all sectors of the economy are lower than those of men. All these characteristics combine to place women in a particularly vulnerable position in times of crisis. These vulnerabilities appear to have become even more manifest since July 1997.

Vulnerabilities and unfair practices. Women account for around 80 per cent of the unskilled labour in the manufacturing sector and many of the industries in which they are strongly represented have been badly affected by the crisis. Having the least secure types of labour contracts and often employed on a temporary basis, they have been among the first to be laid off, often receiving little or nothing in the way of compensation. Women have also been required to make greater concessions in order to secure or retain a job. They have been compelled to compromise on basic working conditions, accepting jobs with longer working hours, reduced rates of pay, exposure to health and occupational hazards, and risks of sexual harassment. According to trade unions, about 20 per cent of women in Thailand forego their full maternity leave, returning to work within 45 days instead of their entitled 90 days, for fear of losing their jobs.

Most of the retrenched female workers are married women with children. Case studies show that 70 per cent of the 1,200 women workers who lost their jobs at the Dynamic factory in Bangkok were married with families, and most of the 760 women workers laid off by the American-Melon Textile Factory in April 1998 had school-age children. Since more than one in four of all households are female-headed and women tend to devote a larger share of their income to meeting

[19] For a more detailed treatment of these issues, see Chapter 5.

children's needs for nutrition, health care and education, it seems reasonable to assume that unemployment among women workers is a particularly significant avenue through which the negative impacts of the crisis are transmitted to children.

Informal sector insecurities. In many respects, the informal sector functions as the last resort. It is a sector in which women predominate, especially in food processing, petty-trading and home working. Surveys have confirmed that women-owned and operated informal sector enterprises in Thailand share many of the characteristics associated with such enterprises in the sub-region. They tend to be small, have low capitalization and technology, few assets, poor access to markets and credit, and low levels of managerial and business skills and low levels of profitability, often being dependent for their survival on high investments of time and energy and even self-exploitation. In practice if not in theory, they are also without legal and social protection.

Vulnerabilities have increased as a result of the crisis. Women own account workers, who make up more than one-third of all self-employed workers in Thailand,[20] dependent on export orders have experienced a sharp decline in sales volume as well as falling piecework rates. According to the Justice and Peace Commission, T-shirt sewers now receive four Baht per T-shirt compared with seven Baht before the crisis and are having to wait longer before being paid. With very limited access to formal credit, they have been compelled to make increasing use of the services of moneylenders, who charge up to 20 per cent per month on the loans extended. The profitability of the enterprises has also been further eroded by the higher utility rates introduced after the onset of the crisis.

Prostitution. There is a growing body of anecdotal evidence indicating that increasing numbers of women are being driven into prostitution, including part-time prostitution, as a consequence of the crisis. One study, for example, has shown that many housewives in Chiang Mai have become part-time sex workers because their husbands can no longer support the family. There is also anecdotal evidence that increasing numbers of students are entering the sex industry due to economic hardships and the absence of alternatives.

Reinforcement of gender bias. Perhaps the most damaging implication of the crisis for women is that it is tending to reinforce deep-rooted gender biases which will impact negatively on the efforts being made, supported by the new Constitution, to achieve social, economic and political emancipation. The crisis is reinforcing the view that, in times of falling incomes and job insecurity, men should be regarded as the most deserving of support, with women regarded as wives and mothers.

The above would appear to support a number of conclusions: (i) women have been more seriously affected by the crisis than men; (ii) the position of women in the labour market has been eroded by the crisis; (iii) the vulnerabilities of women have increased as a direct result of the crisis; (iv) the negative impacts on women are being transmitted to the nation's children; and (v) the

[20] See ASEAN, The Advancement of Women in Asean, No. 20, 1997.

crisis may result in the postponement of emancipation initiatives. These conclusions have great significance for human development in Thailand.

8. Impacts on Children

Reference has already been made to the curtailment of educational opportunities, a key ingredient of strategies to promote human development. The crisis is also affecting Thailand's children in other ways.

Poverty. It was noted earlier that the crisis has impacted most severely on larger families. Since larger households are likely to have a greater number of children, the conclusion can be drawn that children are among those most severely affected by crisis-induced poverty. This is confirmed by Kakwani in his analysis of 1998 SES data, who concludes that there are today more children living in poverty than there are adults.[21]

Health and nutrition. There is mounting evidence of negative impacts on the health and nutrition of Thai children. A survey by the Health Intelligence Unit (HIU) of the Ministry of Public Health indicates that the number of underweight children under the age of five has increased from 7.9 per cent of children in 1996 to 11.8 per cent, apparently bringing to an end a period of sustained improvements in the nutritional status of Thai children.[22] Malnutrition appears to be a particular problem among children in the Northeast Region, where one in four of all under-fives are estimated as being underweight. Notable also is the apparent sharp increase in the number of underweight children in Bangkok, which is estimated at nearly 9 per cent. These levels are considerably above those recorded prior to the onset of crisis. The Primary Education Commission has similarly estimated that 3.7 million of Thailand's 6.3 million under-fives have experienced hunger problems since 1997.

There is evidence of children skipping meals as family budgets have shrunk. Many Children are out of school because their parents could no longer afford educational costs or are required to work to supplement the family income. To make matters worse, theese children are also deprived of free school meals and milk. Several studies have reported families switching to condensed milk for babies because of the very modest savings it entails.

There is also evidence that malnutrition is beginning to have a negative impact on the intelligence of Thai children. The number of children with an IQ of 90 and below, for example, appears to be increasing and is estimated at around 44 per cent. This evidence provides a particular cause for concern since it suggests that the crisis will leave an indelible impression on children, depriving them of opportunities in the world of learning and work.

Child labour. The crisis appears to have marked the end of the period that saw a sharp fall in the number of working children. Some estimates indicate that the number of child workers increased

[21] N. Kakwani, 1999, op.cit.

[22] See S.. Wibulpolprasert et al, 1998, op.cit.

by 350,000 in the 12 months that followed the onset of the crisis and this figure is bound to increase as the crisis becomes longer and the circumstances of increasing numbers of families become more desperate.[23] There is also anecdotal evidence of an increase in child begging, although most of the children arrested in Bangkok for illegal begging continue to come from outside Thailand, mainly Cambodia.

Child prostitution. A particular area of concern is the impact of the crisis on child prostitution. Although the evidence is not yet conclusive, there are reports of parents selling their daughters to brothel owners as well as of growth in prostitution by young boys in especially the main tourist destinations. UNICEF studies confirm the seriousness of the risks. They have shown the correlation existing between child prostitution and such factors as dire poverty, increased family indebtedness, the growth of poor single parent families, the lack of educational and employment opportunities, and broken homes and divorced and separated parents. All of these risk indicators have undoubtedly increased in Thailand since the crisis.

Child abandonment and abuse. There is also mounting evidence of child abandonment, with some estimates suggesting that the number of street children tripled between 1997 and 1998.[24] The above-mentioned HIU study, based on reports from 40 state-run hospitals and welfare homes, suggests that the incidence of abandonment of babies after delivery has increased by nearly 10 per cent since 1997. The number of children in the 6-18 year age group appears to have increased more sharply. The increase is estimated at 34 per cent. Fears have also been expressed of the possibility of increased child abuse as children become the unwitting victims of parents who are finding it increasingly difficult to make ends meet.

9. Impacts on the Environment

Although it is as yet too early to assess the impacts of the crisis on the environment, these may prove to be considerable, further undermining the basis for sustainable development.

Pollution abatement. The sharp reduction in government expenditure will certainly impact negatively on the efforts being made to control environmental pollution and to introduce new regulatory mechanisms. In FY 1998/99 the budget for environmental quality control was cut from Bt 8.3 billion to 7.1 billion, while the budget for pollution control was cut far more drastically from Bt 980 billion to 367 billion. These reductions are bound to slow the pace of efforts to improve ambient air and water quality as well as add to the difficulties in responding effectively to a wide range of environmental challenges.

[23] See N. Kakwani, 1998, ibid.

[24] See Chia Siow Yue and Shamira Bhanu, 'An Intellectual Dialogue on Building Asia's Tomorrow', Background Paper, The Asian Financial Crisis: Human Security Dimensions, Institute of Southeast Asian Studies, 1998.

With many factories struggling to stay open they have neither the desire nor the resources to comply with environmental regulations. Government agencies may also be less inclined to insist upon strict compliance given that such insistence may be the final nail in the factory's coffin and still larger numbers of redundant workers.

Natural resource depletion. The crisis will place pressures on the natural resource base, especially in rural areas, already severe due to the drought conditions that affect large parts of the northern regions. Water levels in dams, reservoirs, and natural watercourses have dropped and increasing numbers of farmers in the central plain are without access to irrigation water. At the end of 1997, nearly 13,000 villages in 472 districts in 57 provinces involving 7.7 million people were affected by drought. The worst hit were 4.5 million villagers in 6,629 villages in 17 provinces in the Northeast Region and 1.4 million villagers in 2,877 villages in 15 provinces in the Northern Region.

The growth of poverty in rural areas combined with the large number of returnees will give rise to increased competition for available resources, which are already at the root of many conflicts in rural areas. This competition may drive greater numbers of poor and increasingly desperate people to illegal land occupation and illegal clearing of forest areas, exacerbating problems that are already serious. Experience has shown that the poorest, often the last in a long chain of exploitative relations, are often left with nothing left to exploit but themselves and nature.

V. THE POSITIVE EFFECTS OF THE CRISIS

This chapter has so far looked at the many negative impacts of the crisis on the Thai economy and Thai society. However, impacts have not been entirely negative. It has also had positive effects, some of which are likely to be long lasting.

At the aggregate level, the crisis has provided tangible evidence of the cohesion, harmony and unity existing in Thai society, the strength of traditional family and community ties, and the robustness of coping mechanisms in times of stress. All this has ensured that the social impacts of the crisis have been far less pronounced than in some other countries in the sub-region. While the crisis has brought centrifugal forces that are causing some countries to unravel at the seams, harmony and unity have propelled centripetal forces in Thailand that have enabled the country to far better weather the storm.

The positive effects of the crisis are evident in a variety of areas, of which three should be stressed.

First, the crisis has led many to question part of the orthodoxy that has underpinned mainstream development strategy, leading increasing numbers of experts and laypersons to search for alternatives outside the mainstream. It has certainly contributed to a reassessment of the role of agriculture and rural areas in national development strategy and their contribution to overall levels of well-being and welfare in a nation that is still predominantly rural. The search for alternatives was provided with a positive stimulus by His Majesty King Bhumibol Adulyadej in his address to the nation on 5 December 1997 in which he articulated the need to create a society that is more self-sufficient and contented. 'It is not important', His Majesty observed, 'to be an economic tiger. What matter is that we have enough to eat and to live. A self-sufficient economy will provide us with just that. It helps us to stand on our own and produce enough for our own consumption'. His Majesty went on to suggest that if only one-quarter of the country would change course and turn from a market-based to a self-sufficient economy, Thailand would be able to survive the economic storm. Rural development issues are today receiving far greater attention, and the tradition of self-reliance and self-sufficiency that has long been practiced by villages in many parts of Thailand is no longer looked at a curiosity that falls outside the development mainstream but is rather being subjected to detailed examination to distill relevant lessons for the future.

Second, the crisis has not only demonstrated the robustness of traditional coping mechanisms, it has also fostered greater self-reliance and self-sufficiency among local communities in both urban and rural areas. Communities that are well-managed and self-regulating, drawing upon long traditions of dharma and self-help, have been particularly successful in coping with the crisis. Their success in responding to the challenges posed by economic difficulties has helped to instill in them a new sense of confidence and entrepreneurship. This is reflected, for example, in many new initiatives in the area of group savings schemes, some of which are being actively supported by NGOs and government agencies, embodying flexible arrangements that make it possible to respond to the needs of returning migrants. An increasing number of communities are practicing the 'New Theory', which is not only making them less dependent but also more assertive, giving new meanings to the traditional understanding of social capital.

Third, the crisis did not bring a coup d'etat as it might once have done, but it has brought a silent revolution that may prove even more significant in the long run. The civil society movement has gained strength from the crisis and this strength is reflected in the vigorous pursuit of the reform agenda established by the new Constitution. The crisis undermined the traditional authority of the state and reinforced demands for greater openness, greater accountability, more participation and the empowerment of local communities. These forces appear irreversible and will no doubt accelerate trends towards further democratization of development that were already evident prior to the crisis. In this context the crisis has created a fertile breeding ground for many civil society initiatives. These initiatives would have been far less numerous without the crisis. The seeds planted will flower in the years ahead and their benefits may prove to be far greater and even more significant in the longer term than any reorientation of economic development strategy.

VI. CONCLUDING OBSERVATIONS

The seeds of the crisis were planted in the fertile ground of financial liberalization. The seeds have blossomed into a multi-dimensional crisis that has been felt by virtually everyone in the Kingdom. Although Thailand's business community has undoubtedly paid a heavy price for its many indiscretions - an estimated 30,000 Mercedes Benzes and BMWs have been repossessed since July 1997 - the impacts of the crisis have been most deeply felt by the nation's poor. Many have been marginalized further and some have been driven so far below the poverty line that they may now be unable to meet their basic subsistence needs.

The crisis has severely impacted on human development. All of its key components have been placed under sustained attack. Poverty has increased, livelihoods have become more uncertain and threatened, social capital is being eroded, vulnerable groups have become more vulnerable, women have lost ground, and the environment is under even more sustained attack. Some of remarkable progress recorded by Thailand has undoubtedly been eroded and it is not yet clear when the negative forces can be redressed.

Few anticipated the crisis. It took almost everyone by surprise, and many were overwhelmed by both the speed at which it occurred and the depths to which it has dragged the nation downwards. However, the initial reactions of confusion, bafflement and even panic have been replaced by a vigorous determination to bring an end to the crisis and to place Thailand on the path of sustainable human development.

The crisis has not been entirely negative. It has also had numerous positive effects. These include the reassessment of development strategy, growing recognition of the importance of the agricultural sector and rural development to future well-being and levels of welfare, and the strengthening of the civil society movement. It has also served to highlight the traditional strength of Thai society and the importance of harmony and unity in the face of economic difficulties. These are tangible assets that form part of the foundation on which to build the new architecture of change.

Human Development, the Crisis and the Challenges of Globalization

I. GLOBALIZATION: THREAT AND OPPORTUNITY

In this report we have looked at the progress recorded by Thailand in the field of human development and at the crisis and its impacts on human development. It has been observed that while progress has been very considerable, the crisis has become a multi-dimensional one that has seriously eroded some of the progress recorded and given rise to doubts about when – and indeed whether – Thailand can return to the path of sustainable human development.

It is impossible to explain progress in the field of human development without reference to globalization. Because globalization is a double-edged sword, it is also impossible to explain both the speed at which the crisis struck and the severity of its impacts without similar reference to globalization. Globalization is thus an important factor in understanding the past as well as options for the future. It is the subject of this chapter.

Globalization is a process that integrates the component parts of the world economy. It is characterized by increasing flows of capital, information, goods and services, with production increasingly organized on a global scale and multinational corporations (MNCs) as the principal architects of the system of production. Globalization has eroded the traditional insulators of time and space as well as the importance of national boundaries and the prerogatives of the nation state. As a process, globalization is neither intrinsically 'good' nor 'bad'. It brings both global 'goods' and global 'bads'. It brings a global 'good' if it enlarges opportunities and increases levels of prosperity and welfare. It is 'bad' if it forecloses opportunities and drives the poor further to the margins of existence. It is 'good' if it contributes to the democratization of development and the promotion of human rights and social justice. It is 'bad' if it creates new human insecurities and vulnerabilities. It is 'good' if it breaks down gender biases and contributes to the full emancipation of women. It is 'bad' if it reinforces the gender-based division of labour and the disparities existing between men and women. It is 'bad' if it brings threats to human society in the form of organized crime and the growth of illegal trafficking in drugs, arms, people, hazardous and toxic wastes, endangered species and new diseases like HIV/AIDS. It is 'good' if it contributes to the solution of such problems and to the sustainability of development. It is 'bad' if it results in the homogenization of culture and the replacement of traditional systems of values and beliefs. It is 'good' if it contributes to a fuller understanding and sharing of the enormous wealth of human experience, imagination and creativity.

Globalization must thus be seen in its proper context of both potentials and threats and as a means for advancing human welfare and development and not as an end in itself. Seen in this context, the challenge is one of maximizing its positive effects for human development and minimizing its negative effects. We will examine positive and negative impacts in Thailand under five main headings covering the economic, labour and employment, gender, social and cultural, and environmental dimensions.[1]

II. ECONOMIC DIMENSIONS

The economic dimensions of globalization are particularly numerous. In this section we will confine the examination to capital flows and foreign investment, production, production technology, and international trade.

1. Capital Flows and Foreign Investment

In the 1980s and early 1990s, Thailand liberalized its financial and banking systems, a requirement for full participation in the global economy, and this paved the way for the massive inflows of foreign capital required for the transformation from an agricultural to an industrial economy. This transformation was the key to the rapid growth of exports that fuelled increases in incomes and improvements in overall levels of well-being and welfare.[2] In Thailand, capital inflows averaged 10 per cent of GDP during most of the 1990s, reaching the extraordinary level of 17 per cent per annum at the height of the boom.

The rapid economic growth made possible by large capital inflows also contributed to sharp increases in government revenues that have been used to promote human development, reflected in significant increases in expenditures on health, education, children and social security. Foreign capital has also been used directly to advance levels of well-being. The rapid expansion of access to electricity and telephones has, for example, been made possible by access to external capital markets. In 1995, the Electricity Generating Authority of Thailand (EGAT) had an outstanding foreign debt of Bt 94 billion, compared with Bt 50 billion of domestic debt, while the Telephone Organization of Thailand (TOT) held Bt 29 billion in outstanding foreign loans compared with Bt 1.9 billion in domestic debt.

However, Thailand's experience confirms that capital flows are highly volatile and becoming increasingly so. Daily turnover in foreign exchange markets is in the order of US$ 1.3 trillion and

[1] This chapter draws upon: T. Karnjanauksorn and V. Charoenloet, 'The Impact of the Economic Crisis on Women Workers in Thailand: Social and Gender Dimensions', Working paper prepared under the AIT/ILO Research Project on Gender Impact of the Economic Crisis in Southeast and East Asia, ILO, Bangkok, 1999 (to be published in Working Women Coping with the Asian Crisis (tentative title), ILO, forthcoming); D. Mongkolsmai and S. Suksiriserekul, 'Linkages Between Globalization, Consumption Patterns and Human Development in Thailand', Paper submitted to UNDP New York, January 1998; and D. Mongkolsmai and S. Suksiriserekul, 'Impact of Globalization on Poverty and Disparity', paper submitted to UNDP Bangkok, February 1999.

[2] On the liberalization of the financial and banking system, see Chapter 1.

growing, and nearly US$ 20 billion flows across borders every day. It also demonstrates the importance of distinguishing between capital inflows that are able to contribute to the development of the infrastructure required to advance the process of transformation and speculative capital in search of short-term gains. Much of the capital that entered Thailand was of the second type. These inflows should not be confused with development capital. Indeed, they undermine development when they fuel macroeconomic imbalances, destabilize the financial and banking system, and encourage investment in non-productive sectors that distort markets and result in excess capacity. All this has been very evident in Thailand. During the boom years, for example, the stock exchange shot up 1,500 points and land prices in some areas increased ten-fold. In Bangkok, the growth in upmarket rental accommodation in 1996 exceeded market demand by around 200 per cent, while the number of beds in private hospitals exceeded demand by 300 per cent.[3]

Large capital inflows can also encourage overconsumption and conspicuous consumption on the part of those who have access to cheap money. This conspicuous consumption undoubtedly contributed to the recession. Import of consumer goods grows at an average of 22 per cent per annum in the period 1987-96, fuelling a trade and current account deficit that eventually reached 8 per cent of GDP, a figure associated more with a least developed country than an emerging NIC.

Overconsumption was also evident in the rapid growth of plastic money. In 1996 around 1.8 million credit cards were in circulation, with an annual transaction volume of Bt 10 billion, and credit card spending increasing by around 20 per cent per annum. Rising bad debt eventually compelled the Bank of Thailand to intervene, increasing the annual income-earning requirement for new card applicants from Bt 120,000 to 240,000.

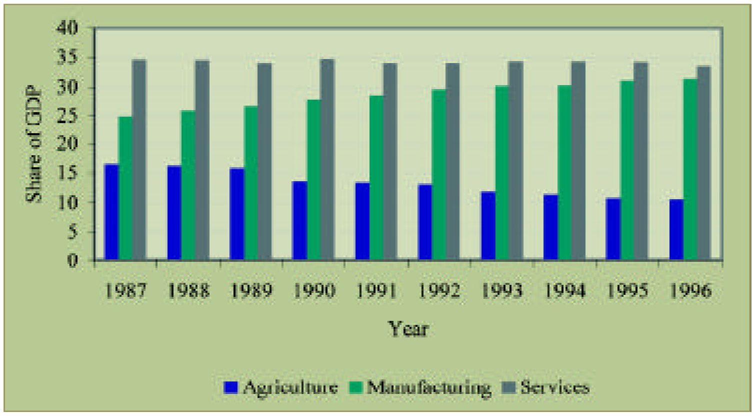
Experience in Thailand also shows that in an age of globally integrated financial markets, capital is able to flow as quickly out of a country as it flows in. The gateways to foreign capital work no less effectively as exits for capital flight. In 1997 alone capital outflows reached 17 per cent of GDP. This means that between 1996 and 1998 Thailand experienced a sudden reversal of private capital flows that amounted to around 20 per cent of GDP. As the experience of Thailand all too clearly shows, no economy can adjust to such a change without major and traumatic disruptions.

2. Production

The past two decades have witnessed a major change in the structure of production. As shown in Figure 5.1, manufacturing and services have replaced agriculture as the dominant sectors. In the period 1987-96, the contribution of agriculture to GDP declined from 16.6 per cent to 10.6 per cent, while the contribution of manufacturing increased from 24.8 to 31.4 per cent, with the share of services remaining more or less unchanged at 34 per cent.

[3] See S. Wibulpolprasert et al, The Economic Crisis and Responses by Health Sector in Thailand 1997-98, Health Services Research Institute/Ministry of Public Health, Bangkok, April 1998.

Figure 5.1
Composition of GDP, 1987-96

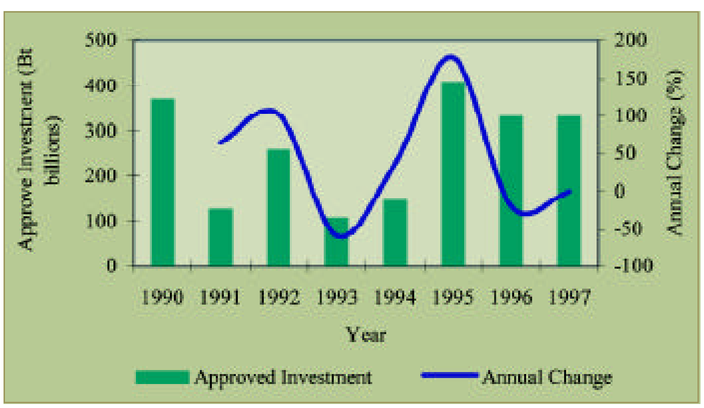


Source: NESDB and Bank of Thailand

While agriculture grew at an annual rate of 4.2 per cent per annum, manufacturing grew at 12.4 per cent and services at 9.1 per cent, with the value of manufacturing exports growing by 16.4 per cent in the period 1988-96 compared with only 1.4 per cent per annum for agriculture. The value of manufactured exports surpassed the value of agricultural exports for the first time in 1985 and by 1990 it was three times the levels of agricultural exports. Revenues from tourism bypassed the value of agricultural exports in the early 1990s.

This shift has been facilitated by direct foreign investment (FDI). Thailand has been singularly successful in the competition for the FDI needed to fuel manufacturing growth. To compete successfully, Thailand has been required to make generous concessions to foreign investors as well as to dismantle impediments that may have stood in the way, thereby reducing the obstacles for full integration in the global system of production. The 1977 Promotion of Investment Act, for example, was amended in 1991 to provide guarantees and to grant privileges to foreign investors in the export sector. Special economic zones, such as specially-designated Industrial Estates and Industrial Zones, were used to attract foreign investment, especially from NICs in search of a cheaper production base for exports. Thailand introduced exemptions of import duties on machinery, waived corporate taxes for exporters in the Industrial Estates and discounted charges for public utilities (water, electricity, and telecommunications) for both exporters and foreign enterprises.

Figure 5.2
Approved Foreign Direct Investment, 1990-97



Source: Board of Investment

The success of these measures is indicated in Figure 5.2, which shows approved FDI applications in the period 1990-97. In some years approved FDI reached Bt 400 billion, with growth rates of more than 100 per cent per annum.

Although these very high levels of foreign investment provide a key to understanding Thailand's past growth performance, they have also had negative impacts. The most important is the reinforcement of the urban bias in development strategy which finds expression in the unbalanced nature of much of the development that has taken place in the past two decades. Most FDI has concentrated in the Bangkok metropolitan area and surrounding provinces which, as noted in chapter 1, account for around 75 per cent of total manufacturing output. The bias inevitably leads to the neglect of agriculture, which has been a characteristic of Thailand's development path over much of the past two decades. In a development strategy that stresses the importance of the growth of export-oriented manufacturing, fuelled by FDI, the agricultural sector tends to be regarded as a source for the cheap labour required to sustain manufacturing growth and for the cheap food required to feed a growing urban population. The decline in the relative importance of agriculture must in part be explained by such neglect rather than by inherent limitations on the potentials of the sector. In any event, the risks associated with neglect have become very apparent during the crisis, when agriculture and rural areas have been required to absorb workers previously employed in urban-based manufacturing and services.

Experience in Thailand also shows that the incentives offered to exporters can carry a high price. The loss of revenues as a result of tax exemptions serves as a case in point. These have grown from an estimated Bt 1.7 billion in 1991 to Bt 12.7 billion in 1995. This loss of revenue impacts negatively on the revenues available for welfare and redistribution policies.

These losses can be expected to increase in future as Thailand is placed under even greater pressure to extend further concessions to foreign enterprises under new multilateral agreements. Of particular importance in this context is the Multilateral Agreement on Investment (MAI), which was concluded in 1995. The MAI sets rules that protect the rights and interests of MNCs, guaranteeing them predictable markets, without the inclusion of effective or binding rules that govern their behaviour or of provisions that require them to take on board the development interests and needs of the communities in which they operate. Moreover, some instruments that exist to promote domestic interests will become illegal. The Alien Business Law of 1972, for example, which seeks to protect the interests of Thais by placing limits on foreign participation in certain activities and professions, is contrary to the obligations of membership of WTO, and is therefore being amended.

3. Production Technology

The capacity for technological change and innovation is one of the keys to successful competition in the globalizing world economy. Globalization, trade and foreign investment are theoretically important means for countries like Thailand to acquire technologies and develop the capacities for innovation required to compete in a knowledge-based global economy. Worldwide, around 75 per cent of technology transfer take place through trade and 18 per cent through FDI.

Available evidence suggests that international trade and FDI have so far made only a modest contribution to Thailand's capacity for technological development and innovation. There is even less evidence of the transfer and diffusion of modern technologies to local and small firms. However, there is evidence of a 'braindrain', with Thailand losing some of its most capable scientists to MNCs operating on the world stage.

Technology transfer and development have no doubt been hampered by the relatively low level of human resources development, which impacts not only on the work of laboratories but also on the shopfloor, with Thais often operating the equipment owned and understood only by foreigners. Difficulties in acquiring the technologies required to compete in world markets are likely to become even more severe in the years ahead.

Industrial development in Thailand and other countries in the region has been based upon a loose arrangement of property rights that existed until the mid-1990s. New multilateral agreements will change this situation, making it more difficult for countries like Thailand to acquire proprietary technologies. Of these agreements, TRIPS (Trade-Related Intellectual Property Rights), which came into effect in 1995, is the most important. Under the provisions of the TRIPS agreement, almost all traded commodities will be subject to strict intellectual property protection. It will lead to tighter control of intellectual property rights, especially of technologies developed by MNCs, closing opportunities for and increasing the costs of accessing new technologies. TRIPS requires a 20-year protection for patents and equal treatment for non-national firms, making it much more difficult for national industrial policies to favour local industries, such as specifying local content requirements. Such provisions are now prohibited by WTO.

4. International Trade

The rapid movement towards the globalization of production has powered the growth of world trade, with the value of exports in 1996 amounting to US$ 5.4 trillion. The growth of trade provides Thais with access to goods and services that may otherwise be unavailable to them, including goods and services required for social development as well as economic progress. Trade is thus indispensable for improvements in overall levels of welfare and well-being.

As Thailand has become increasingly integrated in the global economy, its own economy has become increasingly open and dominated by trade. As shown in Table 5.1, the value of exports and imports in 1996 accounted for around 70 per cent of GDP, an increase of more than 50 per cent from only a decade ago.

Table 5.1

Share of Trade in GDP, 1980-96

Year	Share of GDP (%)
1980	48.59
1983	41.59
1986	41.89
1989	63.49
1992	65.63
1995	75.67
1996	70.57

Source: Calculated from Bank of Thailand and National Account Division/NESDB data

The growing importance of world trade underscores the importance of trade policy and of the conditions and terms governing world trade. Integration compels a nation to undertake far-reaching trade liberalization measures that impact on development strategy. Thailand has been quick to implement such measures, further opening its economy in the process. Under the provisions of the GATT agreement Thailand agreed, for example, to reduce import tariffs on 977 items of agricultural products by 24 per cent within 10 years and on 3,500 items of manufactured products by 30 per cent within 5 years. Liberalization measures have generally proceeded faster than originally intended, with some targets reached ahead of schedule. Impulses to trade liberalization have proceeded rapidly, with the Ministry of Finance cutting import taxes by 30 per cent in 1996, 21 per cent in 1996 and 17 per cent in 1997.

Thailand will be under pressure in future to dismantle its remaining trade restrictions as a consequence of new multilateral agreements. The Marrakech Agreement, which was signed on 15 April 1998 ending the Uruguay Round of trade negotiations, for example, removes virtually all tariffs and other barriers and introduces a 'rule-based' system of regulated world trade. This system covers not only manufactured goods but also banking, insurance, and property rights. Unpre-cedented in scope and reach, this rule-based system will be overseen by WTO, which is mandated to take decisions that are binding on governments. It is not unreasonable to assume that such decisions will further reduce Thailand's room for manoeuvre, imposing limits on domestic policy choices, including those that impact on human development.

III. LABOUR AND EMPLOYMENT

1. The Quality of Work and Employment

In theory, globalization should contribute to increases in productivity and wages, especially in the tradable sector, leading to the expansion of productive employment and greater prosperity. The experience of Thailand confirms that this theory is not without foundation. The investment flows made possible through globalization have created employment that has boosted incomes. Employment created in manufacturing and services has absorbed persons - men and women - who were unable to find work in rural areas, creating opportunities for them to rise above the poverty line and to share more fully the benefits of growth. Experience has also shown that the theory is an imperfect one when applied to countries like Thailand for a number of reasons.

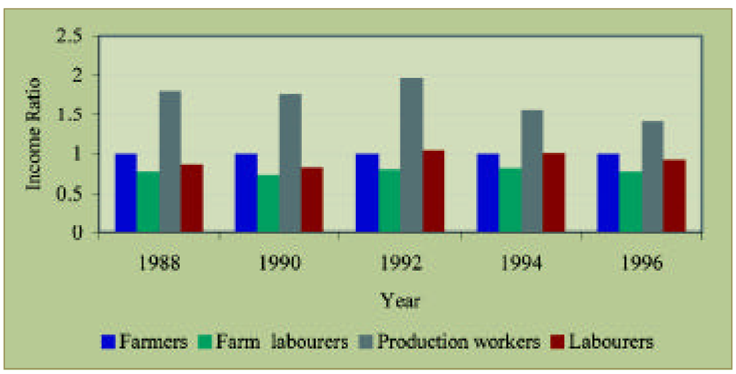
First, despite the enormous growth in manufactured exports and the labour-intensive character of many exports, the number of jobs created has been relatively modest. Although manufacturing accounts for more than 30 per cent of GDP, manufacturing accounted prior to the recession for around 4.5 million jobs, absorbing 13 per cent of the labour force. Many of the foreign enterprises attracted to Thailand, especially those in higher technology industries, have higher capital to labour ratios than most Thai companies. The ratio translates into lower levels of direct employment creation.

Second, many of the jobs created in manufacturing do not fit the classical definition of wage labour: a person employed for a fixed number of hours per day or week, receiving a regular and fixed wage who has the status of a 'permanent worker' entitled to benefits in the form of bonuses, promotions, unemployment pay, sickness insurance, annual vacation, pension, etc. Of the 4.5 million persons employed in manufacturing in the mid-1990s, less than one-half could be considered as being in stable wage employment in medium and large-scale industries with some social security entitlements. Another 1 million were employed in small-scale industries with greater insecurity, and another 1 million could be classified as casual workers with a very high level of insecurity.

Third, although persons employed in manufacturing have incomes that are higher than those found in agriculture, the wages paid have been relatively low and have been in decline relative to agriculture since 1992. As shown in Figure 5.3, the income of a production worker fell from twice the level of a farmer in 1992 to 1.4 times the level in 1996, while the ratio between the incomes of farm labourers and production labourers also declined. It is quite likely that the differentials have further narrowed as a consequence of the crisis.

Figure 5.3

Income Ratio: Farming and Manufacturing, 1988-96



Source: D. Mongkolsmai and S. Suksiriserekul, 'Impact of Globalization on Poverty and Disparity', paper submitted to UNDP Bangkok, February 1999.

Even in 1992, the wages paid in manufacturing were low. Wage rates in industry have traditionally been established on the basis of the needs of an individual rather than those of a family. Even so, the rates have been barely sufficient to meet individual subsistence needs. In 1991, one survey of 700 workers in four industries found that the average daily wage was Bt 100, when daily expenses were in the order of Bt 112[4]. Moreover, minimum wage rates have not always been respected. A survey by the Division of Labour Inspection in 1990 revealed that 44 per cent of the workers sampled received less than the minimum wage. In 1992 the figure was estimated at 55 per cent. Although the figure improved to 34 per cent in 1994, there were still provinces where three-quarters of workers received less than the legal minimum wage.[5]

Fourth, much of the industrialisation that has taken place have led to a greater labour market insecurity. Firms operating in especially labour-intensive industries have sought to externalize the costs of labour, with an increasing emphasis on sub-contracting. While this creates flexibility for the firm, it has led to the segmentation and casualization of labour.[6] This has greatly added to job

[4] See L.R. Heron, 'Minimum Wages and Wage Administration: Thailand', ILO/EASTMAT, Bangkok, 1995

[5] ibid.

[6] See X. Oudin, Development and Changes in the Labour Force in Thailand, Social Research Institute, Chulalongkorn University, Bangkok, 1995.

insecurity and depressed wages, especially of unskilled workers (see box 5.1). Short-term employment has become widespread and this has frustrated the consolidation of a formal labour market. It has pushed increasing numbers of workers, especially women, into the informal sector and onto the margins of existence. Under Thai labour law all workers have the status of 'employees' implying that they possess rights. However, many workers, especially those in small-scale and informal production, have rights that exist more in theory than practice. While even small firms have social security obligations, they are often reluctant or unable to meet them.

Fifth, the informalization and casualization of labour combined with depressed wages requires Thai workers to work longer hours, to look for second jobs and to work even harder in order to make ends meet. The pressures on them lead to self-exploitation. At the time of the boom, for example, cases of workers working 55-60 hours a week were not uncommon. A survey conducted in 1997 on work intensity found that many workers in the garment industry made regular use of amphetamines just to stay awake.[7] The crisis has only added to such pressures.

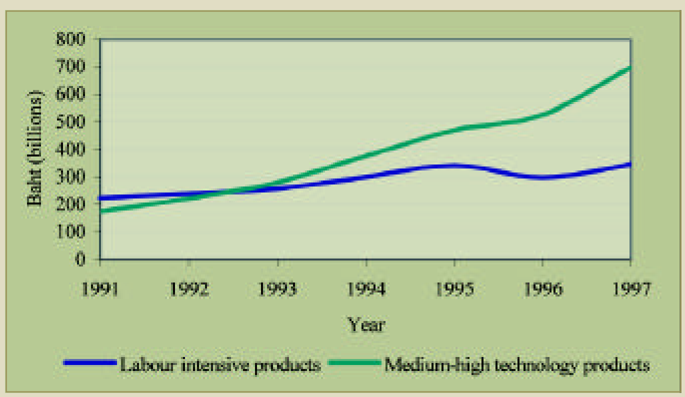
Box 5.1

Labour-Intensive Exports

Thailand has lost some of its competitiveness in the production of the labour-intensive exports that fuelled economic growth in the second half of the 1980s. In 1993, the value of higher technology exports, such as electronics and computer equipment, exceeded for the first time the value of traditional labour-intensive products, such as textiles, garments leather and footwear.

The erosion of the competitive position of labour-intensive exports has had a major impact on the labour market and the conditions and terms of employment. Firms have sought to reduce production costs by externalizing the cost of labour, which has resulted in the rapid growth of sub-contracting to small firms. While this has provided flexibility to the firms under pressure, it has contributed to the segmentation of the labour market, reduced wages, and led to a marked deterioration in the quality of employment. Women have been particularly severely affected by the informalization and casualization of the labour market, which has added to their insecurity and vulnerabilities. These have been thrown into still sharper relief by the economic crisis, which has had major impacts on the labour-intensive industries in which women form the vast majority of workers.

Value of Exports by Main Industrial Category, 1991-97



Source: T. Karnjanauksorn and V. Charoenloet, 'The Impact of the Economic Crisis on Women Workers in Thailand: Social and Gender Dimensions', AIT/ILO, Bangkok, 1999

[7] See Arom Pongpangan Foundation, Survey on the Use of Amphetamines in Manufacturing Establishments, Bangkok, 1997

Sixth, the pressures on producers to retain the competitiveness of especially labour-intensive products has led them to seek savings in areas that have reduced the quality of jobs and increased the vulnerabilities of workers. Savings have, for example, been achieved through the evasion of mandatory safety and occupational health standards. This finds expression in the sharp increase in the number of work-related injuries and illnesses that more than tripled between 1989 and 1995. Prior to the onset of the economic crisis, Thailand had one of the highest industrial injury rates in Southeast Asia, being twice the level of Malaysia and three times that of Korea. A survey of 144 factories in Bangkok and vicinity revealed that 90 per cent of them did not have a fire alarm, 80 per cent had no emergency exit, and 70 per cent were even without a fire extinguisher. This has resulted in a number of highly publicized tragedies.[8]

Seventh, producers of labour-intensive exports have made ever-greater use of foreign workers, depriving Thais of jobs they may once have held. The number of registered foreign workers, mainly from Myanmar, Lao, Cambodia and China, increased from close to zero in 1990 to reach 66,891 in 1993. However, these figures greatly underestimate the number of foreign workers active in Thailand, the vast majority of them illegal, which has been variously estimated at between 760,000 and 1.3 million.[9] Many of the migrants are unskilled workers involved in so-called 3D jobs - work that is dirty, dangerous and demeaning - that has few attractions for Thais. Unskilled migrant workers typically receive around one-half - in some cases one-third - of the wage demanded by Thai workers. Estimates indicate that the substitution of Thai with foreign workers increased the value of Thai exports by 0.64 per cent in 1995 but decreased wages paid to Thais by 3.5 per cent.[10] Moreover, the large number of illegal migrants has been implicated in the spread of such diseases as AIDS, malaria, elephantiasis and yellow fever, the costs of which have to be borne by the Thai government. Surveys also reveal that one-half of all Thais attribute rising crime to the large numbers of low-paid illegal and poorly educated migrant workers. At the same time, globalization has also enabled many Thais to seek opportunities overseas, with their remittances providing an important source of income for many low-income families (see box 5.2).

Eighth, globalization has impeded the formation of trade unions and frustrated the emergence of organized labour and free collective bargaining. Trade unions are perhaps the weakest feature of Thai civil society. Although the crisis has provided a positive stimulus to the trade union movement, the number of workers associated in trade unions is still relatively small. Union membership and rights of association are specifically prohibited in export zones and there are numerous cases in which workers who have joined unions have lost their jobs. In this context, globalization has added to the vulnerabilities of workers, contributed to the denial of basic working rights, and hampered progress towards the improvement of working conditions.

[8] In recent years these have included a much-publicized fire at a toy factory that attracted the attention of the International Confederation of Free Trade Unions. See ICFTU, From the Ashes: A Toy Factory Fire in Thailand, Brussels, 1993. For a more recent case, see N. Ativanichayapong, Lives and Families of the Workers After the Kader Fire, Arom Pongpangan Foundation, Bangkok, 1997.

[9] See Y. Chalamwong, An estimation of Undocumented Migrant Workers in Thailand, Thailand Development research Institute, Bangkok, 1996.

[10] See C. Sussangkarn, Macroeconomic Impacts of Migrant Workers: Analysis with a CGE Model, Thailand Development Research Institute, Bangkok, 1996.

2. Human Resources

Successful competition in a globalizing world economy is critically dependent upon the availability of a well-trained and educated labour force. This is a basic requirement for the development of the knowledge- and information-intensive industries and services that are driving the process of globalization.

Thailand is at present poorly equipped to meet challenges in this area, with the experience of globalization highlighting the relatively poor quality of the nation's human resources, which has been a contributory factor in the loss of competitiveness and economic downturn.[11] The skill base is both shallow and narrow. With 80 per cent of the work force possessing only primary school education or less, overall levels of educational attainment are low and lag behind those of

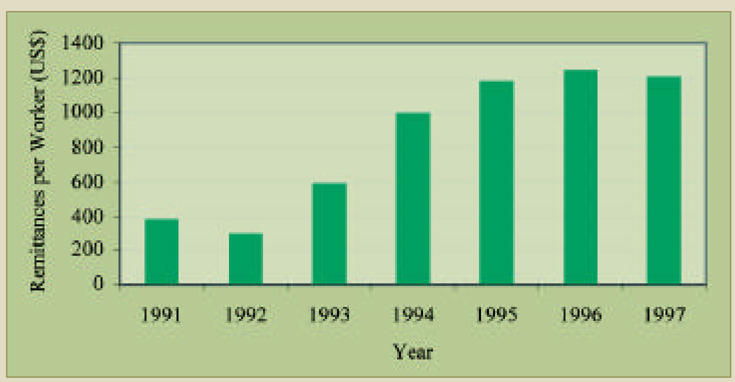
Box 5.2

Thais Working Overseas

Globalization has not only made it possible for foreign workers to enter Thailand - the vast majority of them illegally - but also for Thais to work overseas. As shown below, the number of Thais working abroad under the auspices of the Department of Skills Development has progressively increased since 1990, passing the 150,000 mark in 1995. There are many others, some of whom may have no legal status in the countries in which they work.

Source: Department of Employment,
Ministry of Labour and Social Welfare

The growth in the remittances of Thais working overseas has been even more pronounced. As shown below, remittances per worker increased three-fold in nominal terms between 1991 and 1996-97, when each Thai remitted around US$ 1,200. Actual remittances are larger. Thais are allowed to reenter Thailand with US$ 5,000 in cash. These cash amounts are excluded from official figures on remittances received.



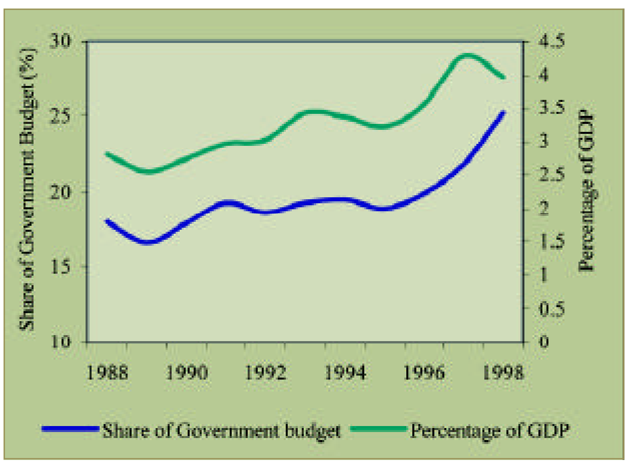
Source: Calculated from Bank of Thailand data

[11] On the quality of Thailand's human resources, see Thailand Development Research Institute, The Thai Economy: First Step in a New Direction, Bangkok, 1994.

competitors both in the region and beyond. Although the transition rate from primary to lower secondary schools has increased sharply in recent years, this has yet to impact on the knowledge and skills base, confirming that there are no short cuts or quick fixes in improving the quality of human resources.

This is clearly recognized by the government. It accepts that improvements in the quality of the nation's human resources is a precondition both for moving out of crisis and into the next development stage in which Thailand is able to compete effectively in the world economy. As shown in Figure 5.4, investments in education have risen sharply, increasing in nominal terms from Bt 43.86 billion in 1998 to 201.7 billion in 1998, when they accounted for around one-quarter of all government expenditure and the equivalent of 4 per cent of GDP.

Figure 5.4
Investments in Education, 1988-98



Source: Bureau of the Budget

Numerous other measures are also planned, many forming part of the National Education Act 1999 that provides for a complete restructuring of basic education, although the pace of change is likely to be slowed as a consequence of the crisis and prevailing budget constraints.[12] Plans include the expansion of the period of compulsory education to 9 years and basic education to 12 years by the year 2002, and the reorientation of the school curriculum to make it more responsive to the challenges posed by globalization, including greater emphasis on foreign languages and the acquisition of computer and other practical skills required for the world of work. Computers are being installed in all schools to facilitate computer literacy and to give schools access to the Internet. Beyond basic education, the target has been set of ensuring that 40 per cent of all university students graduate in science and technology subjects by the year 2001.

Globalization not only requires high quality human resources, it also enlarges opportunities to meet requirements in this critically important area. It does so in four main ways.

First, it enlarges opportunities for study abroad. Between 1992 and 1997, the number of students going abroad under the supervision of the Office of the Civil Services Commission increased by 4.8 per cent per annum, with the U.S. as the most favoured destination. However, the real number of Thais studying abroad is much higher. While around 400 Thais study annually in Australia under government programmes, the actual number is believed to be as high as 4,000.

[12] For a review of the main provisions of the new National Education Act, see Chapter 6.

Second, globalization has contributed to the expansion of international education opportunities in Thailand. The number of international schools has more than doubled in recent years, from 16 in 1993 to 34 in 1997. Attendance of the schools, which are spread throughout the country, has grown by around 12 per cent per annum, with a total attendance of around 14,500 in 1996. Although it is questionable whether the quality of the courses offered by international institutions is higher than those available at Thai institutions, the fees charged are many times higher. Tuition fees of Bt 160,000-250,000 per year are not uncommon, which is 40-50 times the level charged by Thai institutions for comparable courses.

Third, increasing numbers of Thai institutions are offering international courses, often as an alternative to study abroad. Some of these courses have a regional orientation and involve collaboration with foreign institutions.

Fourth, the rapid expansion of the Internet and electronic learning has established opportunities for Thais to enroll in the courses of foreign institutions without ever having to leave their homes as well as to learn from each other. There are an estimated 340,000 Internet accounts in Thailand and 500,000 regular users.

While these are important benefits of globalization, they are unevenly distributed. They enlarge access to the world of learning for the children of rich parents. Because the children of poorer and low-income families are at present denied such access, they are contributing to a widening of disparities in educational opportunity.

IV. GENDER DIMENSIONS

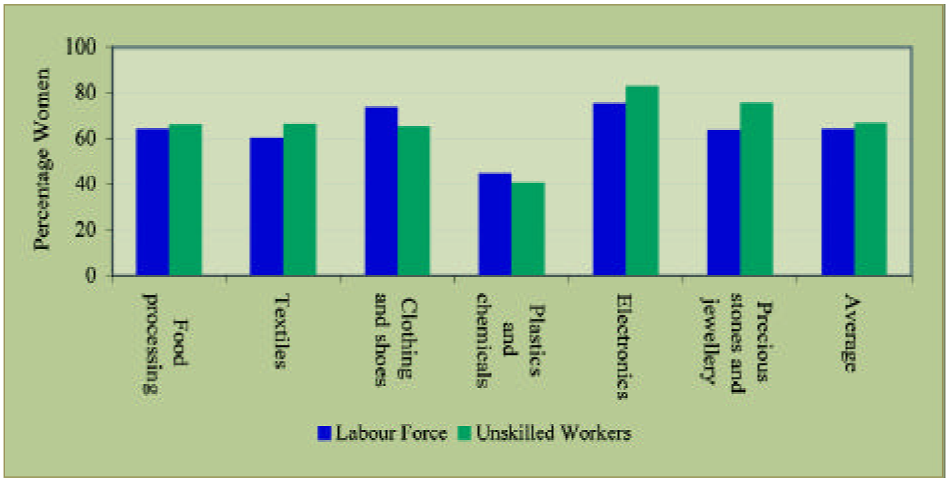
Globalization has in some ways expanded opportunities for women, especially opportunities to find jobs that would otherwise not be available to them in especially manufacturing and services. As shown in Figure 5.5, women constitute between 60 and 80 per cent of all workers in most export-oriented industries. Even in plastics and chemicals, they constitute nearly one-half of all workers. Such statistics support the view that women have shouldered a disproportionate burden of the export drive as well as the contention that globalization has contributed to the feminization of the labour force.

However, it was suggested above that much of the employment created through globalization has failed to meet conventional definitions of wage employment and that globalization has given rise to the segmentation of the labour market and to the casualization and informalization of labour. These trends have been particularly damaging to women.

The reasons for the employment of women have been well documented, in Thailand and elsewhere. Although women are frequently preferred to men because of their assumed manual dexterity, which makes them more suited for the repetitive work characteristic of assembly line production and light manufacturing, they are also favoured because they can be more easily hired

Figure 5.5

Women in Export-Oriented Industries



Source: Employer's Survey, Ministry of Labour and Social Welfare, 1997[13]

and fired, they can be paid lower wages, they are less likely to engage in industrial disputes, and they have fewer choices for employment elsewhere, which makes them captive employees. These considerations mean that the terms of their integration in the work force are very often inferior to those of men (see box 5.3). Gender biases also ensure that there are far fewer opportunities for women to acquire new skills and, more generally, to pursue the same career paths that may be available to men. This contention is confirmed by Figure 5.5, which indicates that while women form the majority of workers, they are in most industries to be found among the unskilled. Even when classified as skilled workers, the skills are often those required for assembly line and repetitive work.

The consequences of this are far-reaching for women. They mean that although women may be able to find work when they are young and healthy, they are likely to retain the job for only as long as they are able to retain their health and fitness. The limited opportunities to acquire new skills translate into significantly curtailed opportunities for advancement and the distinct possibility of job termination at an older age, when their health may have been damaged by self-exploitation by overwork and exposure to occupational risks and hazards in the workplace. When older they find it increasingly difficult to find new work, having acquired no new skills that fit them for other occupations. In the absence of other choices, they drift, uneducated and unskilled, into informal

[13] On Thailand, see: Mathana Phananiramai, Women's Economic Roles in Thailand, Thailand Development Research Institute, Bangkok, 1993; Pasuk Phongpaichit, Sungsidh Piriyarangsan and Nualnoi Treerat, Challenging Social Exclusion: Rights and Livelihood in Thailand, ILO, Geneva, 1996; Pawadee Tonguthai and Umaporn Pattaravanich, 'Employment and Mobility in the Bangkok Labour Market with Special Reference to Women in the Manufacturing Sector, in ESCAP/UNDP/ ILO, Promoting Diversified Skill Development for Women in Industry, Volume II, New York, 1993; Rachel Kurian, 'Women's Work in Changing Labour Markets: The Experience of Thailand', in Haleh Afshar and Stephanie Barrientos (eds), Women, Globalization and Fragmentation in the Developing World, Macmillan, London and New York, 1999.

sector activity, with the prospect of even longer hours of work, even lower rates of pay, and very low returns on their own labour, or into the lower end of the commercial sex business, the traditional avenue of escape for women who have next to nothing. Enterprising women capable of starting a small business are more disadvantaged than men, finding it harder, for example, to access through formal channels the capital and know-how that may be required. Eventually, they may be driven to the margins of existence and under the poverty line. During all this time, they will have been compelled to combine work with family obligations that extend to cover not only children but also the care of elderly parents and possibly other family members.

Box 5.3

Wage and Training Inequalities

Although women stand as equals with men before the law, they earn less than men in virtually all occupations and in all parts of the country. As shown in the table, the disparities in income are evident at all levels of the working population.

Employed Persons by Sex and Monthly Income, 1993

Monthly Income (Baht)	Men		Women	
	Per cent	Cumulative Percentage	Per cent	Cumulative Percentage
Less than 750	43.4	43.4	46.7	46.7
750-1,500	16.4	59.7	20.9	67.6
1,500-2,000	7.7	67.4	9.8	77.4
2,000-2,500	4.9	72.3	5.3	82.7
2,500-3,000	7.4	79.7	5.6	88.3
3,000-4,000	8.1	87.8	5.0	93.3
4,000-5,000	3.4	91.2	2.1	95.4
5,000-6,000	2.1	93.3	1.0	96.4
6,000-7,000	1.2	94.5	0.8	97.2
7,000-8,000	1.3	95.8	0.8	98.0
8,000-9,000	0.7	96.5	0.4	98.4
9,000-10,000	0.8	97.3	0.4	98.8
More than 10,000	2.7	100.0	1.2	100.0

Source: Labour Force Survey, NSO, August 1993

Surveys in Thailand have shown that women not only receive lower wages but also have fewer opportunities than men to acquire new skills. Many vocational and technical training programmes have an inherent gender bias that has the unintended effect of reinforcing the traditional division of labour between men and women. The crisis is tending to reinforce this bias, with employment creation initiatives favouring men above women on the assumption that in times of crisis men should be regarded as the principal breadwinner. Such assumptions not only work to the obvious disadvantage of women but also fail to take sufficiently into account the fact that nearly 30 per cent of all households in Thailand are headed by women.

These characteristics of women's work in an age of globalization have been greatly exacerbated by the crisis, adding to uncertainties, insecurities and vulnerabilities that were already considerable. One survey of retrenched women workers found that 60 per cent were over the age of 30 and that two-thirds had been out of work for 1-6 months.[14] Because 61 per cent of them were married with children, their disadvantage is being transmitted to a new generation of Thais.

Globalization has contributed to these processes. It has reinforced a division of labour that is fundamentally inequitable: between better paid and lower paid work; between the acquisition of new skills and deskilling; between protected and unprotected labour; between recognized and unrecognized work; and between the expansion of opportunity and the curtailment of opportunity. In this sense, globalization has contributed not only to the feminization of labour but also to the feminization of poverty.

V. SOCIAL AND CULTURAL DIMENSIONS

Globalization is not only integrating capital, trade and the world's economies, it is also integrating ideas, norms, cultures and values. It intensifies contacts not only between countries but also between peoples, which have been growing and deepening at a speed that is without parallel in history. To many, exposure to new cultures can be exciting. It can expand their choices, enhance their creativity and enlarge their access to information that is able to empower them. There is no doubt that Thailand has benefitted greatly from such exchanges, especially those that have enabled civil society organizations to strengthen their position, enlarge their capacity to engage in active advocacy, and to share ideas and information with like-minded groups throughout the world. Such exchanges have been a powerful force for the democratization of development and the promotion of social justice.

The exchanges have not, however, been based upon the notion of reciprocity. Globalization has transformed culture into an economic sector. It is, moreover, a sector with an extreme degree of concentration. World trade in goods with a cultural content - printed matters, literature, music, visual arts, cinema, photography, radio and television equipment - reached US$ 200 billion in 1991 and has increased exponentially since then. For the US, the largest single export industry is not aircraft, computers or even automobiles, but entertainment, especially in the form of movies and TV programmes. Hollywood films alone grossed US$ 30 billion world-wide in 1998, while a single movie - Titanic - grossed over US$ 1.6 billion.

These products go far beyond pure entertainment. They embody values, ideas and messages that are assumed to possess a universal validity and are dedicated to moulding a world in their own image. Like people elsewhere, Thais have been open to these messages and ideas and have shown a great readiness to imitate and adopt new modes of behaviour. Indeed, this capacity for imitation and adaptation may be essential for understanding the speed and extent to which

[14] See B. Thanachaisethavut, Voices of the Unemployed Workers, Arom Pongpangan Foundation, Bangkok, 1998.

Thailand has been so fully and effectively integrated in the world system. The same readiness finds expression in the often uncritical acceptance of ideas and products that may be antithetical to the values that are deeply rooted in Thai society. In this case, globalization brings not only blessings but also burdens that erode traditional values, weaken local institutions and uproot local communities. It is able to contribute to cultural alienation and the undervaluing or even rejection of social and cultural assets that have been built up over centuries.

The cultural homogenisation promoted by globalization finds its most concrete expression in the overly materialistic and consumer-driven behaviour of the more affluent and urbanized sections of society, the first to be influenced by western lifestyles and values. A powerful industry has grown up that actively promotes these values. There are 180 advertising agencies in Thailand, 20 of which are branches of large international agencies, and 18 joint ventures, that actively promote a global consumer culture that recognizes neither national populations nor national boundaries. They recognize only a segmented market based upon the economic status of consumers. MNCs have found that the distribution of products to different regions of the world under a marketing plan that uses the same message is increasingly effective.

These marketing strategies are greatly facilitated by the rapid growth in the ownership of television - 88 per cent of the urban population and 68 per cent of the rural population had access to colour TVs in 1996 compared with 78 per cent and 39 per cent respectively in 1990 - with television advertising accounting for nearly one-half of all advertising by value, which increased six-fold in nominal terms between 1988 and 1995, from Bt 6.5 billion to Bt 37 billion. The five companies with the largest advertising budgets in the mid-1990s were all foreign MNCs - Lever Brothers, Proctor and Gamble, Nestle, Sony, and Coca-Cola - using marketing strategies that differed little from those used elsewhere. Thais are known from marketing surveys to attach greater importance to the status that may come with foreign products rather than their real value, with around two out of three Thais admitting that their purchasing decisions are directly influenced by advertising.[15]

The international travel that follows in the wake of globalization and rising incomes has provided increasing numbers of Thais with even greater opportunities to indulge their consumer preferences. In the period 1990-96, the number of Thai tourists doubled from 900,000 to 1.8 million. They typically spend as much on shopping as they do on accommodation, travel and meals combined.

VI. ENVIRONMENTAL DIMENSIONS

Globalization has entailed environmental costs that are evident in both the agricultural and industrial sectors. Cash crop production for the international market place has, for example, required increasingly heavy use of agro-chemicals, which are placing an increasingly heavy toll on

[15] See D. Mongkolsmai and S. Suksiriserekul, 'Linkages Between Globalization, Consumption Patterns and Human Development in Thailand', UNDP, Bangkok, January 1998

both the environment and the health of the Thai population. Pesticide use, for example, increased from 20,270 tonnes in 1987 to 44,922 tonnes in 1996, a 122 per cent increase in the ten-year period. This growth is having a profound effect on the nation's water resources. A 1994 study of water resources across the country, for example, found that 81 per cent of all reservoir water was contaminated with DDT. These problems are also being passed on to farmers and consumers. Blood tests of 416,438 farmers nationwide indicated that 16.6 per cent had been tainted with pesticides, while an FDA investigation of pesticide residuals in five locally grown fruits found that 98 per cent of the 79 samples tested had residuals above health safety standards.

MNCs are implicated in these problems. Of the 40 major pesticide and weedicide producers in Thailand, most are multinationals. Some studies have suggested that they have not always devoted sufficient attention to the risks associated with their use, a criticism that is substantiated by the growth in the incidence of pesticide-related illnesses, which, according to the Ministry of Public Health, increased 17-fold in the period 1988-93. MNCs active in the agricultural sector have also been criticized for showing insufficient interest in protecting the environment beyond complying with government rules and regulations, which are known to be weak and not without loopholes.[16] The law has generally failed to encourage MNCs to adopt higher standards of environmental behaviour that could serve as an example to Thai industries, despite their ability to do so.

In the case of industry, there have been few examples of foreign companies using Thailand as a pollution haven or as a dumping ground for toxic materials. However, much of the industry attracted by Thailand under its investment promotion regime have figured prominently among the most polluting industries. A study on waste management by the National Environment Commission in 1989, for example, found that the chemical industry produces the highest volume of hazardous wastes, followed by steel, wood and ceramic industries. It is in chemicals and chemical products that much MNC investment has concentrated - chemicals and paper production accounted for 42 per cent of all foreign investment in 1996 - with investors drawn mainly from Japan, the Netherlands, the United States, Great Britain and Taiwan. Overall, Thai industries imported 2.22 million tonnes of hazardous and toxic substances in 1994. In 1996, around three-quarters of the 1.35 million tonnes of hazardous and toxic wastes produced in Thailand came from the industrial sector.

While globalization has contributed to environmental destruction, it is also able to contribute to improvements. In 1991, Thailand became a member of the International Organization for Standardization and increasing numbers of Thai companies are keen to increase the quality assurance of their products to be able to compete effectively in world markets. In early 1997, 200 companies had obtained ISO 9000 certification for 79 products, mainly for construction materials. Although relatively small compared with some other countries in the region - Singapore has 1,500 certified companies and Malaysia 800 - the number is growing. The adoption of ISO 14000 in 1996 can provide an even more positive stimulus to environmental conservation. The European

[16] See J. Veeraves, 'The Role of Multinational Corporations in the Pesticide and Weedicide Industries and Environmental Conservation in Thailand', Aiyakarn Journal, Vol. 17, No. 3, 1994, pp. 87-95.

Union, United States, Canada, Japan, Australia and New Zealand require ISO 14000 certification for a range of imported products, including textiles, paper, computers and computing equipment, electrical appliances and wooden products, some of which are major sources of pollution in Thailand. ISO 14000 will compel Thai producers to adopt more stringent environmental policies. Some 20 firms applied for certification in the first 12 months.

VII. CONCLUDING NOTE

Although short and in many respects incomplete, the above review is sufficient to confirm that globalization is indeed a double-edged sword. It has brought to Thailand both global 'goods' and global 'bads'. It has shown that it is able to enlarge opportunities for promoting human development as well as to curtail them.

Globalization is as much a part of the crisis as it is a way out of it. In retrospect it could be argued that Thailand has been undiscriminating and uncritical in its acceptance of the benefits of globalization. I t has opened its doors to foreign investment and enterprises without necessarily giving detailed consideration to the implications and consequences of the policies it has chosen to pursue. This situation stands in contrast to the one that prevailed a century ago, when Thailand also chose to open its doors wider to foreign influences. But a century ago, Thailand, under the enlightened leadership of King Rama V, was in some ways better prepared to deal with these influences and to prevent the exploitation of weaknesses. In a real sense, Thailand was less well prepared a decade ago and its weaknesses have enabled globalization to become an inextricable part of the crisis that engulfs the nation today.

Of the many dimensions of globalization, three are arguably the most disturbing.

First, the benefits of globalization have been unequally shared. Globalization is without inbuilt mechanisms that make it sensitive to such principles as social justice, equality and redistribution. If left to its own devices it confers the greatest benefits on richer, better educated and urban groups, while marginalizing the disadvantaged, which must be defined to include women. Corrective measures are required and the formulation and implementation of such measures are an obligation of governments in an age of globalization.

Second, Thailand's experience shows that the forces that drive the process of globalization can contribute directly and very tangibly to crisis as well as ensure that when it occurs the crisis can be sudden and severe, eroding almost overnight progress in the field of human development painstakingly built up over decades. Such a crisis is much more than a statistical aberration. It has social and psychological dimensions that are experienced in bone and marrow. Globalization poses great challenges to informed decision-making which, given the many dimensions, must go well beyond traditional concepts of prudent macroeconomic management.

Third, the terms and conditions of integration are likely to shift in directions that will be less favourable to countries like Thailand, reducing rather than enlarging the nation's room for manoeuvre in the years ahead. New multilateral agreements, such as the MAI, TRIPS and the rule-based system of international trade with WTO at its core, are demonstrably more responsive to the priorities and interests of nations with large MNCs than smaller trading nations. These agreements will not only work to the advantage of large trading nations but also impose restrictions on the domestic policy options open to countries like Thailand. This will impact on prospects for human development.

Globalization brings new issues to the policy and reform agenda for the years ahead. It is to this agenda that we will now turn.

Beyond the Crisis: The Policy and Reform Agenda

I. INTRODUCTION: THE CRISIS AS AN OPPORTUNITY

The drafting of this Human Development Report is taking place at a time of mixed signals on Thailand's economy and its growth prospects. After two agonising years, the worst of the crisis appears to be over, with numerous indicators suggesting that the economy has already bottomed out.[1] A positive growth rate for the second half of 1999 is predicted by many agencies. Inflation recorded in March of 1999 is at a low of 2.6 per cent. Consumption and investment indicators are stable, vulnerabilities to further external shocks have been reduced considerably by increases in reserves, the repayment of short-term debt, and the conversion of a current account deficit into a solid surplus. The Baht is currently quite stable. The interest rate is now less than half of the last year rate. These factors suggest that a stage have been reached when monetary policy can become more expansionary. Government expenditures are edging upwards. Progress is being made in the restructuring of corporate debt and the implementation of legal reforms, including new bankruptcy laws and foreclosure laws. The programme of privatisation and divestiture is gathering pace and the country's international credit ratings are expected to be upgraded in mid-1999. Stabilisation has been achieved.

In the real economy, although indicators are at relatively low level, there are many encouraging signals. The overall level of production is still quite low, but since the fourth quarter of 1998, there has been improvement in manufacturing index and capacity utilization. Export volumes and values still show little signs of recovery, but it is believed that recent increase in import volumes indicates that manufacturing sector has been building up inventory for future manufactured export. Unemployment continues to be relatively high, but seems to have reached its peak. However, it remains unclear whether the stabilization and improved macro-economic situations have produced any significant impact on the life of the people whose real income has suffered a drop of nearly 20 per cent in 1998.

The drafting of this Human Development Report is also taking place at a time of fierce debate on the way ahead. Opinions differ on both priorities and directions. The divergence of expert opinion places the nation's policy makers in a predicament. They stand accused by some for being excessively cautious. Others urge continuing caution, warning that stabilization and an incipient

[1] See World Bank, Thailand Economic Monitor, Bangkok, February 1999

recovery should not generate a false sense of security or undermine the resolve to tackle structural problems. They are bombarded with analyses of almost every description. Virtually every aspect of Thailand's development has been subjected to minute scrutiny in the past 20 months and virtually every group has advanced and strongly advocated an agenda that sets out to return the Kingdom to the path of sustainable growth.

This concluding chapter seeks to contribute to the debate on the policy and reform agenda. It does not seek to be comprehensive. Rather, its starting points are the imperatives of human development and the issues that have emerged in this report from the review of experience with it. The chapter is concerned with directions not detail; with strategy not tactics; with priorities and not discrete programmes and projects.

UNDP is not alone in seeing in the crisis a defining moment in Thailand's history and a watershed opportunity for reflection, new initiatives and reform. Crisis can cause persons as well as nations to lose their way, to become withdrawn, hesitant and defensive. It can also form a fertile breeding ground for new, bold and far-sighted initiatives. In this context it is worth recalling the 'New Deal' that was born in the U.S. in the depression of the 1930s and the welfare state that emerged from the uncertainties and vulnerabilities of the 1940s and the aftermath of the Second World War. Times of crisis establish an opportunity as well as the need to address structural impediments to sustainable human development and to develop and streamline the institutions and instruments that are required to underpin it. Thailand's past achievements provide testimony to its capacity to periodically reinvent itself in ways that mobilize its assets and resources and take advantage of opportunities. The crisis provides another - and the most important - test of this capacity.

The process of reinvention is able to draw upon some very tangible assets. These are much broader - and ultimately more important - than narrow economic ones. They include an understanding of development, firmly embodied in the Eighth Plan, that puts people in the centre. They include a vigorous and active civil society that facilities the democratization of development and promotes social justice. They include a new Constitution that has the power to change the relationship existing between the state and the people and which establishes a new framework for cooperation, participation and empowerment. These assets are not mutually exclusive. They are self-reinforcing, together creating new opportunities to build development that is people-centered, broadly based, and founded on the principles of law. Their fusion can lead the way to a 'new miracle'. This is an exciting prospect and one that in some respects sets Thailand apart from many other countries engulfed by crisis, both within the region and beyond.

II. FUTURE PRIORITIES

The review of human development, the crisis, and the forces of globalization lead to the identification of priorities for the policy and reform agenda as well as for the Ninth Plan (see box 6.1). These priorities can appropriately be grouped under three main headings covering overall directions for human development, development strategy, and policy instruments.

1. Overall Directions for Human Development

Overall directions for development are preeminently concerned with the principles that underpin development strategy and give expression to national aspirations in the field of human development. The analyses contained in this report underscore the importance of commitments in respect of democratization, decentralization, participation, social and cultural capital, and the challenges posed by globalization.

Priority 1: Maintaining the Commitment to Democratization

The past three decades have in some ways been troubled decades that contributed to the erosion of the confidence of the trust of civil society in political and government institutions. Considerable progress has been recorded in the past few years in restoring confidence and in developing new partnership arrangements, some with their roots planted in the crisis, between government institutions and civil society.

The new Constitution establishes an enormous opportunity for further progress in restructuring the relationships between the state and civil society, in further democratizing the development process, and in creating new institutions and mechanisms that provide for greater accountability, transparency, representation and participation. Initiatives in these areas can be rooted in law and guided by far-reaching principles pertaining to basic human rights. It is of the utmost importance that these opportunities be seized to the full and remain central issues in the policy and reform agenda. Their full and effective utilization will allow civil society organizations to further flourish and to serve as a positive force for change as well as enable them to serve still more effectively as a countervailing force against the negative impacts of globalization.

Priority 2: Maintaining the Commitment to Decentralization and Empowerment

The Eighth Plan and the new Constitution have provided an important stimulus to the decentralization of development, participation and empowerment. New initiatives, such as the new Education Bill, will add to the momentum. It is the area of decentralization, participation and empowerment that some of the most exciting and far-reaching reforms are either underway or in preparation.

The crisis has demonstrated the importance of initiatives that are able to expand opportunities for individuals and communities to directly influence the decisions that have a powerful bearing on their lives and livelihoods as well as decisions on development choices for the Kingdom as a whole. Such initiatives are wholly consistent with the further democratization of development and should be vigorously pursued. They significantly expand opportunities for the formulation and implementation of local level and location-specific responses to the crisis, ensuring that they are rooted in the lives, problems and priorities of people, and enabling them to exercise responsibilities that were formerly in the hands of others. Decentralization initiatives not only

Box 6.1

Preparing for the Ninth Plan

Preparations for the Ninth Economic and Social Development Plan covering the period 2002-2006 will soon get under way. The Eighth Plan was a landmark document that set out new directions for Thailand. The Ninth Plan will be required to do the same.

The Eighth Plan embodied a people-centred approach to development that was both bold and unique. Viewed from the perspective of human development, this emphasis should be retained for the Ninth Plan. However, the analyses contained in this report and the policy priorities that stem from them suggest that the Eighth Plan's central concept of development must be further refined and expanded in terms of both ends and means.

With respect to ends, the analyses and priorities indicate that the Ninth Plan's normative architecture should be more sensitive and responsive to:

- The issues of equity and distribution and the negative impacts of globalization, focusing on the problems and needs of the poorest and most deprived groups and areas and the most disadvantaged individuals;
- The need to achieve more balanced development in which the benefits of future growth are more equitably shared between regions, provinces and socio-economic groups;
- The need to correct gender biases and to achieve the full and effective emancipation of women;
- The need to redress negative trends in resource depletion and environmental pollution that are impacting negatively on the health of all Thais and undermining prospects for sustainable development;
- The need to adopt a more proactive approach to the building of social capital and to safeguarding and promoting the Kingdom's rich cultural heritage and the values on which it is based and gives expression so as to resist more effectively trends towards cultural homogenization and alienation.

These must become an integral part of the vision for the Kingdom's further development. However, some of the greatest challenges that must be addressed in the preparation of the Ninth Plan relate more to means than to ends since it has not been the lack of vision but rather the absence of or weaknesses in the instruments required to translate vision into reality that have in important respects constituted the greatest impediment to progress.

The preparation of the Ninth Plan must give greater attention to:

- The further promotion of the democratization of development through instruments and mechanisms that provide for new partnerships and greater accountability, transparency, representation and participation that are able to build confidence and trust between the different actors involved in the development process, especially government agencies and civil society organizations;
- The creation of a more enabling environment that actively fosters participation and empowerment and enables local authorities and communities to discharge new responsibilities and take full advantage of new opportunities emerging under the decentralization drive and related initiatives;
- The instruments required to manage a development process that is becoming substantively more complex;
- The need to achieve greater efficiency in the use of available instruments and to achieve more with less, especially in the social sectors;
- The instruments required to distinguish more effectively between choices and to assess the likely and real effects of the choices made, to be supported by concerted efforts to develop the information systems required to support informed decision-making at the national and sub-national levels;
- The methodologies and instruments required to measure human deprivation and human well-being on a disaggregated basis and to allocate resources on the basis of real needs.

empower local communities, they also establish a countervailing power at the grassroots level that is able to resist some of the negative forces of globalization.

Important new initiatives are not confined to enlarging opportunities for public participation at the local level. There are also an increasing number of initiatives that will enable the general public to influence decisions on the nation's overall development strategy. Some of these initiatives build on the positive experience acquired in the formulation of the Eighth Plan, which entailed an extensive process of consultation, discussion and debate. Particularly significant in this context is the proposal to establish a broad-based and representative Advisory Council on Economic and Social Affairs as a permanent, independent and non-governmental body with a four-fold mandate: (i) to advise the Cabinet on economic and social issues; (ii) to propose measures for tackling urgent social and economic problems; (iii) to review and advise on new National Economic and Social Development Plans with the aim of ensuring that they respond to the needs and aspirations of the people; and (iv) to review and advise on other thematic and sectoral national plans, such as those under preparation for education and the environment. In the form proposed, the Advisory Council will serve as a conduit for public opinion and for achieving a larger measure of consensus on the aims and directions of development and ways to tackle national problems.

Although yet to be finalized, the Advisory Council is an example of a new initiative that is wholly consistent with the further democratization of development and the guiding principles of participation and empowerment.

Priority 3: Building Social and Cultural Capital

The policy and reform agenda must include a reexamination of the nation's approach to social development, with the need to think as much in terms of social capital as financial capital. The development of social capital must seek to reestablish and activate the ties that have traditionally bound together families and communities, the strength and importance of which have been demonstrated by the crisis. Emphasis on social capital must include still more determined efforts to develop social safety nets and systems of social security, the importance of which have also been highlighted by the crisis.

They must also be reflected in still greater determination to safeguard and actively promote the Kingdom's rich cultural heritage and the value systems upon which it is built and to which it gives expression. The articulation of a cultural imperative is essential for the maintenance of a distinct identity in an age of globalization and for resisting the powerful forces that contribute to both cultural alienation and cultural homogenization. If challenges in this area are to be met, the cultural heritage must be defined in a dynamic and development-oriented context that enables culture to continue to live in the minds and imagination of especially young people, providing them with a proud reminder of their roots as well as a source of inspiration.

Priority 4: Responding to the Challenges of Globalization

Strategies that seek to promote human development cannot be indifferent to globalization. They must take more fully into account the forces that are driving it as well as their consequences. Thailand has used a variety of policy instruments to create the conditions for integration in a globalizaing world economy and there are few developing countries that are today as fully and effectively integrated. This integration has brought both blessings and burdens, global 'goods' as well as global 'bads'.

The question of whether integration is 'right' or 'wrong' for Thailand has little relevance outside of academic debate. The key issues concern the terms and conditions of integration and the importance of measures that maximise the benefits of integration and minimise the negative impacts. The terms and conditions of integration are in future likely to work increasingly to the disadvantage of Thailand as new multilateral agreements take effect which - like the General Agreement on Services and Trade, the Agreement on Trade-Related Intellectual Property Rights, and the Multilateral Agreement in Investment - can be shown to better articulate the priorities and interests of large trading countries with large MNCs rather than smaller trading nations like Thailand.

These multilateral agreements will limit rather than expand Thailand's room for manoeuvre. Because they will impose restrictions on domestic policy choices, including choices that impact on human development, it is of the utmost importance that the changing terms and conditions be continuously appraised and evaluated. Thailand alone is powerless to change deteriorating terms and conditions of integration. They will need to be contested through the regional organizations in which Thailand is an active member as well as groups of countries that can jointly exercise countervailing power.

2. Strategies for Promoting Human Development

This report has identified a number of key areas in which development strategy is in need of review if human development is to be placed on a more sustainable path. These areas include growth strategy, gender biases, human resources development, and the environment.

Priority 5: Fostering Pro-Poor Growth

In the area of economic policy, the first priority must be the reactivation of growth in general and exports in particular, since exports have provided the motor that has driven improvements in incomes, welfare and well-being. However, experience shows that the understanding of growth and its place in development must be further refined to make development strategy even more sensitive to issues of equity and distribution and to the negative impacts of globalization, which include forces that, without corrective measures, are able to marginalize the poor and disadvantaged. Growth must be defined in terms of its direct rather than indirect contribution to human development, and growth that promotes human development is pro-poor growth.

Pro-poor growth calls for a rediscovery and revitalization of agriculture, especially smallholder agriculture, and the correction of a bias in development strategy that has tended to favour urban-based, export-oriented manufacturing. This bias has unwittingly contributed to unbalanced development and the implicit neglect of rural areas. It is only recently that efforts have been made to repair this neglect and already there is evidence that the efforts are contributing to improvements in income distribution. These efforts must be intensified as a matter of deliberate policy and they are able to draw upon the 'New Theory' and the inspiration provided by His Majesty the King. The importance of revitalizing agriculture in ways that make fuller and more effective use of the potentials that undoubtedly exist within the sector has been thrown in sharp relief by the crisis and the return of large numbers of urban migrants to their rural homes.

As in most other areas of development strategy, there can be no quick fixes to a period of neglect that extends over several decades. There will be long time lags before investments in irrigation systems, rural infrastructure and credit and marketing facilities translate into increased productivity, higher rates of agricultural growth, and sustainable increases in rural incomes. The required strategy of agricultural revitalization should not be seen as an alternative to an export-led growth strategy but rather as a complement to it. This requires that much greater attention be given to the development of backward and forward linkages between industrial and agricultural activity, creating the conditions that enable industrial and technological innovation and opportunity to take firmer root in rural soils.

Priority 6: Correcting Gender Biases

The policy reform agenda must address other biases. Of these, gender biases deserve special attention. In periods of high economic growth these biases often remain hidden, only coming to the surface when recession strikes and the forces endemic in globalization expose unequal opportunities, disadvantages, vulnerabilities and insecurities of women, and the many impediments to their full emancipation.

One of the misconceptions potentially most damaging for human development prospects after the crisis is that Thailand is without a 'gender problem'. While less pronounced than in many other developing countries, it is taking on new and more virulent forms as a consequence of globalization, while the crisis itself has tended to reinforce traditional perceptions of the division of labour between men and women. It is an iceberg, most visible in bad rather than good weather, on which sustainable human development could run aground.

To avoid this, greater efforts will need to be made in a number of areas. These include measures that reduce the vulnerabilities of women in their place of work, enlarge their opportunities for remunerative work and career advancement through an expansion of especially technical and vocational training, and improve their access to credit, information and other resources required to foster entrepreneurship. No less important, measures aimed at economic emancipation must be supported by measures that enlarge political emancipation and enable women to occupy their rightful place in the mainstream of the nation's political, social and economic life.

Priority 7: Improving the Quality of Human Resources

The crisis has highlighted structural weaknesses in the nation's human resources. If Thailand is to compete in international markets and the opportunities of Thais are to be expanded, priority must continue to be given to upgrading the nation's human resources and to deepening and broadening the knowledge and skills base. The National Education Act 1999 will restructure the nation's educational system and should make it possible to achieve qualitative improvements in basic education (see box 6.2).

These improvements will impact positively on all aspects of development. It will greatly facilitate the technological upgrading of the nation's industrial base, helping to unlock the creativity, imagination, ambitions and entrepreneurship of the Thai population, thereby enlarging the basis for sustainable increases in prosperity and well-being. No less importantly, it will be instrumental in enabling all Thais to achieve their full and innate potentials as human beings, which is and will remain the keystone of human development.

Priority 8: Addressing the Environmental Crisis

The natural environment is under constant attack and rates of natural resource depletion are in some areas unsustainable. The economic crisis is paralleled by an environmental crisis that is undermining the basis for sustainable development and having measurable impacts on the health of men, women and children in both urban and rural areas. Although a silent and in some respects an invisible emergency, it nevertheless forms an integral part of the nation's development predicament.

Efforts to address the emergency must be broadened and deepened and supported by legal instruments that exist in practice and theory, as well as by educational and awareness campaigns that highlight the importance of the environment for the well-being and welfare of the Thai population. No less important, these efforts must recognize that environmental degradation has part of its origins in poverty and inequality, with some of the agents of environmental destruction being the last link in a long chain of exploitative relations who have nothing to exploit but themselves and nature. This has major implications for pro-poor growth and welfare and redistribution policies.

3. Policy Instruments

Strategy development must be supported by the development and application of improved policy instruments. This report has identified numerous priorities in this area. Principal among them are: (i) the strengthening of capacities for the management of development and of a process of economic and social transformation that is becoming substantively more complex; (ii) the development of well-being indicators that enlarge the basis for the monitoring of progress towards sustainable human development; and (iii) improved methodologies and procedures for resource allocation aimed at addressing poverty and deprivation and expanding opportunities.

Box 6.2

Human Resources Development and the National Education Act 1999

In recognition of the importance of basic education to human resources development, the National Education Act was promulgated in August 1999 to guide Thailand's approach to education into the next century. It is wide-ranging in scope and orientation and is in-line with the 1997 Constitution. It is guided by three main principles: lifelong education for all; the participation of all segments of society in the provision of education; and the continuous development of the body of knowledge and the learning process. The Act sets out to realize the full potential of the Thai population in all aspects - physical, mental, intellectual, and spiritual - and to promote knowledge, morality, integrity and desirable ways of life that enable Thais to live happily with other people.

It provides for an extension of the period of compulsory education to 9 years and eventually to 12 years. Its many provisions cover the rights of access to free education, including the access of the handicapped, disadvantaged and school dropouts, the importance of early childhood development, organization and financing of education, and teacher training and motivation.

The Act also provides for a complete restructuring of primary and secondary education with the aim of securing major improvements in both their quality and relevance. Its key elements include the decentralization of responsibilities for 40,000 state-run schools to local authorities that will have the authority to manage them and to collect revenues for the task and to enter into partnerships with private sector organizations. Each school is to have a management board in which parents and community leaders are represented to ensure that schools respond to the needs of local communities. This is expected to have a major impact on the quality and relevance of education in especially rural areas, with the reform proposal seeking specifically to enlarge the educational opportunities of poorer groups and to prepare more fully for the working life.

Among its many innovative measures is the designation of airwaves and TV and radio broadcasting infrastructure for educational broadcasting. This will also promote distance learning in recognition of education as a life-long learning process.

Under the provisions of the National Education Act, the main role of the central government will be to supervise at a distance with the aim of ensuring that the quality of education is improved and schools do not become over-commercialized. The Act provides for the creation of an independent agency that will monitor schools, both public and private, to ensure that quality standards are being observed. Schools passing the test will be given written guarantees of the quality of their teaching. The independent agency will make recommendations on how schools failing the test can bring the quality of their teaching up to approved standards.

Thailand has also finalized its first educational development plan for gifted children, which covers the period 1998-2002. Under the plan, some 450,000 gifted students - primarily in secondary schools - will be enrolled in 'student-centred' special programmes aimed at developing their particular talents, with the aim of increasing the number to 500,000 by 2002. Gifted students will be grouped in five main categories covering mathematics and science, Thai language, sports, music, and the visual and dramatic arts.

Priority 9: The More Effective Management of the Transformation Process

One of the main challenges confronting Thailand in the years ahead is the management of a development and transformation process that is becoming substantively more complex. The last few years have served to show that Thailand does not yet possess the instruments and tools required to translate the vision embodied in the Eighth Plan into concrete reality and to manage a process of transformation. The drive towards decentralization, participation and empowerment as well as the imperatives of more balanced and equitable development have only served to highlight weaknesses and limitations, with management reform and the strengthening of capacities for the management of development having emerged as a key challenge. The extent to which it is met can be expected to determine the extent to which many other challenges are successfully addressed.

The crisis has also underscored the importance of a range of resource-related issues. They include access to resources, the use and management of resources, and the mobilization of resources. There is sufficient evidence to support the view that available resources have in the past not always been used efficiently, especially in the social sectors, and that it is possible to achieve more with less. Measures to reorient access to resources must also be accompanied by more determined efforts to mobilize additional resources that not only supplement government revenues but also enlarge the financial autonomy of local communities.

Priorities in these areas are particularly numerous and include: (i) development of new mechanisms and improved delivery systems that enlarge the access of poor and disadvantaged groups to land, credit and basic services and infrastructure such as health, education, safe water and sanitation; (ii) a rapid introduction of fair property and inheritance taxes and a greater application of user fees; (iii) strengthening of the capacity of local governments to generate and manage development funds; (iv) elaborating an improved system of intergovernmental grants and transfers; and (v) enlarging the access of local governments to loan and debt financing.[2]

Strengthened capacities for the management of development also call for the development of an information systems required to support informed analysis and decision-making. Although Thailand is, when compared with many other developing countries, a 'data rich' nation, the crisis has highlighted deficiencies and weaknesses in the information systems required for purposeful and timely policy analysis and for monitoring the impacts and effects of corrective and remedial measures. The absence of reliable and up-to-date information on employment and labour markets has, for example, hampered the formulation and implementation of crisis responses, with paucities of data on the utilization of educational infrastructure providing another area of concern. Efforts to strengthen and expand information systems should not be confined to the national level. Democratization, decentralization and participation also require that they be extended to the sub-national level. Information is power and the availability of and access to information is an essential ingredient in strategies aimed at community empowerment.

Priority 10: The Development of Well-Being Indicators

Development of information systems must be accompanied by a further development of policy-relevant development indicators. Human development is a concept that has many dimensions. Globalization and the crisis have impacted many of them, sometimes in counter-intuitive ways. The active promotion of human development requires the development of monitoring systems that make it possible to assess the impacts of interventions, the effectiveness of targetting strategies and, more generally, the measurement of progress in the direction of sustainable human development.

[2] See Asian Development Bank, Governance in Thailand: Challenges, Issues and Prospects, Bangkok, April 1999

Well-being indicators have a particularly important role to play. Their value is greatest when they are able to capture the many dimensions of human development and have direct applications in the refinement of policies. This is an area in which important work is already being conducted by NESDB and the Thailand Research Fund (see box 6.3). Both the imperatives of human development and the impacts of the crisis underscore the importance of its continuation.

Box 6.3

The Development of Well-Being Indicators

Thailand has a long tradition in developing and applying well-being and welfare indicators. Government and other agencies routinely collect different sets of indicators. However, the different sets of indicators are neither coordinated nor integrated and the Kingdom is effectively without indicators that together provide a comprehensive picture of trends in social development. The absence of such indicators has been highlighted by the economic crisis and the difficulties encountered in measuring its impacts on different groups in society.

Deficiencies are being addressed through two major research projects: one by NESDB with support from ADB; and one by the Social Research Institute, Chulalongkorn University, with support from the Thailand Research Fund.

The starting point for the NESDB project being undertaken by the Development Evaluation Division is the people-centred approach to development embodied in the Eighth Plan. The Plan defines the well-being of people as the ultimate goal of development, and the project is concerned with the development of the indictors required for monitoring and evaluating progress towards greater well-being. It is based on an holistic approach to people-centred development, with indicators that seek to cover all aspects of well-being. The NESDB methodology has been developed by Nanak Kakwani, who has drawn upon the work of A.K. Sen, especially Sen's concepts of 'functionings' and 'capabilities'.

The project has identified 7 main components of well-being: health and nutrition; education; work life; poverty, inequality and welfare; family life, environment and safety; and governance. These components have been disaggregated into more than 30 sub-components, for which more than 70 well-being indicators are currently being constructed. Components, sub-components and indicators are all linked to the 7 main strategies set out in the Eighth Plan to ensure the policy relevance of indicator development.

The SRI Project is similarly developing quality of life indicators, mainly for use at the community level, that are able to serve as planning and monitoring tools as well as instruments for promoting participatory learning and capacity development at local levels. The development of the indicators is based upon a participatory approach in which a range of groups, through a number of workshops, has contributed to the identification of both qualitative and quantitative social development indicators. Indicators are currently under development under 8 main headings: basic infrastructure and environment indicators; occupational and economic indicators; health indicators; education and human resource development indicators; information and media indicators; cultural and spiritual development indicators; civil society and good governance indicators; and family and community indicators. Some 20-30 indicators have been identified under each of these headings, giving a total of around 200 indicators. The emphasis in the work to date has been on what should be inventoried rather than on how it should be measured. In recognition of the differences existing within Thailand, indicators are being developed and tested in 9 different locations that include an upland cultivation area, a border province, a coastal community, and an urban slums.

Sources: 'Conceptual Framework of Well-Being', Indicators of Well-Being and Policy Analysis. NESDB newsletter, Volume 1, Number 1, October 1997; Social Research Institute, 'Development of Social Sector Indicators: A Participatory Approach', Chulalongkorn University, Bangkok, no date (mimeo)

Priority 11: More Efficient Resource Allocation

Revised methods are required for the allocation of resources to provinces and local authorities on the basis of more integrated assessments of needs, disadvantage and deprivation. As shown in Chapter 3, there appears to be considerable scope for further development in this area, with the analyses undertaken supporting the contention that human deprivation is far more widespread in Thailand than might be assumed from existing poverty data and this is inadequately reflected in resource allocation procedures.

A first priority is to develop new methods that are comprehensive in scope and orientation and are able to capture more of the dimensions of human development than is at present the case with current methods. These methods should also establish a strategic framework for integrating data available from a wide range of sources as well as establish the basis for future data collection and processing initiatives. The indicators used should also be 'crisis responsive' and make it possible to assess not only the impacts of the crisis but also the effects of policy measures aimed at ameliorating negative impacts.

III. CONCLUDING NOTE

The above constitutes a formidable policy and reform challenge. UNDP has no doubt that Thailand is able to respond effectively to it. Although the last few years have been difficult ones that have witnessed an erosion of confidence in the future, the nation has both the assets and determination to recover lost ground and to rebuild and reinvent itself. The process of rediscovery and reinventing is able to draw upon assets that - like a commitment to democracy, an active civil society, and the stability and unity that contribute to the formation of a broad-based consensus on the purposes and directions of development - are seldom found in developing societies. If Thailand is able to make full use of these assets, the next few years may see more than nation's reemergence. It may mark a turning point that today's children will learn to recognise as one of the Kingdom's finest hours.

Statistical Annex

Introduction to Statistical Annex
Note on Data Sources

Listed below are the sources used for the compilation of the tables reproduced in the following pages and which have been used as the database for the calculation of indices. The tables bring together data from a dozen different sources, some of which are unpublished.

As a general rule, data are reproduced for the last year available at the time the tables were compiled. In a number of cases it has been necessary to make use of 1990 Population and Housing Census data. Since the indices are more concerned with relative values rather than absolute values, this was not considered a major problem. Moreover, the use of Census data has a number of advantages for the calculation of indices. They provide for national coverage and, because they are derived from a single methodology, possess a high degree of internal consistency.

Data are reproduced for provinces and regions. Since 1990 the boundaries of some regions have been changed and several new provinces have been created (Sa Kaeo, Amnat Charoen and Nong Bua Lam Phu). In cases where data were required to complete a data set for a series that included a new province, the data for the existing province have been used as a proxy for the new province. Whenever data for the new province were available they have been included. Three proxy extrapolations have been required: Sa Kaeo uses figures available for Prachin Buri when figures for Sa Kaeo are not available, Amnat Charoen uses figures for Ubon Ratchathani, and Nong Bua Lam Phu uses figures for Udon Thani. In data series after 1995, data are generally available for all provinces and such proxy extrapolations were not required.

Table 1: Basic Data

Columns 1 & 2: National Statistical Office, Statistical Yearbook Thailand 1997, Table 1.3; 1996 data.
Column 3: National Statistical Office, Statistical Yearbook Thailand 1997, Table 1.4; 1995–96 Survey.
Column 4: National Statistical Office, Report of the 1996 Household Socio–Economic Survey (Whole Kingdom).
Columns 5 to 8: Office of Agricultural Economics, Agricultural Statistics Thailand: Crop Year 1995/96, Tables 143 and 144; 1993 data.
Column 9: National Statistical Office, Statistical Yearbook Thailand 1997, Table 1.3; 1996 data.
Columns 10 & 11: National Statistical Office, Statistical Yearbook Thailand 1997, Table 10.10; 1995 data.

Table 2: Income Indicators

Column 1: National Statistical Office, Statistical Yearbook Thailand 1997, Table 1.3; 1996 data.
Column 2: National Statistical Office, Statistical Yearbook Thailand 1997, Table 1.4, 1995–96 Survey.
Columns 3–5: Office of the National Economic and Social Development Board, unpublished document with data compiled by the National Statistical Office.
Columns 6–8: Calculated from reproduced data.

Table 3: Employment Indicators

Column 1: National Statistical Office, 1990 Population and Housing Census, Table 1.
Columns 2 and 4–6: National Statistical Office, 1990 Population and Housing Census, Table 20.
Columns 3 and 7–8: Calculated from reproduced data.

Table 4: Health Indicators (I)

Column 1:	Alpha Research Co., Thailand in Figures 1995–1996, (third edition), Manager Information Services; 1992 data.
Column 2:	National Statistical Office, 1990 Population and Housing Census, Tables 13 and 14 covering married women in the age group 15–49 years.
Columns 3–5:	Ministry of Public Health, unpublished data for 1997; infant mortality rates for the Whole Kingdom and Bangkok are for 1995.
Columns 6–9:	Ministry of Public Health, Annual Epidemiological Surveillance Report 1996, various tables.

Table 5: Health Indicators (II)

Columns 1–9:	Alpha Research Co., Thailand in Figures 1995–1996, (third edition), Manager Information Services; 1992 data.

Table 6: Education and Human Resource Indicators (I)

Columns 1–2:	National Statistical Office, 1990 Population and Housing Census, Table 1.6; population 5 years and older.
Columns.3–4:	Data based on unpublished document of the National Education Committee 1995. The figures cover the number of illiterate persons and persons aged 14 years or older who did not complete grade 4.
Columns 5–7:	National Statistical Office, Report of the Labour Force Survey by Provinces, Round 3, August 1998. Covers population aged 13 years and older.

Table 7: Education and Human Resource Indicators (II)

Columns 1–3:	Office of the National Education Committee, Provincial Data on Education and School System, 1997, Table 12. Data for population aged 13 years and older.
Columns 4–5:	Office of the National Education Committee, Provincial Data on Education and School System, 1997, Tables 17 and 22.

Table 8: Housing and Environment Indicators, 1990

Columns 1–2:	National Statistical Office, 1990 Population and Housing Census by Provinces, Table 1.
Column 3:	National Statistical Office, 1990 Population and Housing Census by Provinces, Housing Section, Table 2.
Column 4:	National Statistical Office, 1990 Population and Housing Census by Provinces, Housing Section, Table 8.
Column 5:	National Statistical Office, 1990 Population and Housing Census by Provinces, Housing Section, Table 2.
Column 6:	National Statistical Office, 1990 Population and Housing Census by Provinces, Housing Section, Table 11.
Column 7:	National Statistical Office, 1990 Population and Housing Census by Provinces, Housing Section, Table 10.
Column 8:	National Statistical Office, 1990 Population and Housing Census by Provinces, Housing Section, Table 12.

Table 9: Transport and Communications Indicators, 1990

Column 1:	National Statistical Office, 1990 Population and Housing Census by Provinces, Table 1.
Columns 2–4:	Alpha Research Co., Thailand in Figures 1995–1996, (third edition), Manager Information Services; 1992 data.
Columns 5–6:	National Statistical Office, 1990 Population and Housing Census by Provinces, Housing Section.

Table 10: Access to Consumer Goods, 1990

Column 1:	National Statistical Office, 1990 Population and Housing Census by Provinces, Table 1.
Columns 2–9:	National Statistical Office, 1990 Population and Housing Census by Provinces, Table 13.

Table 11: Women's Indicators by Region and Province (I)

Columns 1–4:	National Statistical Office, 1990 Population and Census by Provinces, calculated from reproduced data.
Columns 5–9:	National Statistical Office, 1998 Labour Force Survey, Round 3

Table 12: Women's Indicators by Region and Province (II)

Columns 1–2:	Office of the National Education Committee, Provincial Data on Education and School System, 1997, Table 12
Column 3:	National Statistical Office, 1990 Population and Housing Census by Provinces, Table 14
Column 4:	National Statistical Office, 1990 Population and Housing Census by Provinces, Table 12
Column 5:	Ministry of Public Health, Annual Epidemiological Surveillance Report 1996

Table 1 Basic Data

Location	Population 1996		No.of Households 1996	Average Household Size 1996	Land Area and Land Use 1993				Population Density 1996	Gross Provincial Product (GPP) 1995	
	Male	Female			Forest Land	Farm Land	Unclassified Land	Total Area		Total	Per capita
	Number	Number	Number	Number	Rai	Rai	Rai	Rai	p.p.sq.km	Baht (mil)	Baht
	1	2	3	4	5	6	7	8	9	10	11
Kingdom	**29,973,059**	**30,143,123**	**15,341,204**	**3.8**	**83,450,623**	**131,270,893**	**105,975,372**	**320,696,888**	**117**	**4,202,836**	**70,754**
Bangkok	**2,746,352**	**2,838,611**	**1,703,128**	**3.1**	–	**242,721**	**735,542**	**978,263**	**3,568**	**1,652,600**	**238,849**
Bangkok Vicinity	**1,681,404**	**1,742,637**	**1,306,940**	**3.7**	–	**2,022,347**	**1,898,276**	**3,870,578**	**272**	**512,848**	**149,779**
Nakhon Pathom	364,995	377,237	201,934	3.6	–	809,455	545,794	1,355,204	342	62,701	81,962
Nonthaburi	381,502	402,082	320,003	3.8	–	162,345	226,594	388,939	1,259	73,570	105,099
Pathum Thani	271,492	279,428	249,265	4.1	–	631,495	322,165	953,660	361	119,219	236,078
Samut Prakan	466,084	482,149	392,705	3.7	–	197,342	430,216	627,558	944	174,615	189,182
Samut Sakon	197,331	201,741	143,033	3.2	–	221,710	373,507	545,217	457	82,743	212,708
Central Region	**1,439,164**	**1,467,377**	**757,102**	**3.7**	**164,055**	**6,883,335**	**3,323,532**	**10,370,922**	**175**	**186,901**	64,896
Chai Nat	170,748	180,842	88,407	3.5	3,869	1,129,497	410,225	1,543,591	142	14,310	38,780
Pra Nakhon Si Ayuthaya	348,613	366,043	183,889	4.0	–	1,174,128	423,772	1,597,900	280	60,619	83,613
Lop Buri	381,241	368,246	200,853	3.8	123,125	2,497,888	1,253,833	3,874,846	121	30,134	40,232
Saraburi	289,878	287,890	159,420	4.0	37,061	1,142,874	1,055,369	2,235,304	162	61,057	115,420
Sing Buri	109,090	115,913	56,052	3.4	–	460,788	53,261	514,049	274	9,662	40,597
Ang Thong	139,594	148,443	68,481	3.2	–	478,160	127,072	605,232	297	11,119	41,180
Eastern Region	**2,017,039**	**1,980,760**	**1,229,487**	**3.6**	**4,771,202**	**11,726,819**	**7,326,042**	**22,814,063**	**110**	**409,922**	109,138
Chanthaburi	240,801	238,303	142,398	4.0	1,175,399	1,449,186	1,336,665	3,961,250	76	23,068	54,023
Chachoengsao	308,744	313,131	163,923	3.7	746,719	1,848,428	749,228	3,344,375	116	50,871	85,210
Chon Buri	515,548	493,493	384,458	3.6	152,383	2,525,971	1,058,521	2,726,875	231	193,790	206,599
Trat	106,739	103,315	64,138	3.5	483,282	502,897	775,696	1,761,875	75	14,321	75,772
Nakhon Nayok	118,717	121,167	59,211	3.8	302,812	746,083	277,355	1,326,250	113	8,811	36,259
Prachin Buri	218,054	214,197	109,775	3.7	1,774,544	3,126,877	2,572,017	7,473,438	91	23,028	49,206
Rayong	247,395	242,742	167,899	3.6	136,063	1,527,377	556,560	2,220,000	138	83,657	168,324
Sa Kaeo	261,041	254,412	137,685	3.6	na	na	na	na	72	12,376	31,173
Western Region	**1,756,046**	**1,776,220**	**905,260**	**3.7**	**10,070,548**	**7,682,751**	**9,151,128**	**26,904,427**	**82**	**176,796**	52,885
Ratchaburi	398,281	408,883	196,122	3.7	823,203	1,250,395	1,174,191	3,247,789	155	44,469	57,454
Kanchanaburi	385,617	370,911	204,466	3.8	6,713,907	2,058,134	3,404,927	12,176,968	39	39,582	58,726
Suphan Buri	414,481	433,386	200,430	3.8	371,878	2,319,631	657,246	3,348,755	158	34,005	40,530
Samutshongkhram	101,416	106,119	47,927	3.6	–	110,108	150,334	260,442	498	8,085	40,223
Phetchaburi	220,834	229,206	124,724	3.7	1,367,341	693,646	1,829,724	3,890,711	72	22,799	53,899
Prachuap Kiri Kan	235,417	227,715	131,591	3.9	794,219	1,250,837	1,934,706	3,979,762	73	27,856	64,482
Northeastern Region	**10,450,863**	**10,425,337**	**4,380,017**	**4.1**	**13,420,600**	**57,616,084**	**34,497,379**	**105,534,063**	**124**	**502,798**	24,834
Nakhon Ratchasima	1,242,702	1,251,814	581,859	3.7	1,433,591	7,951,261	3,423,876	12,808,728	122	95,110	37,623
Buri Ram	738,019	738,965	292,256	4.2	330,938	3,850,803	2,269,437	6,451,178	143	30,341	20,983
Surin	679,106	680,443	267,356	4.0	173,906	3,399,117	1,504,512	5,077,535	167	24,554	19,004
Sisa Ket	703,870	706,132	270,423	4.3	453,984	3,361,528	1,709,573	5,525,085	160	24,842	18,199
Ubon Ratchathani	860,727	856,445	340,036	4.4	2,252,266	6,034,170	3,529,875	11,816,311	109	38,407	23,419
Yasothon	274,501	272,465	110,470	4.2	240,782	1,756,470	603,788	2,601,040	131	10,728	19,123
Chaiyaphum	551,207	551,963	256,573	3.4	1,923,595	3,323,443	2,739,391	7,986,429	86	25,981	24,487
Amnat Charoen	179,419	177,915	70,495	4.4	na	na	na	na	113	7,984	23,008
Nong Bua Lam Phu	243,578	238,147	97,816	4.6	na	na	na	na	125	8,733	18,700
Khon Kaen	838,181	834,218	373,755	4.0	520,863	4,145,942	2,136,939	6,803,744	153	60,201	34,879

Location	Population 1996 Male	Population 1996 Female	No.of Households 1996	Average Household Size 1996	Land Area and Land Use 1993 Forest Land	Land Area and Land Use 1993 Farm Land	Land Area and Land Use 1993 Unclassified Land	Land Area and Land Use 1993 Total Area	Population Density 1996	Gross Provincial Product (GPP) 1995 Total	Gross Provincial Product (GPP) 1995 Per capita
	Number	Number	Number	Number	Rai	Rai	Rai	Rai	p.p.sq.km	Baht (mil)	Baht
	1	2	3	4	5	6	7	8	9	10	11
Udon Thani	739,803	731,085	317,726	4.3	1,363,138	5,319,548	3,060,682	9,743,368	125	37,895	26,762
Loei	319,389	307,177	144,206	4.2	1,827,542	2,342,608	2,970,232	7,140,382	55	14,890	26,169
Nong Khai	443,416	437,682	191,715	4.1	302,613	2,477,623	1,802,439	4,582,675	120	20,089	23,579
Maha Salakham	457,998	461,617	186,838	4.1	21,798	2,663,499	622,005	3,307,302	174	18,402	19,702
Roi Et	652,107	650,315	258,540	4.0	119,219	3,332,515	1,735,422	5,187,156	157	24,235	20,247
Kalasin	484,746	483,969	198,100	4.1	372,502	2,478,811	1,490,403	4,341,716	139	18,926	21,122
Sakhon Nakhon	532,696	535,172	218,582	4.3	885,313	2,834,975	2,283,314	6,003,602	111	21,291	21,206
Nakhon Phanom	347,756	348,864	138,271	3.9	356,875	1,540,703	1,547,840	3,445,418	126	13,133	19,779
Mukdahan	161,642	160,949	65,000	4.4	841,675	803,068	1,067,651	2,712,394	74	7,056	25,112
Northern Region	**5,981,292**	**6,005,007**	**3,265,897**	**3.5**	**47,019,480**	**28,904,883**	**30,103,337**	**106,027,700**	**71**	**384,396**	**34,565**
Chiang Mai	782,322	782,116	501,663	3.2	9,012,500	1,300,385	2,254,026	12,566,911	78	71,395	49,614
Lamphun	201,184	204,880	125,263	3.4	1,379,218	543,809	893,149	2,816,176	90	23,614	54,916
Lampang	402,275	402,420	224,560	3.4	5,066,094	1,136,976	1,630,656	7,833,726	64	31,276	40,723
Uttaradit	238,598	241,044	120,837	3.3	1,902,282	1,189,133	1,807,705	4,899,120	61	15,023	32,729
Phrae	245,024	249,168	137,268	3.5	1,521,862	607,355	1,957,427	4,086,644	76	12,172	24,007
Nan	243,724	237,047	119,746	3.9	3,008,125	839,190	3,322,730	7,170,045	42	11,490	26,232
Phayao	258,665	259,185	147,532	3.3	1,564,844	944,545	1,450,023	3,959,412	82	12,869	25,791
Chiang Rai	629,677	623,525	357,523	3.5	2,494,219	2,194,713	2,610,049	7,298,981	107	31,516	28,521
Mae Hong Son	117,775	109,147	57,925	3.9	5,656,250	202,731	2,066,806	7,925,787	18	4,763	28,019
Nakhon Sawan	554,957	569,313	295,819	3.5	428,060	4,032,400	1,538,088	5,998,548	117	38,166	34,887
Uthai Thani	161,772	165,225	87,637	3.6	1,637,929	1,310,930	1,257,545	4,206,404	49	10,786	35,133
Kamphaeng Phet	370,975	347,776	189,298	3.6	1,311,250	2,842,239	1,226,192	5,379,681	87	24,251	35,875
Tak	235,005	226,503	121,192	3.8	7,489,218	956,467	1,808,471	10,254,156	28	12,726	36,052
Sukhotai	301,386	314,857	159,343	3.5	1,413,723	1,844,500	864,334	4,122,557	93	16,635	28,291
Phitsanulok	425,768	428,122	226,594	3.7	1,517,500	2,652,351	2,590,058	6,759,909	79	27,486	34,530
Phichit	293,065	304,137	141,441	3.6	–	2,136,693	695,190	2,831,883	132	15,459	26,792
Phetchabun	519,120	513,542	252,256	3.8	1,616,406	4,170,466	2,130,888	7,917,760	82	24,769	27,070
Southern Region	**3,900,899**	3,907,174	**1,856,373**	**4.1**	**8,004,738**	**17,202,073**	**18,990,181**	**44,196,992**	**110**	**376,575**	**47,947**
Nakhon Si Thammarat	748,810	754,346	340,704	4.1	796,249	2,976,842	2,440,973	6,214,064	151	52,745	33,617
Krabi	171,900	166,945	74,775	4.3	244,532	1,052,922	1,645,366	2,942,820	72	18,037	57,809
Phangnga	115,692	112,222	57,391	3.4	766,094	760,522	1,080,193	2,606,809	55	14,773	62,596
Phuket	106,199	108,434	74,449	3.3	16,329	165,074	157,993	339,396	395	27,062	143,949
Surat Thani	423,193	419,918	224,525	3.9	1,978,687	2,264,367	3,814,114	8,057,168	65	45,295	53,859
Ranong	76,469	70,912	45,195	3.9	707,500	278,992	1,074,786	2,061,278	45	11,204	84,882
Chumphon	221,946	218,050	124,452	3.8	689,688	1,578,299	1,487,643	3,755,630	73	20,766	49,324
Songkla	578,807	587,712	282,205	4.0	371,329	1,979,498	2,270,354	4,621,181	158	72,123	58,305
Satun	126,012	124,465	55,703	4.3	353,616	464,108	731,637	1,549,361	101	11,280	46,999
Trang	281,134	283,526	129,177	4.2	598,125	1,414,441	1,060,883	3,073,449	115	23,873	40,327
Phattalung	243,863	250,882	116,560	4.0	295,066	1,103,979	741,251	2,140,296	144	14,692	29,740
Pattani	287,146	294,974	113,742	4.4	28,283	686,836	497,603	1,212,722	300	26,895	46,133
Yala	203,586	198,972	90,246	4.0	715,178	1,127,472	983,024	2,825,674	89	18,630	48,016
Narathiwat	316,142	315,816	127,249	4.4	444,062	1,348,721	1,004,361	2,797,144	141	19,200	30,918

Table 2 Per Capita Income Indicators

Location	Population 1996	No. of Households 1996	Annual Average Per Capita Income (Baht) 1988	1992	1996	Change in Annual Per Capita Income (%) 1988 – 92	1992 – 96	1988 – 96
	1	2	3	4	5	6	7	8
Kingdom	**60,116,182**	**15,341,204**	**27,564**	**49,410**	**76,634**	**79.3**	**55.1**	**178.0**
Bangkok	**5,584,963**	**1,703,128**	**98,383**	**176,814**	**254,611**	**79.7**	**44.0**	**158.8**
Bangkok Vicinity	**3,344,028**	**1,306,940**	**89,220**	**154,598**	**225,743**	**73.3**	**46.0**	**153.0**
Nakhon Pathom	742,232	201,934	30,685	47,569	85,058	55.0	78.8	177.2
Nonthaburi	783,584	320,003	37,542	70,743	113,713	88.4	60.7	202.9
Pathum Thani	550,974	249,265	85,750	133,556	246,581	55.8	84.6	187.6
Samut Prakan	868,166	392,705	113,009	156,167	203,635	38.2	30.4	80.2
Samut Sakon	399,072	143,033	70,402	135,092	218,849	91.9	62.0	210.9
Central Region	**2,906,541**	**757,102**	**23,126**	**43,967**	**73,629**	**90.1**	**67.5**	**218.4**
Chai Nat	351,590	88,407	21,214	27,989	43,847	31.9	56.7	106.7
Pra Nakhon Si Ayuthaya	714,656	183,889	18,422	52,659	94,013	185.8	78.5	410.3
Lop Buri	749,487	200,853	19,466	28,129	48,413	44.5	72.1	148.7
Saraburi	577,768	159,420	40,239	81,136	127,876	101.6	57.6	217.8
Sing Buri	225,003	56,052	18,814	27,454	44,505	45.9	62.1	136.6
Ang Thong	288,037	68,481	18,249	28,376	48,851	55.5	72.2	167.7
Eastern Region	**3,997,799**	**1,229,487**	**41,680**	**68,632**	**121,802**	**64.7**	**77.5**	**192.2**
Chanthaburi	479,104	142,398	18,841	37,621	53,978	99.7	43.5	186.5
Chachoengsao	621,875	163,923	36,185	60,905	91,363	68.3	50.0	152.5
Chon Buri	1,009,041	384,458	75,436	121,930	218,997	61.6	79.6	190.3
Trat	210,054	64,138	25,251	50,355	75,076	99.4	49.1	197.3
Nakhon Nayok	239,884	59,211	20,523	29,438	37,926	43.4	28.8	84.8
Prachin Buri	432,251	109,775	16,209	23,821	54,059	47.0	126.9	233.5
Rayong	490,137	167,899	68,588	108,460	223,475	58.1	106.0	225.8
Sa Kaeo	515,453	137,685	–	–	37,333	na	na	na
Western Region	**3,532,266**	**905,260**	24,195	**38,380**	**56,732**	**58.6**	**47.8**	**134.5**
Ratchaburi	807,164	196,122	23,635	38,513	60,345	62.9	56.7	155.3
Kanchanaburi	756,528	204,466	33,038	44,901	62,592	35.9	39.4	89.5
Suphan Buri	847,867	200,430	18,093	29,420	46,904	62.6	59.4	159.2
Samutshongkhram	207,535	47,927	16,165	27,953	42,857	72.9	53.3	165.1
Phetchaburi	450,040	124,724	22,128	41,088	55,556	85.7	35.2	151.1
Prachuap Kiri Kan	463,132	131,591	29,047	47,554	67,786	63.7	42.5	133.4
Northeastern Region	**20,876,200**	**4,380,017**	**10,165**	**17,063**	**26,635**	**67.9**	**56.1**	**162.0**
Nakhon Ratchasima	2,494,516	581,859	12,367	22,366	39,519	80.9	76.7	219.6
Buri Ram	1,476,984	292,256	8,931	15,025	21,824	68.2	45.3	144.4
Surin	1,359,549	267,356	7,977	13,786	19,719	72.8	43.0	147.2
Sisa Ket	1,410,002	270,423	8,399	13,272	19,636	58.0	48.0	133.8
Ubon Ratchathani	1,717,172	40,036	9,617	15,194	25,224	58.0	66.0	162.3
Yasothon	546,966	110,470	8,703	14,510	19,990	66.7	37.8	129.7
Chaiyaphum	1,103,170	256,573	10,959	17,796	26,346	62.4	48.0	140.4
Amnat Charoen	357,334	70,495	–	–	25,741	na	na	na
Nong Bua Lam Phu	481,725	97,816	–	–	20,949	na	na	na
Khon Kaen	1,672,399	373,755	12,640	24,044	39,139	90.2	62.8	209.6

Location	Population	No. of Households	Annual Average Per Capita Income (Baht)			Change in Annual Per Capita Income (%)		
	1996	1996	1988	1992	1996	1988 – 92	1992 – 96	1988 – 96
	1	2	3	4	5	6	7	8
Udon Thani	1,470,888	317,726	10,272	16,529	29,527	60.9	78.6	187.5
Loei	626,566	144,206	13,517	19,883	27,186	47.1	36.7	101.1
Nong Khai	881,098	191,715	11,283	17,307	24,180	53.4	39.7	114.3
Maha Salakham	919,615	186,838	9,108	15,516	21,085	70.4	35.9	131.5
Roi Et	1,302,422	258,540	9,314	15,560	21,680	67.1	39.3	132.8
Kalasin	968,715	198,100	9,155	14,899	21,887	62.7	46.9	139.1
Sakhon Nakhon	1,067,868	218,582	9,717	14,835	23,475	52.7	58.2	141.6
Nakhon Phanom	696,620	138,271	8,936	14,162	21,330	58.5	50.6	138.7
Mukdahan	322,591	65,000	8,843	16,437	27,773	85.9	69.0	214.1
Northern Region	**11,986,299**	**3,265,897**	**16,932**	**25,794**	**37,878**	**52.3**	**46.8**	**123.7**
Chiang Mai	1,564,438	501,663	22,441	36,840	54,317	64.2	47.4	142.0
Lamphun	406,064	125,263	13,380	38,125	61,205	184.9	60.5	357.4
Lampang	804,695	224,560	18,990	31,447	43,419	65.6	38.1	128.6
Uttaradit	479,642	120,837	17,773	24,541	38,406	38.1	56.5	116.1
Phrae	494,192	137,268	11,860	18,133	25,819	52.9	42.4	117.7
Nan	480,771	119,746	11,757	18,094	28,524	53.9	57.6	142.6
Phayao	517,850	147,532	12,852	16,507	28,167	28.4	70.6	119.2
Chiang Rai	1,253,202	357,523	14,827	20,836	30,049	40.5	44.2	102.7
Mae Hong Son	226,922	57,925	15,059	21,515	31,508	42.9	46.4	109.2
Nakhon Sawan	1,124,270	295,819	17,545	25,759	37,954	46.8	47.3	116.3
Uthai Thani	326,997	87,637	17,977	24,142	39,021	34.3	61.6	117.1
Kamphaeng Phet	745,751	189,298	20,247	31,295	39,499	54.6	26.2	95.1
Tak	461,508	121,192	26,861	28,716	39,185	6.9	36.5	45.9
Sukhotai	616,243	159,343	15,220	22,056	30,887	44.9	40.0	102.9
Phitsanulok	853,890	226,594	15,724	25,392	39,410	61.5	55.2	150.6
Phichit	597,202	141,441	15,517	20,502	30,260	32.1	47.6	95.0
Phetchabun	1,032,662	252,256	14,289	19,806	28,982	38.6	46.3	102.8
Southern Region	**7,808,073**	**1,856,373**	**20,311**	**32,785**	**51,657**	**61.4**	**57.6**	**154.3**
Nakhon Si Thammarat	1,503,156	340,704	13,807	23,389	39,363	69.4	68.3	185.1
Krabi	338,845	74,775	25,600	33,049	56,796	29.1	71.9	121.9
Phangnga	227,914	57,391	36,117	46,169	67,217	27.8	45.6	86.1
Phuket	214,633	74,449	56,647	103,608	156,675	82.9	51.2	176.6
Surat Thani	843,111	224,525	24,060	34,763	61,122	44.5	75.8	154.0
Ranong	147,381	45,195	40,993	87,457	106,397	113.3	21.7	159.5
Chumphon	439,996	124,452	21,498	31,885	48,444	48.3	51.9	125.3
Songkla	1,166,519	282,205	23,058	39,628	60,350	71.9	52.3	161.7
Satun	250,477	55,703	18,920	34,510	51,436	82.4	49.0	171.9
Trang	564,660	129,177	19,017	27,375	46,584	44.0	70.2	145.0
Phattalung	494,745	116,560	14,408	19,237	30,697	33.5	59.6	113.1
Pattani	582,120	113,742	14,147	30,796	47,853	117.7	55.4	238.3
Yala	402,558	90,246	18,926	28,831	43,502	52.3	50.9	129.9
Narathiwat	631,958	127,249	16,293	22,286	32,998	36.8	48.1	102.5

Table 3 Employment Indicators, 1990

Location	Population	Economically Active Population	Activity Rate (%)	Number of Employed Persons	Number of Persons Looking for Work	Number of Persons Waiting for Farm Season	Persons Looking for Work as Percentage of Active Population	Persons Waiting for Farm Season as Percentage of Active Population
	1	2	3	4	5	6	7	8
Kingdom	**54,548,530**	**30,360,977**	**55.7**	**21,520,613**	**1,624,518**	**7,215,646**	**5.4**	**23.8**
Bangkok	**5,882,411**	**3,114,635**	**52.9**	**2,914,024**	**197,986**	**2,625**	**6.4**	**0.1**
Bangkok Vicinity	**2,707,463**	**1,530,671**	**56.5**	**1,445,140**	**72,109**	**13,422**	**4.7**	**0.9**
Nakhon Pathom	629,573	375,744	59.7	360,056	10,566	5,122	2.8	1.4
Nonthaburi	574,702	303,568	52.8	286,597	16,342	629	5.4	0.2
Pathum Thani	412,407	237,166	57.5	220,477	11,670	5,019	4.9	2.1
Samut Prakan	769,822	419,399	54.5	392,355	25,300	1,744	6.0	0.4
Samut Sakon	320,959	194,794	60.7	185,655	8,231	908	4.2	0.5
Central Region	**2,777,829**	**1,588,933**	**57.2**	**1,311,269**	**68,757**	**208,907**	**4.3**	**13.1**
Chai Nat	357,129	214,776	60.1	185,901	6,805	22,070	3.2	10.3
Pra Nakhon Si Ayuthaya	700,649	380,039	54.2	330,618	19,718	29,703	5.2	7.8
Lop Buri	721,023	425,062	59.0	309,181	16,190	99,691	3.8	23.5
Saraburi	507,792	285,042	56.1	231,988	14,757	38,297	5.2	13.4
Sing Buri	230,251	134,218	58.3	119,803	5,225	9,190	3.9	6.8
Ang Thong	260,985	149,796	57.4	133,778	6,062	9,956	4.0	6.6
Eastern Region	**3,414,093**	**1,964,646**	**57.5**	**1,623,929**	**74,371**	**270,933**	**3.8**	**13.8**
Chanthaburi	390,648	245,206	62.8	235,292	4,545	9,956	1.9	4.1
Chachoengsao	552,108	310,822	56.3	237,902	11,202	61,718	3.6	19.9
Chon Buri	851,181	486,524	57.2	446,356	22,680	17,488	4.7	3.6
Trat	162,226	94,762	58.4	90,926	1,447	2,389	1.5	2.5
Nakhon Nayok	221,706	118,950	53.7	77,701	6,186	35,063	5.2	29.5
Prachin Buri	785,578	447,234	56.9	293,114	18,422	135,698	4.1	30.3
Rayong	450,646	261,148	57.9	242,638	9,889	8,621	3.8	3.3
Sa Kaeo	na	na	na	na	na	na	na	na
Western Region	**3,177,339**	**1,829,663**	**57.6**	**1,663,193**	**53,237**	**113,233**	**2.9**	**6.2**
Ratchaburi	734,991	416,005	56.6	376,272	14,504	25,229	3.5	6.1
Kanchanaburi	641,041	372,200	58.1	336,502	9,029	26,669	2.4	7.2
Suphan Buri	797,514	476,254	59.7	431,424	10,059	34,771	2.1	7.3
Samutshongkhram	191,125	108,108	56.6	103,799	4,259	50	3.9	0.0
Phetchaburi	401,317	226,476	56.4	199,011	8,714	18,751	3.8	8.3
Prachuap Kiri Kan	411,351	230,620	56.1	216,185	6,672	7,763	2.9	3.4
Northeastern Region	**19,038,407**	**10,483,099**	**55.1**	**5,158,923**	**680,650**	**4,673,526**	**6.5**	**44.6**
Nakhon Ratchasima	2,375,476	1,249,121	52.6	808,535	64,927	375,659	5.2	30.1
Buri Ram	1,357,108	748,440	55.1	267,815	31,671	448,954	4.2	60.0
Surin	1,220,540	544,674	44.6	248,091	41,235	255,348	7.6	46.9
Sisa Ket	1,286,121	753,173	58.6	217,171	23,988	512,014	3.2	68.0
Ubon Ratchathani	1,869,590	1,042,362	55.8	449,963	32,811	559,588	3.1	53.7
Yasothon	529,093	328,972	62.2	149,036	10,054	169,882	3.1	51.6
Chaiyaphum	997,861	600,702	60.2	300,063	23,252	277,387	3.9	46.2
Amnat Charoen	na	na	na	na	na	na	na	na
Nong Bua Lam Phu	na	na	na	na	na	na	na	na
Khon Kaen	1,6 21,415	912,405	56.3	532,126	41,856	338,423	4.6	37.1

Location	Population	Economically Active Population	Activity Rate (%)	Number of Employed Persons	Number of Persons Looking for Work	Number of Persons Waiting for Farm Season	Persons Looking for Work as Percentage of Active Population	Persons Waiting for Farm Season as Percentage of Active Population
	1	2	3	4	5	6	7	8
Udon Thani	1,770,669	897,209	50.7	465,382	146,358	285,469	16.3	31.8
Loei	535,842	326,709	61.0	228,114	6,961	91,634	2.1	28.0
Nong Khai	797,344	437,032	54.8	288,781	26,295	121,956	6.0	27.9
Maha Salakham	878,675	522,650	59.5	268,787	21,103	262,760	4.0	50.3
Roi Et	1,122,021	664,027	59.2	218,529	27,309	418,189	4.1	63.0
Kalasin	845,546	506,646	59.9	266,031	16,385	224,230	3.2	44.3
Sakhon Nakhon	943,348	480,023	50.9	250,541	53,017	176,465	11.0	36.8
Nakhon Phanom	623,165	331,480	53.2	119,855	92,925	118,700	28.0	35.8
Mukdahan	264,593	137,474	52.0	80,103	20,503	36,868	14.9	26.8
Northern Region	**10,584,443**	**6,189,596**	**58.5**	**4,337,656**	**237,058**	**1,614,882**	**3.8**	**26.1**
Chiang Mai	1,367,183	812,394	59.4	710,739	22,504	79,151	2.8	9.7
Lamphun	409,862	245,318	59.9	208,974	7,337	29,007	3.0	11.8
Lampang	728,843	421,214	57.8	330,077	14,160	76,977	3.4	18.3
Uttaradit	440,342	260,683	59.2	187,447	8,713	64,523	3.3	24.8
Phrae	483,270	284,747	58.9	182,873	15,539	86,335	5.5	30.3
Nan	416,686	235,015	56.4	147,696	7,507	79,812	3.2	34.0
Phayao	474,524	272,279	57.4	138,740	11,689	121,850	4.3	44.8
Chiang Rai	1,052,234	597,050	56.7	356,906	26,989	213,155	4.5	35.7
Mae Hong Son	158,385	89,097	56.3	62,227	2,441	24,429	2.7	27.4
Nakhon Sawan	1,040,054	599,694	57.7	399,894	25,702	174,098	4.3	29.0
Uthai Thani	295,050	178,772	60.6	101,612	6,184	70,976	3.5	39.7
Kamphaeng Phet	643,795	391,545	60.8	293,701	19,691	78,153	5.0	20.0
Tak	335,201	185,308	55.3	110,488	10,615	64,205	5.7	34.6
Sukhotai	560,375	341,787	61.0	204,175	12,535	125,077	3.7	36.6
Phitsanulok	757,209	440,179	58.1	318,792	15,261	106,126	3.5	24.1
Phichit	550,608	321,673	58.4	219,345	13,584	88,744	4.2	27.6
Phetchabun	870,822	512,841	58.9	363,970	16,607	132,264	3.2	25.8
Southern Region	**6,966,455**	**3,659,474**	**52.5**	**3,066,679**	**240,350**	**352,705**	**6.6**	**9.6**
Nakhon Si Thammarat	1,400,598	737,993	52.7	584,973	49,559	103,461	6.7	14.0
Krabi	276,243	140,143	50.7	125,730	7,066	7,607	5.0	5.4
Phangnga	209,415	107,384	51.3	101,895	4,581	908	4.3	0.8
Phuket	166,308	86,142	51.8	81,368	4,763	11	5.5	0.0
Surat Thani	747,049	419,225	56.1	377,632	20,552	21,041	4.9	5.0
Ranong	116,913	62,450	53.4	58,183	2,969	1,298	4.8	2.1
Chumphon	373,918	218,390	58.4	191,769	8,131	18,490	3.7	8.5
Songkla	1,094,323	576,763	52.7	476,874	41,435	58,454	7.2	10.1
Satun	208,918	99,706	47.7	87,226	6,924	5,556	6.9	5.6
Trang	528,568	281,854	53.3	260,041	15,537	6,276	5.5	2.2
Phattalung	441,093	244,430	55.4	156,454	15,133	72,843	6.2	29.8
Pattani	515,372	253,847	49.3	179,646	27,420	46,781	10.8	18.4
Yala	340,982	169,958	49.8	155,376	12,986	1,596	7.6	0.9
Narathiwat	546,755	261,189	47.8	229,512	23,294	8,383	8.9	3.2

Table 4 Health Indicators (I)

Location	Population 1992 Number	Married Women Using Contraception 1990 (%)	Infant Mortality Rate 1997 per 1,000 livebirths	Under-Five Mortality Rate 1997 per 1,000 livebirths	Maternal Mortality Rate 1997 per 100,000 livebirths	Incidence of First Degree Child Malnutrition 1996 (%)	Incidence of Selected Notifiable Diseases 1996 (per 1,000)	Incidence of Malaria 1996 (per 1,000)	Incidence of Sexually Transmitted Diseases 1996 (per 1,000)
	1	2	3	4	5	6	7	8	9
Kingdom	**57,788,965**	**56.16**	**7.2**	**6.2**	**16.7**				
Bangkok	**5,562,141**	**48.26**	**8.3**	**6**	**0.4**	**5.78**	**7.5**	**0.088**	**0.875**
Bangkok Vicinity	**3,099,087**	**58.19**	**7.4**	**4.7**	**9.9**				
Nakhon Pathom	671,386	46.25	12.6	9.2	35.3	2.52	17.4	0.151	0.53
Nonthaburi	698,704	46.25	4.5	3.7	0.0	1.49	13.1	0.091	0.969
Pathum Thani	484,586	58.97	4.4	6.9	0.0	2.25	28.3	0.143	0.358
Samut Prakan	871,806	49.19	10.8	2.2	6.8	0.68	25.4	0.076	0.541
Samut Sakon	372,605	50.84	3.0	4.0	10.1	1.87	21.6	0.155	0.318
Central Region	**2,822,518**	**60.06**	**6.3**	**4.1**	**5.4**				
Chai Nat	339,329	65.20	8.7	5.9	0.0	3.14	8.5	0	0.114
Pra Nakhon Si Ayuthaya	693,230	56.83	6.4	3.5	0.0	2.5	29.7	0.067	0.409
Lop Buri	738,370	59.97	1.0	4.7	11.9	5.92	18.9	0.053	0.739
Saraburi	546,044	58.07	8.3	3.6	0.0	7.26	32.4	0.088	0.208
Sing Buri	221,407	62.74	7.9	3.9	0.0	4.46	11.4	0.044	0.209
Ang Thong	284,138	62.06	10.9	4.4	31.3	4.1	18.9	0.066	0.181
Eastern Region	**3,738,670**	**55.59**	**6.5**	**7.6**	**9.2**				
Chanthaburi	455,158	54.87	12.2	8.7	0.0	6.56	20.7	6.512	0.428
Chachoengsao	593,170	54.32	2.3	9.5	0.0	2.27	26.2	0.159	0.486
Chon Buri	927,458	50.72	5.0	1.1	20.5	2.08	22.1	0.159	0.845
Trat	201,639	57.56	11.0	5.8	0.0	4.56	34.8	13.968	0.557
Nakhon Nayok	230,333	59.22	7.8	20.5	0.0	4.6	26.3	0.054	0.167
Prachin Buri	893,360	56.97	3.8	12.9	16.0	6.6	12.5	0.386	1.222
Rayong	437,552	61.61	10.9	12.1	10.1	5.67	39.1	0.63	1.13
Sa Kaeo	na	na	3.8	6.9	0.0	15.7	14.6	3.31	0.283
Western Region	**3,423,473**	**56.71**	**5.8**	**11.2**	**4.2**				
Ratchaburi	777,105	53.71	8.2	6.8	7.1	5.23	11.5	1.92	0.087
Kanchanaburi	724,435	54.42	3.2	11.7	11.0	4.95	21.4	15.038	0.395
Suphan Buri	825,451	59.51	5.3	18.2	0.0	6.11	15.8	0.742	0.44
Samutshongkhram	206,712	53.25	9.8	14.3	0.0	4.92	26.9	0.453	0.887
Phetchaburi	438,615	57.67	4.6	13.7	0.0	2.39	11.7	3.095	0.096
Prachuap Kiri Kan	451,155	60.50	4.5	5.2	0.0	3.28	16.5	3.273	0.484
Northeastern Region	**20,059,015**	**58.59**	**7.0**	**5.7**	**7.6**				
Nakhon Ratchasima	2,467,366	58.92	6.6	2.1	0.0	14.07	16.5	0.035	0.473
Buri Ram	1,417,329	58.31	4.1	10.4	4.7	13.72	22.6	0.039	0.225
Surin	1,341,385	48.88	4.4	8.9	20.7	12.63	14.1	0.059	0.026
Sisa Ket	1,335,487	51.29	8.5	6.2	5.0	10.52	16.1	0.084	0.079
Ubon Ratchathani	1,945,179	58.36	9.2	6.5	4.6	12.2	13.7	0.49	0.017
Yasothon	528,277	56.25	7.3	3.5	0.0	10.88	26.1	0.037	0.02
Chaiyaphum	1,086,331	64.84	2.0	5.6	16.3	8.18	19.2	0.014	0.062
Amnat Charoen	na	na	10.8	7.6	0.0	14.84	12.1	0.193	0.014
Nong Bua Lam Phu	na	na	48.8	64.5	174.2	11.18	17.1	0.008	0.031
Khon Kaen	1,662,512	62.96	10.1	3.6	3.6	18.95	28.5	0.009	0.257

Location	Population 1992 Number	Married Women Using Contraception 1990 (%)	Infant Mortality Rate 1997 per 1,000 livebirths	Under-Five Mortality Rate 1997 per 1,000 livebirths	Maternal Mortality Rate 1997 per 100,000 livebirths	Incidence of First Degree Child Malnutrition 1996 (%)	Incidence of Selected Notifiable Diseases 1996 (per 1,000)	Incidence of Malaria 1996 (per 1,000)	Incidence of Sexually Transmitted Diseases 1996 (per 1,000)
	1	2	3	4	5	6	7	8	9
Udon Thani	1,846,154	59.20	9.1	4.9	13.0	10.65	10.8	0.022	0.209
Loei	595,444	67.16	15.1	6.6	14.4	14	25.6	0.089	0.075
Nong Khai	836,693	59.07	6.8	5.9	7.8	8.88	15.6	0.03	0.033
Maha Salakham	869,118	61.24	1.1	4.0	0.0	12.27	23.2	0.012	0.175
Roi Et	1,238,930	57.37	3.5	6.5	13.2	12.36	18.9	0.01	0.017
Kalasin	925,254	64.34	6.5	4.1	19.6	12.44	22.5	0.025	0.32
Sakhon Nakhon	1,014,343	55.68	4.0	5.2	7.0	11.29	11.7	0.052	0.01
Nakhon Phanom	649,933	55.10	13.1	4.4	0.0	13.64	28.1	0.537	0.075
Mukdahan	299,280	62.14	8.8	7.5	0.0	16.81	23.8	0.753	0.806
Northern Region	**11,682,315**	**63.15**	**10.1**	**7.8**	**18.6**				
Chiang Mai	1,530,779	61.60	2.4	2.5	49.3	11.46	21	1.173	0.104
Lamphun	397,712	68.00	12.4	10.1	0.0	11.52	30.1	0.707	0.832
Lampang	776,251	66.44	14.0	8.1	0.0	11.1	19.2	0.411	1.438
Uttaradit	475,564	67.33	13.4	5.4	0.0	10.43	12.4	0.361	0.115
Phrae	493,532	65.90	9.2	10.3	0.0	10.47	18.7	1.469	0.346
Nan	457,626	70.04	11.8	5.4	31.0	18.1	26.2	0.84	0.064
Phayao	512,473	66.97	10.9	9.9	23.1	12.09	30.4	0.222	0.483
Chiang Rai	1,229,445	63.01	10.8	10.2	27.1	16.6	22.4	0.75	0.128
Mae Hong Son	206,863	54.54	9.6	9.9	85.0	18.54	41.5	22.149	0.145
Nakhon Sawan	1,093,973	61.11	13.6	6.3	8.2	9.04	15.4	0.138	0.317
Uthai Thani	318,595	59.72	9.5	5.2	0.0	6.29	12	0.609	0.257
Kamphaeng Phet	731,355	63.22	10.6	10.1	12.9	9.35	20.6	0.507	0.186
Tak	425,668	56.66	8.0	4.2	30.0	15.59	34.9	26.639	0.841
Sukhotai	606,823	63.82	3.2	14.7	0.0	6.49	14.9	0.31	0.055
Phitsanulok	842,016	63.73	23.0	6.5	13.5	10.69	14.5	0.165	0.034
Phichit	587,414	59.91	13.2	14.2	14.2	8.25	9	0.012	0.017
Phetchabun	996,256	59.83	3.0	5.6	17.7	5.97	11.1	0.053	0.092
Southern Region	**7,401,746**	**42.05**	**4.4**	**4.6**	**14.2**				
Nakhon Si Thammarat	1,477,417	49.59	5.0	8.6	14.1	6.42	14.3	0.039	0.031
Krabi	311,310	51.60	7.6	4.6	0.0	5.08	28.3	0.333	1.166
Phangnga	217,380	56.86	4.0	2.4	26.8	7.17	23.1	0.794	0.399
Phuket	188,535	47.70	8.5	7.5	20.8	4.68	39.5	0.093	1.095
Surat Thani	791,259	49.35	5.5	17.4	0.0	5.11	21	2.176	0.399
Ranong	130,787	50.09	2.0	3.2	0.0	4.08	25.7	11.345	0.292
Chumphon	416,048	51.42	3.5	6.3	15.8	4.82	19.4	2.516	0.561
Songkla	1,130,073	36.17	1.4	1.8	5.5	6.99	17.9	0.093	0.062
Satun	230,563	38.38	1.8	2.8	26.2	9.22	30.6	0.004	0.016
Trang	540,079	54.55	4.5	3.5	0.0	6.38	27	0.028	0.264
Phattalung	474,564	45.77	3.6	5.2	0.0	9.56	17.6	0.036	0.119
Pattani	541,166	21.40	10.4	4.7	24.6	8.5	19.1	0.161	0.478
Yala	375,482	24.79	4.0	1.4	22.9	13.04	40.6	1.943	0.559
Narathiwat	576,593	24.63	3.4	1.4	31.7	15.46	23.8	0.684	0.454

Table 5 **Health Indicators (II)**

Location	Population 1992	Number of Physicians 1992	Number of Dentists 1992	Number of Nurses 1992	Number of Hospital Beds 1992	Persons per Physician	Persons per Dentist	Persons per Nurse	Persons per Hospital Bed
	1	2	3	4	5	6	7	8	9
Kingdom	**57,788,965**	**13,398**	**2,669**	**69,280**	**83,016**	**4,313**	**21,652**	**834**	**696**
Bangkok	**5,562,141**	**6,154**	**1,345**	**16,824**	**19,805**	**904**	**4,135**	**331**	**281**
Bangkok Vicinity	**3,099,087**	**695**	**143**	**3,899**	**3,611**	**4,459**	**21,672**	**795**	**858**
Nakhon Pathom	671,386	111	28	883	1,000	6,049	23,978	760	671
Nonthaburi	698,704	234	45	1,270	834	2,986	15,527	550	838
Pathum Thani	484,586	96	31	572	410	5,048	15,632	847	1,182
Samut Prakan	871,806	184	29	761	923	4,738	30,062	1,146	945
Samut Sakon	372,605	70	10	413	444	5,323	37,261	902	839
Central Region	**2,822,518**	**445**	**99**	**3,813**	**5,245**	**6,343**	**28,510**	**740**	**538**
Chai Nat	339,329	42	11	432	453	8,079	30,848	785	749
Pra Nakhon Si Ayuthaya	693,230	76	17	616	661	9,121	40,778	1,125	1,049
Lop Buri	738,370	106	28	884	1,357	6,966	26,370	835	544
Saraburi	546,044	126	21	961	1,514	4,334	26,002	568	361
Sing Buri	221,407	58	12	534	866	3,817	18,451	415	256
Ang Thong	284,138	37	10	386	394	7,679	28,414	736	721
Eastern Region	**3,738,670**	**716**	**159**	**5,280**	**6,584**	**5,222**	**23,514**	**708**	**568**
Chanthaburi	455,158	129	14	761	945	3,528	32,511	598	482
Chachoengsao	593,170	67	17	484	571	8,853	34,892	1,226	1,039
Chon Buri	927,458	277	58	1,962	2,457	3,348	15,991	473	377
Trat	201,639	32	11	396	365	6,301	18,331	509	552
Nakhon Nayok	230,333	52	15	361	496	4,429	15,356	638	464
Prachin Buri	893,360	91	30	795	1,125	9,817	29,779	1,124	794
Rayong	437,552	68	14	521	625	6,435	31,254	840	700
Sa Kaeo	na	na	na	na	na	na	na	na	na
Western Region	**3,423,473**	**496**	**108**	**4,265**	**5,609**	**6,902**	**31,699**	**803**	**610**
Ratchaburi	777,105	196	37	1,549	2,171	3,965	21,003	502	358
Kanchanaburi	724,435	68	18	606	908	10,653	40,246	1,195	798
Suphan Buri	825,451	89	21	784	928	9,275	39,307	1,053	889
Samutshongkhram	206,712	30	7	343	390	6,890	29,530	603	530
Phetchaburi	438,615	55	11	555	573	7,975	39,874	790	765
Prachuap Kiri Kan	451,155	58	14	428	639	7,779	32,225	1,054	706
Northeastern Region	**20,059,015**	**1,867**	**283**	**13,283**	**16,219**	**10,744**	**70,880**	**1,510**	**1,237**
Nakhon Ratchasima	2,467,366	254	47	1,714	2,495	9,714	52,497	1,440	989
Buri Ram	1,417,329	79	16	675	1,019	17,941	88,583	2,100	1,391
Surin	1,341,385	102	12	707	938	13,151	111,782	1,897	1,430
Sisa Ket	1,335,487	65	15	570	771	20,546	89,032	2,343	1,732
Ubon Ratchathani	1,945,179	156	21	1,511	1,695	12,469	92,628	1,287	1,148
Yasothon	528,277	37	8	369	405	14,278	66,035	1,432	1,304
Chaiyaphum	1,086,331	63	12	663	635	17,243	90,528	1,639	1,711
Amnat Charoen	na	na	na	na	na	na	na	na	na
Nong Bua Lam Phu	na	na	na	na	na	na	na	na	na
Khon Kaen	1,662,512	539	40	1,896	2,023	3,084	41,563	877	822

Location	Population 1992	Number of Physicians 1992	Number of Dentists 1992	Number of Nurses 1992	Number of Hospital Beds 1992	Persons per Physician	Persons per Dentist	Persons per Nurse	Persons per Hospital Bed
	1	2	3	4	5	6	7	8	9
Udon Thani	1,846,154	155	26	1,086	1,461	11,911	71,006	1,700	1,264
Loei	595,444	42	11	373	480	14,177	54,131	1,596	1,241
Nong Khai	836,693	48	9	522	564	17,431	92,966	1,603	1,483
Maha Salakham	869,118	51	12	535	530	17,042	72,427	1,625	1,640
Roi Et	1,238,930	73	12	749	847	16,972	103,244	1,654	1,463
Kalasin	925,254	60	10	600	640	15,421	92,525	1,542	1,446
Sakhon Nakhon	1,014,343	76	17	580	876	13,347	59,667	1,749	1,158
Nakhon Phanom	649,933	44	11	441	530	14,771	59,085	1,471	1,226
Mukdahan	299,280	23	4	292	310	13,012	74,820	1,025	965
Northern Region	**11,682,315**	**1,801**	**291**	**12,413**	**15,370**	**6,487**	**40,145**	**941**	**760**
Chiang Mai	1,530,779	666	72	2,740	3,476	2,298	21,261	559	440
Lamphun	397,712	36	9	364	348	11,048	44,190	1,093	1,143
Lampang	776,251	116	26	927	1,092	6,692	29,856	837	711
Uttaradit	475,564	48	11	549	658	9,908	43,233	866	723
Phrae	493,532	57	9	541	614	8,658	54,837	912	804
Nan	457,626	56	10	497	691	8,172	45,763	921	662
Phayao	512,473	52	12	602	672	9,855	42,706	851	763
Chiang Rai	1,229,445	115	20	829	1,270	10,691	61,471	1,843	968
Mae Hong Son	206,863	25	4	310	264	8,275	51,716	667	784
Nakhon Sawan	1,093,973	173	24	1,143	1,399	6,324	45,582	1,556	782
Uthai Thani	318,595	41	8	386	420	7,771	39,824	1,642	759
Kamphaeng Phet	731,355	49	10	440	478	14,926	73,136	3,222	1,530
Tak	425,668	52	10	545	613	8,186	42,567	1,488	694
Sukhotai	606,823	56	14	575	720	10,836	43,345	2,183	843
Phitsanulok	842,016	162	26	923	1,469	5,198	32,385	912	573
Phichit	587,414	45	14	510	562	13,054	41,958	1,152	1,045
Phetchabun	996,256	52	12	532	624	19,159	83,021	1,873	1,597
Southern Region	**7,401,746**	**1,224**	**241**	**9,503**	**10,573**	**6,047**	**30,713**	**779**	**700**
Nakhon Si Thammarat	1,477,417	121	27	1,209	1,771	12,210	54,719	1,222	834
Krabi	311,310	35	4	280	364	8,895	77,828	1,112	855
Phangnga	217,380	42	11	517	396	5,187	19,806	421	550
Phuket	188,535	59	9	399	483	3,196	20,948	473	390
Surat Thani	791,259	144	12	1,281	1,179	5,495	65,938	618	671
Ranong	130,787	26	6	275	278	5,030	21,798	476	470
Chumphon	416,048	51	10	565	587	8,158	41,605	736	709
Songkla	1,130,073	452	113	1,931	2,363	2,500	10,001	585	478
Satun	230,563	21	4	248	190	10,979	57,641	930	1,213
Trang	540,079	60	11	457	695	9,001	49,098	1,182	777
Phattalung	474,564	37	7	448	405	12,826	67,795	1,059	1,172
Pattani	541,166	39	12	501	448	13,876	45,097	1,080	1,208
Yala	375,482	88	11	765	704	4,267	34,135	491	533
Narathiwat	576,593	49	4	627	710	11,76	144,148	920	812

Table 6 Education and Human Resources Indicators (I)

Location	Literacy Rates (%)				Educational Attainment Levels 1998 (%)		
	1990		1995		No Formal Education	lower & upper Primary	lower & upper Secondary
	Male	Female	Male	Female			
	1	2	3	4	5	6	7
Kingdom	**84.74**	**82.25**	**99.69**	**99.58**	**3.6**	**65.5**	**16.3**
Bangkok	**90.54**	**89.92**	**100.00**	**100.00**	**1.5**	**41.1**	**22.5**
Bangkok Vicinity	**88.24**	**86.27**	**99.98**	**99.97**	**1.7**	**51.2**	**24.6**
Nakhon Pathom	85.71	82.31	99.94	99.95	2.2	67.2	17.7
Nonthaburi	89.28	88.54	100.00	100.00	0.9	31.6	23.5
Pathum Thani	88.90	86.99	99.96	99.94	2.1	55.8	27.3
Samut Prakan	89.45	87.92	99.99	99.98	1.3	42.4	33.3
Samut Sakon	87.61	85.62	100.00	100.00	2.5	65.4	18.0
Central Region	**87.47**	**84.29**	**99.94**	**99.83**	**2.7**	**63.6**	**18.2**
Chai Nat	87.29	82.57	99.93	99.77	3.2	69.2	14.4
Pra Nakhon Si Ayuthaya	87.50	85.40	100.00	100.00	1.7	59.2	21.2
Lop Buri	87.47	83.98	99.91	99.71	3.9	67.7	16.3
Saraburi	86.87	83.44	99.96	99.87	2.0	58.3	18.4
Sing Buri	83.55	84.96	99.92	99.85	3.6	65.2	18.5
Ang Thong	87.87	85.47	99.91	99.72	1.6	61.7	21.1
Eastern Region	**86.91**	**84.16**	**99.91**	**99.82**	**3.0**	**65.6**	**17.7**
Chanthaburi	87.36	85.40	99.85	99.73	3.1	67.3	17.7
Chachoengsao	86.06	82.73	99.86	99.73	4.1	24.2	19.0
Chon Buri	89.28	87.50	99.97	99.92	2.2	61.7	18.3
Trat	86.10	83.63	99.89	99.79	4.9	60.7	18.2
Nakhon Nayok	86.19	82.11	99.92	99.85	0.7	70.4	15.2
Prachin Buri	84.60	80.75	99.79	99.62	2.6	66.1	22.6
Rayong	87.77	85.69	99.92	99.87	1.3	68.3	15.4
Sa Kaeo	na	na	100.00	100.00	5.3	70.0	14.2
Western Region	**84.80**	**81.51**	**99.78**	**99.61**	**5.2**	**67.8**	**14.1**
Ratchaburi	85.78	82.56	99.97	99.95	3.9	64.0	15.4
Kanchanaburi	82.09	78.19	99.09	98.59	11.8	64.6	11.6
Suphan Buri	84.54	80.00	99.80	99.48	3.8	73.5	12.5
Samutshongkhram	87.46	85.51	99.96	99.84	3.8	64.6	15.9
Phetchaburi	86.66	85.01	99.99	99.98	2.4	69.5	15.5
Prachuap Kiri Kan	84.82	82.35	99.94	99.87	3.0	69.3	16.4
Northeastern Region	**84.31**	**82.44**	**99.87**	**99.77**	**1.7**	**77.9**	**12.8**
Nakhon Ratchasima	84.39	80.50	99.96	99.89	1.4	72.9	16.4
Buri Ram	82.68	78.97	100.00	100.00	4.5	78.5	10.2
Surin	80.89	77.72	99.74	99.59	2.6	75.2	13.1
Sisa Ket	81.75	79.83	100.00	100.00	3.5	79.6	11.0
Ubon Ratchathani	83.78	82.99	100.00	100.00	1.1	79.5	13.1
Yasothon	86.61	86.75	99.85	99.73	0.2	83.3	11.1
Chaiyaphum	85.52	83.36	99.57	99.02	1.4	82.5	10.3
Amnat Charoen	na	na	99.97	99.97	0.6	78.7	13.7
Nong Bua Lam Phu	na	na	99.95	99.89	1.5	80.9	11.5
Khon Kaen	85.78	83.92	99.87	99.69	1.2	74.5	13.3

Location	Literacy Rates (%)				Educational Attainment Levels 1998 (%)		
	1990		1995		No Formal Education	lower & upper Primary	lower & upper Secondary
	Male	Female	Male	Female			
	1	2	3	4	5	6	7
Udon Thani	84.34	82.93	99.91	99.83	1.4	76.2	12.3
Loei	83.89	80.95	99.54	99.37	4.6	69.3	15.5
Nong Khai	84.11	82.46	99.71	99.59	2.4	79.8	9.8
Maha Salakham	87.02	86.40	99.88	99.71	0.8	81.2	12.5
Roi Et	86.25	85.98	99.92	99.87	0.2	81.8	13.1
Kalasin	86.05	85.74	99.90	99.87	0.7	82.1	11.1
Sakhon Nakhon	84.98	84.26	99.85	99.79	0.7	82.8	10.9
Nakhon Phanom	84.13	83.05	99.75	99.75	1.6	75.1	15.7
Mukdahan	82.55	79.89	99.53	99.49	6.8	62.6	18.5
Northern Region	**82.40**	**77.84**	**98.88**	**98.55**	**7.3**	**66.6**	**14.1**
Chiang Mai	80.16	75.91	96.67	96.26	8.0	55.6	20.6
Lamphun	82.78	78.62	98.39	98.26	6.9	62.9	17.7
Lampang	82.51	76.86	99.74	99.64	5.2	64.4	15.7
Uttaradit	86.97	83.89	99.48	99.33	2.3	69.4	14.0
Phrae	86.68	82.90	99.25	98.85	3.3	71.6	14.7
Nan	79.24	75.02	98.41	97.68	14.7	63.6	14.3
Phayao	81.78	75.38	99.30	98.84	11.6	64.4	15.5
Chiang Rai	77.99	72.06	98.87	98.51	12.6	58.1	15.0
Mae Hong Son	56.09	50.90	100.00	100.00	39.9	43.7	10.0
Nakhon Sawan	85.58	79.17	99.89	99.61	5.8	71.3	12.9
Uthai Thani	86.23	82.87	99.67	99.23	5.5	78.5	8.6
Kamphaeng Phet	83.65	78.53	99.34	98.83	7.6	73.6	10.1
Tak	71.94	68.80	97.15	97.27	9.3	65.1	12.9
Sukhotai	86.13	83.65	99.47	98.95	2.9	77.1	9.3
Phitsanulok	85.17	81.07	99.95	99.91	4.4	64.3	15.0
Phichit	86.42	81.06	99.89	99.62	3.7	72.7	14.8
Phetchabun	84.27	80.48	98.51	97.41	3.5	78.7	8.0
Southern Region	**81.26**	**78.62**	**99.68**	**99.68**	**6.0**	**61.1**	**18.4**
Nakhon Si Thammarat	83.91	81.63	99.97	99.96	1.8	66.4	18.8
Krabi	81.16	79.60	99.85	99.74	2.5	70.1	13.2
Phangnga	84.59	82.21	99.95	99.91	4.8	65.6	18.0
Phuket	87.82	86.24	99.91	99.90	3.1	43.2	30.2
Surat Thani	86.13	84.45	99.94	99.90	2.5	62.4	21.8
Ranong	83.32	81.01	99.93	99.77	2.7	60.7	21.2
Chumphon	87.08	85.82	99.95	99.93	1.9	67.1	17.2
Songkla	83.12	80.23	99.86	99.83	3.7	56.8	21.7
Satun	77.52	73.74	98.92	98.18	9.1	59.1	17.4
Trang	83.32	81.63	99.97	99.97	2.6	66.1	17.4
Phattalung	85.20	83.64	99.86	99.72	1.6	66.9	19.8
Pattani	69.36	64.58	100.00	100.00	18.8	54.0	13.4
Yala	73.22	69.00	100.00	100.00	15.8	51.5	14.7
Narathiwat	69.23	64.03	97.01	97.49	22.5	52.4	12.1

Table 7 Education and Human Resource Indicators (II)

Location	1997			1997	
	Enrollment Rates			Ratios	
	Primary School	Junior High School	High School	Students per Teacher	Students per Classroom
	1	2	3	4	5
Kingdom	**90.81**	**74.18**	**25.85**	**20.23**	**35.11**
Bangkok	**84.70**	**66.70**	**28.83**	**19.05**	**45.26**
Bangkok Vicinity				**20.37**	**43.06**
Nakhon Pathom	102.44	84.21	31.53	20.72	41.31
Nonthaburi	103.98	90.72	32.86	18.86	43.36
Pathum Thani	121.26	99.32	29.60	20.36	40.28
Samut Prakan	118.65	94.51	20.34	22.68	46.72
Samut Sakon	118.28	71.24	12.66	23.30	42.78
Central Region				**18.03**	**30.96**
Chai Nat	78.44	64.95	13.99	16.75	28.03
Pra Nakhon Si Ayuthaya	93.97	80.94	13.84	18.79	32.07
Lop Buri	90.40	77.97	19.13	18.17	31.27
Saraburi	107.75	80.95	20.04	20.14	25.57
Sing Buri	85.43	84.13	21.57	14.70	28.17
Ang Thong	91.42	83.76	19.77	16.60	30.35
Eastern Region	**108.55**	**83.90**	**22.14**	**20.82**	**38.72**
Chanthaburi	120.69	90.61	26.24	20.82	35.67
Chachoengsao	103.58	76.76	21.76	20.12	34.59
Chon Buri	122.82	96.17	20.16	21.23	40.68
Trat	104.63	74.64	25.32	15.85	27.94
Nakhon Nayok	85.55	74.70	24.31	17.07	30.34
Prachin Buri	83.93	72.59	21.17	20.49	33.30
Rayong	110.83	80.06	20.72	24.16	42.29
Sa Kaeo	118.35	89.84	23.29	23.06	35.11
Western Region				**19.29**	**33.48**
Ratchaburi	98.74	79.23	21.28	19.24	36.28
Kanchanaburi	104.58	70.08	17.23	20.44	33.25
Suphan Buri	94.07	72.56	17.58	20.07	32.44
Samutshongkhram	87.13	73.67	18.69	15.22	29.84
Phetchaburi	96.86	84.19	27.59	17.21	32.08
Prachuap Kiri Kan	98.82	80.31	22.45	20.50	34.17
Northeastern Region	**83.60**	**71.74**	**27.03**	**21.40**	**34.40**
Nakhon Ratchasima	79.96	68.15	26.17	20.99	33.94
Buri Ram	80.33	68.17	26.94	22.32	34.98
Surin	80.61	77.88	30.19	23.96	37.22
Sisa Ket	82.09	71.86	29.42	22.19	34.72
Ubon Ratchathani	89.08	65.05	24.80	22.27	36.23
Yasothon	73.69	68.24	25.55	19.56	31.55
Chaiyaphum	92.60	74.43	27.20	21.56	31.77
Amnat Charoen	82.09	67.28	28.23	22.38	33.06
Nong Bua Lam Phu	82.05	62.71	19.83	22.82	33.92
Khon Kaen	84.23	77.79	28.62	20.64	32.24

Location	1997			1997	
	Enrollment Rates			Ratios	
	Primary School	Junior High School	High School	Students per Teacher	Students per Classroom
	1	2	3	4	5
Udon Thani	85.72	71.87	23.40	21.40	34.94
Loei	90.76	69.25	26.17	19.12	30.27
Nong Khai	77.45	62.13	19.21	20.92	37.94
Maha Salakham	77.55	72.50	31.43	20.03	35.92
Roi Et	89.92	76.54	30.28	20.91	33.26
Kalasin	89.33	86.45	35.38	21.43	34.56
Sakhon Nakhon	83.24	71.99	24.64	21.56	35.66
Nakhon Phanom	80.29	69.13	23.65	20.19	34.33
Mukdahan	91.26	89.23	37.16	20.69	35.09
Northern Region	**95.04**	**74.99**	**26.73**	**18.84**	**31.48**
Chiang Mai	111.90	85.44	31.46	18.82	31.95
Lamphun	91.31	91.54	30.86	17.12	29.38
Lampang	98.61	83.70	25.07	17.50	31.51
Uttaradit	86.02	72.94	22.66	17.11	29.64
Phrae	85.04	81.84	28.11	16.55	31.78
Nan	105.12	96.26	44.54	18.46	29.37
Phayao	92.88	80.24	30.08	19.01	35.08
Chiang Rai	105.08	78.08	26.21	21.11	36.14
Mae Hong Son	125.49	65.35	26.85	20.95	25.20
Nakhon Sawan	89.16	66.01	21.75	18.78	31.50
Uthai Thani	87.40	72.95	27.60	18.08	27.88
Kamphaeng Phet	85.04	63.88	20.62	20.28	32.29
Tak	111.43	73.37	28.43	21.92	33.13
Sukhotai	92.81	68.01	24.80	18.83	30.72
Phitsanulok	88.16	74.66	27.06	18.35	32.23
Phichit	77.43	66.00	23.13	16.93	27.37
Phetchabun	88.98	68.08	25.87	19.67	31.43
Southern Region	**91.29**	**73.92**	**25.57**	**20.68**	**36.85**
Nakhon Si Thammarat	79.40	74.25	24.49	20.04	37.35
Krabi	108.96	76.06	19.90	22.27	35.83
Phangnga	83.99	71.67	21.92	18.80	29.84
Phuket	103.69	84.60	28.46	19.07	43.16
Surat Thani	96.82	73.46	23.00	20.13	32.89
Ranong	98.62	76.37	20.42	20.57	33.72
Chumphon	96.38	75.07	21.91	20.42	32.87
Songkla	88.55	73.70	23.42	20.36	39.96
Satun	93.11	80.60	34.21	20.89	37.12
Trang	84.43	72.76	30.26	21.01	36.10
Phattalung	77.54	73.32	27.85	18.47	37.78
Pattani	96.60	72.31	26.26	21.81	51.76
Yala	111.87	86.58	40.58	22.35	25.88
Narathiwat	103.13	61.83	23.21	24.27	44.36

Table 8 Housing and Environment Indicators, 1990

Location	Population	Number of Households	Quality of Housing			Environmental Quality		
			Average no. of Persons per Dwelling	Average no. of Persons per Sleeping Room	Dwellings in Non-Permanent Building Materials (%)	Households without Access to Safe Sanitation (%)	Households without Access to Electricity (%)	Households Cooking with Fuelwood and Charcoal (%)
	1	2	3	4	5	6	7	8
Kingdom	**54,548,530**	**12,366,485**	**4.5**	**4.4**	**9.4**	**2.0**	**10.3**	**19.1**
Bangkok	**5,882,411**	**1,341,668**	**4.5**	**4.4**	**2.4**	**0.2**	**0.4**	**5.7**
Bangkok Vicinity	**2,707,463**	**603,479**	**4.6**	**4.5**	**8.8**	**0.7**	**1.2**	**6.2**
Nakhon Pathom	629,573	135,918	4.7	4.7	13.2	1.1	1.7	7.0
Nonthaburi	574,702	126,816	4.6	4.5	11.5	0.3	1.2	6.7
Pathum Thani	412,407	93,504	4.5	4.4	5.7	0.6	1.5	6.9
Samut Prakan	769,822	175,142	4.4	4.4	3.4	0.3	0.6	4.8
Samut Sakon	320,959	72,099	4.6	4.5	12.7	1.5	1.2	6.1
Central Region	**2,777,829**	**677,052**	**4.1**	**4.1**	**5.7**	**0.4**	**5.9**	**13.3**
Chai Nat	357,129	91,124	3.9	3.9	6.0	0.2	9.7	22.7
Pra Nakhon Si Ayuthaya	700,649	162,311	4.4	4.3	3.5	0.4	2.1	8.9
Lop Buri	721,023	176,922	4.1	4.1	6.6	0.5	8.5	12.6
Saraburi	507,792	121,726	4.2	4.2	7.7	0.5	8.1	14.2
Sing Buri	230,251	58,836	3.9	3.9	4.9	0.1	2.4	15.7
Ang Thong	260,985	66,133	4.0	4.0	5.3	0.6	2.6	9.3
Eastern Region	**3,414,093**	**806,168**	**4.3**	**4.3**	**6.6**	**5.4**	**10.8**	**10.4**
Chanthaburi	390,648	93,581	4.2	4.2	8.1	3.7	17.6	13.2
Chachoengsao	552,108	122,598	4.5	4.5	9.9	2.7	11.0	12.2
Chon Buri	851,181	202,818	4.2	4.2	4.7	1.6	4.5	6.9
Trat	162,226	37,855	4.3	4.3	4.9	4.8	12.3	14.3
Nakhon Nayok	221,706	56,799	3.9	3.9	7.2	1.1	8.4	9.2
Prachin Buri	785,578	186,005	4.3	4.2	7.3	1.1	15.2	14.4
Rayong	450,646	106,512	4.3	4.2	4.5	27.2	9.5	4.7
Sa Kaeo	na	na	na	na	na	na	na	na
Western Region	**3,177,339**	**731,888**	**4.4**	**4.4**	**13.1**	**1.8**	**8.9**	**12.5**
Ratchaburi	734,991	167,392	4.4	4.4	11.3	1.2	4.8	10.5
Kanchanaburi	641,041	146,014	4.4	4.4	18.0	3.5	13.9	18.5
Suphan Buri	797,514	185,707	4.3	4.3	9.7	1.0	7.3	10.2
Samutshongkhram	191,125	43,839	4.4	4.4	9.1	1.2	1.2	8.2
Phetchaburi	401,317	92,010	4.4	4.4	13.3	0.6	7.2	14.6
Prachuap Kiri Kan	411,351	96,926	4.3	4.3	16.7	3.0	16.5	11.5
Northeastern Region	**19,038,407**	**4,047,349**	**4.7**	**4.7**	**8.5**	**0.5**	**11.5**	**20.5**
Nakhon Ratchasima	2,375,476	531,678	4.5	4.5	0.4	0.0	15.5	12.0
Buri Ram	1,357,108	281,893	4.8	4.8	8.9	0.6	17.8	6.9
Surin	1,220,540	264,151	4.7	4.6	9.9	1.1	17.7	19.3
Sisa Ket	1,286,121	271,005	4.8	4.8	12.0	0.6	13.8	18.9
Ubon Ratchathani	1,869,590	381,987	4.9	4.9	8.6	0.4	14.2	27.8
Yasothon	529,093	115,863	4.6	4.6	6.1	0.3	8.7	18.1
Chaiyaphum	997,861	226,944	4.4	4.4	13.0	0.7	12.7	18.2
Amnat Charoen	na	na	na	na	na	na	na	na
Nong Bua Lam Phu	na	na	na	na	na	na	na	na
Khon Kaen	1,621,415	357,329	4.6	4.6	9.2	0.4	5.6	19.3

Location	Population	Number of Households	Quality of Housing			Environmental Quality		
			Average no. of Persons per Dwelling	Average no. of Persons per Sleeping Room	Dwellings in Non-Permanent Building Materials (%)	Households without Access to Safe Sanitation (%)	Households without Access to Electricity (%)	Households Cooking with Fuelwood and Charcoal (%)
	1	2	3	4	5	6	7	8
Udon Thani	1,770,669	353,774	5.0	5.0	8.9	0.5	6.5	20.8
Loei	535,842	114,752	4.7	4.7	13.5	0.7	13.0	22.0
Nong Khai	797,344	161,407	5.0	5.0	15.0	0.6	16.7	19.1
Maha Salakham	878,675	192,995	4.6	4.6	10.2	0.2	3.3	20.6
Roi Et	1,122,021	239,515	4.7	4.7	8.1	1.3	4.5	23.8
Kalasin	845,546	181,054	4.7	4.7	9.4	0.4	4.7	23.4
Sakhon Nakhon	943,348	194,868	4.9	4.9	5.8	0.7	9.0	38.2
Nakhon Phanom	623,165	125,567	5.0	5.0	8.4	1.0	14.4	39.9
Mukdahan	264,593	52,567	5.1	5.1	9.7	1.1	14.5	22.3
Northern Region	**10,584,443**	**2,631,930**	**4.1**	**4.0**	**11.9**	**2.5**	**13.6**	**35.5**
Chiang Mai	1,367,183	364,736	3.8	3.8	17.5	0.9	10.1	39.0
Lamphun	409,862	110,273	3.7	3.7	9.9	0.2	7.6	35.4
Lampang	728,843	186,437	3.9	3.9	6.0	1.1	7.3	40.4
Uttaradit	440,342	109,520	4.0	4.0	7.6	3.3	12.3	23.3
Phrae	483,270	124,108	3.9	3.9	3.3	0.7	7.1	38.5
Nan	416,686	99,005	4.2	4.2	14.9	3.7	9.7	60.8
Phayao	474,524	121,508	3.9	3.9	9.1	0.6	3.2	49.2
Chiang Rai	1,052,234	262,792	4.0	4.0	16.8	1.5	7.7	39.2
Mae Hong Son	158,385	36,049	4.4	4.4	72.9	5.0	47.1	49.0
Nakhon Sawan	1,040,054	257,082	4.1	4.1	8.0	2.0	16.3	29.0
Uthai Thani	295,050	73,924	4.0	4.0	10.0	1.5	32.2	45.6
Kamphaeng Phet	643,795	151,009	4.3	4.3	8.7	2.3	26.7	39.6
Tak	335,201	78,967	4.3	4.3	21.8	4.3	24.8	51.3
Sukhotai	560,375	138,691	4.1	4.1	6.3	10.0	21.6	30.5
Phitsanulok	757,209	187,812	4.1	4.0	10.7	4.0	13.7	25.5
Phichit	550,608	136,998	4.0	4.0	5.3	2.6	11.9	17.5
Phetchabun	870,822	193,019	4.8	4.5	12.4	3.3	15.4	20.9
Southern Region	**6,966,455**	**1,526,411**	**4.6**	**4.6**	**14.0**	**7.2**	**15.7**	**13.5**
Nakhon Si Thammarat	1,400,598	297,693	4.7	4.7	12.4	11.9	16.7	11.4
Krabi	276,243	58,993	4.7	4.7	23.9	7.4	31.3	12.6
Phangnga	209,415	46,892	4.5	4.5	16.3	2.6	21.4	15.7
Phuket	166,308	36,941	4.7	4.5	7.2	1.2	2.3	5.6
Surat Thani	747,049	168,125	4.5	4.5	12.1	9.4	20.7	7.8
Ranong	116,913	27,309	4.3	4.3	17.3	15.4	24.1	15.3
Chumphon	373,918	90,425	4.2	4.2	14.7	19.2	34.7	20.4
Songkla	1,094,323	244,505	4.5	4.5	12.5	3.2	7.5	11.0
Satun	208,918	42,703	4.9	4.9	26.1	5.0	17.8	14.6
Trang	528,568	114,119	4.7	4.6	17.9	3.9	28.1	9.8
Phattalung	441,093	98,966	4.5	4.5	8.6	2.5	12.9	11.3
Pattani	515,372	106,181	4.9	4.9	11.8	5.7	2.7	22.5
Yala	340,982	75,731	4.5	4.5	14.4	4.7	9.2	18.1
Narathiwat	546,755	117,828	4.7	4.7	16.6	4.1	6.0	22.9

Table 9 Transport and Communications Indicators

Location	Population 1990	Persons per Telephone 1992	Persons per Motorcycle 1992	Persons per Car 1992	Households with Access to a Radio (%) 1990	Households with Access to a Bicycle (%) 1990
	1	2	3	4	5	6
Kingdom	**54,548,530**	**54.2**	**14.0**	**29.2**	**81.3**	**57.1**
Bangkok	**5,882,411**	**9.4**	**7.6**	**6.5**	**90.7**	**31.7**
Bangkok Vicinity	**2,707,463**	**34.4**	**19.4**	**23.3**		
Nakhon Pathom	629,573	68.9	10.3	17.6	88.4	70.0
Nonthaburi	574,702	20.9	31.5	16.6	91.6	46.7
Pathum Thani	412,407	78.0	36.0	44.1	88.9	59.8
Samut Prakan	769,822	25.3	31.6	27.3	92.1	39.0
Samut Sakon	320,959	50.6	13.0	39.4	88.2	32.4
Central Region	**2,777,829**	**131.6**	**11.9**	**34.6**		
Chai Nat	357,129	268.9	10.3	55.8	86.5	79.1
Pra Nakhon Si Ayuthaya	700,649	107.8	20.0	52.0	88.1	59.1
Lop Buri	721,023	148.8	12.4	19.9	87.9	68.4
Saraburi	507,792	100.8	11.6	35.5	81.6	66.7
Sing Buri	230,251	143.4	6.9	47.5	87.9	74.5
Ang Thong	260,985	145.7	9.4	51.8	86.1	73.6
Eastern Region	**3,414,093**	**77.0**	**12.8**	**26.3**		
Chanthaburi	390,648	75.8	7.9	15.0	84.8	51.2
Chachoengsao	552,108	153.1	31.9	58.8	87.6	57.1
Chon Buri	851,181	35.9	12.4	17.2	91.9	52.1
Trat	162,226	100.9	9.2	21.6	81.0	48.8
Nakhon Nayok	221,706	176.2	12.0	55.0	83.7	77.2
Prachin Buri	785,578	212.8	18.6	58.3	81.5	67.0
Rayong	450,646	85.0	8.5	22.3	80.7	57.0
Sa Kaeo	na	na	na	na	na	na
Western Region	**3,177,339**	**101.3**	**11.5**	**36.7**		
Ratchaburi	734,991	81.5	10.9	37.8	84.0	67.7
Kanchanaburi	641,041	128.1	10.4	31.1	83.2	59.8
Suphan Buri	797,514	139.7	12.1	52.8	83.5	75.7
Samutshongkhram	191,125	74.2	19.1	31.9	88.7	31.8
Phetchaburi	401,317	87.2	11.6	31.5	88.0	72.8
Prachuap Kiri Kan	411,351	92.2	11.0	32.7	87.5	54.1
Northeastern Region	**19,038,407**	**288.0**	**30.4**	**102.5**		
Nakhon Ratchasima	2,375,476	149.8	23.4	66.8	75.7	55.5
Buri Ram	1,357,108	414.5	42.5	137.4	71.0	68.6
Surin	1,220,540	426.6	39.1	155.0	69.1	69.2
Sisa Ket	1,286,121	867.8	37.4	171.4	70.0	71.3
Ubon Ratchathani	1,869,590	305.3	27.0	115.1	77.3	69.7
Yasothon	529,093	499.6	28.5	95.7	85.0	75.3
Chaiyaphum	997,861	495.0	47.9	210.3	76.0	67.7
Amnat Charoen	na	na	na	na	na	na
Nong Bua Lam Phu	na	na	na	na	na	na
Khon Kaen	1,621,415	139.2	20.6	52.9	74.9	60.3

Location	Population 1990	Persons per Telephone 1992	Persons per Motorcycle 1992	Persons per Motor Car 1992	Households with Access to a Radio (%) 1990	Households with Access to a Bicycle (%) 1990
	1	2	3	4	5	6
Udon Thani	1,770,669	241.1	38.9	83.1	78.6	62.3
Loei	535,842	239.2	19.0	107.1	82.3	58.2
Nong Khai	797,344	326.0	32.1	157.3	79.9	75.3
Maha Salakham	878,675	564.3	40.7	119.0	76.4	55.1
Roi Et	1,122,021	571.6	31.8	117.3	81.6	69.9
Kalasin	845,546	644.0	45.0	95.7	74.3	63.7
Sakhon Nakhon	943,348	377.9	30.3	355.0	82.5	74.6
Nakhon Phanom	623,165	404.9	24.2	98.6	82.5	71.1
Mukdahan	264,593	299.6	32.3	155.6	80.4	65.8
Northern Region	**10,584,443**	**135.2**	**11.5**	**44.8**		
Chiang Mai	1,367,183	52.0	6.6	28.6	78.6	51.5
Lamphun	409,862	187.1	6.8	18.4	78.6	63.7
Lampang	728,843	126.9	7.3	33.7	80.7	62.4
Uttaradit	440,342	181.5	12.5	51.7	84.3	65.8
Phrae	483,270	155.4	9.4	33.3	86.2	70.8
Nan	416,686	274.1	10.3	57.6	78.7	55.5
Phayao	474,524	315.5	13.8	65.1	75.7	68.5
Chiang Rai	1,052,234	197.7	16.1	59.6	80.9	67.0
Mae Hong Son	158,385	284.9	27.3	166.5	70.6	16.5
Nakhon Sawan	1,040,054	119.3	17.0	47.7	80.7	64.1
Uthai Thani	295,050	239.1	8.1	61.8	82.9	71.9
Kamphaeng Phet	643,795	325.6	24.7	79.5	79.8	70.2
Tak	335,201	99.7	14.5	51.2	76.0	48.0
Sukhotai	560,375	211.9	17.7	100.5	82.2	77.1
Phitsanulok	757,209	126.2	13.2	47.5	83.1	67.4
Phichit	550,608	182.7	12.4	57.9	82.4	75.8
Phetchabun	870,822	327.0	21.5	53.8	81.1	65.1
Southern Region	**6,966,455**	**110.6**	**10.6**	**51.9**		
Nakhon Si Thammarat	1,400,598	220.2	17.5	62.8	75.9	31.1
Krabi	276,243	215.1	8.6	44.2	80.1	30.5
Phangnga	209,415	137.9	14.2	37.5	70.8	29.2
Phuket	166,308	23.9	2.6	14.1	88.4	29.4
Surat Thani	747,049	117.5	10.5	50.4	81.5	35.4
Ranong	116,913	44.4	9.8	35.3	74.8	21.0
Chumphon	373,918	99.9	10.8	46.3	82.7	32.8
Songkla	1,094,323	64.6	9.8	43.8	73.3	40.4
Satun	208,918	157.0	13.0	77.0	70.0	41.5
Trang	528,568	125.4	11.1	54.0	74.4	35.9
Phattalung	441,093	329.7	16.3	143.6	75.9	57.2
Pattani	515,372	221.3	14.1	60.7	79.0	50.1
Yala	340,982	87.5	7.1	46.9	82.6	46.3
Narathiwat	546,755	133.5	8.6	94.0	82.8	45.5

Table 10 Access to Consumer Goods, 1990

Location	Population	Percentage of Households with Access to							
		Television		Refrigerator	Sewing Machine	Iron	Electric Fan	Bicycle	Motorcycle
		Color	Black & White						
	1	2	3	4	5	6	7	8	9
Kingdom	54,548,530	46.2	24.9	36.0	18.7	54.5	72.1	57.1	40.0
Bangkok	5,882,411	81.5	20.4	74.3	32.6	96.1	96.1	31.7	22.3
Bangkok Vicinity	2,707,463								
Nakhon Pathom	629,573	68.1	25.6	56.6	19.6	77.2	93.8	70.0	62.9
Nonthaburi	574,702	79.7	26.7	76.0	33.2	89.3	95.0	46.7	22.6
Pathum Thani	412,407	69.5	26.4	62.0	22.5	81.9	94.3	59.8	34.4
Samut Prakan	769,822	77.6	23.0	69.0	23.4	91.6	95.8	39.0	22.7
Samut Sakon	320,959	70.2	21.2	57.5	15.6	82.6	94.0	32.4	32.7
Central Region	2,777,829								
Chai Nat	357,129	51.1	25.1	33.4	20.3	59.6	83.7	79.1	60.1
Pra Nakhon Si Ayuthaya	700,649	58.1	34.6	53.7	25.1	75.5	92.3	59.1	35.8
Lop Buri	721,023	54.6	24.9	43.0	17.4	66.0	82.5	68.4	49.3
Saraburi	507,792	54.4	26.4	45.0	22.4	66.7	82.1	66.7	50.9
Sing Buri	230,251	58.0	23.0	47.1	17.7	74.7	92.2	74.5	61.2
Ang Thong	260,985	53.0	31.0	41.2	15.3	71.2	90.3	73.6	46.0
Eastern Region	3,414,093								
Chanthaburi	390,648	58.2	19.2	45.6	12.2	60.4	70.6	51.2	65.5
Chachoengsao	552,108	51.3	33.0	42.1	21.3	63.2	80.9	57.1	42.9
Chon Buri	851,181	72.8	19.7	61.9	20.5	81.7	91.0	52.1	68.3
Trat	162,226	62.4	11.8	51.9	13.9	66.0	77.5	48.8	61.4
Nakhon Nayok	221,706	41.9	38.2	39.0	21.2	63.5	84.1	77.2	54.6
Prachin Buri	785,578	38.2	25.7	27.1	14.9	48.9	70.8	67.0	38.8
Rayong	450,646	59.6	30.0	51.7	18.7	68.2	82.5	57.0	72.7
Sa Kaeo	na	na	na	na	na	na	na	na	na
Western Region	3,177,339								
Ratchaburi	734,991	61.3	24.9	48.8	20.1	69.4	86.9	67.7	59.2
Kanchanaburi	641,041	53.7	18.7	42.1	18.9	59.8	78.0	59.8	69.4
Suphan Buri	797,514	49.3	29.9	33.5	19.6	55.0	85.4	75.7	62.0
Samutshongkhram	191,125	69.5	27.7	59.1	22.1	79.9	93.1	31.8	24.0
Phetchaburi	401,317	58.0	17.5	43.5	16.5	67.7	82.6	72.8	56.9
Prachuap Kiri Kan	411,351	60.2	15.9	49.0	15.5	63.1	72.8	54.1	72.1
Northeastern Region	19,038,407								
Nakhon Ratchasima	2,375,476	33.4	30.0	22.3	13.7	43.6	62.1	55.5	28.0
Buri Ram	1,357,108	22.5	24.6	12.0	10.2	27.4	51.6	68.6	24.1
Surin	1,220,540	18.1	17.7	10.7	8.3	23.1	47.0	69.2	21.3
Sisa Ket	1,286,121	17.0	29.9	10.6	8.7	24.7	50.6	71.3	21.2
Ubon Ratchathani	1,869,590	23.0	32.5	18.0	14.0	32.7	54.3	69.7	28.4
Yasothon	529,093	27.1	31.7	18.2	16.4	37.9	67.8	75.3	32.3
Chaiyaphum	997,861	25.9	24.8	14.8	14.6	38.2	57.2	67.7	28.7
Amnat Charoen	na	na	na	na	na	na	na	na	na
Nong Bua Lam Phu	na	na	na	na	na	na	na	na	na
Khon Kaen	1,621,415	32.3	29.5	21.5	16.8	44.3	72.1	60.3	31.1

Location	Population	Percentage of Households with Access to							
		Television		Refrigerator	Sewing Machine	Iron	Electric Fan	Bicycle	Motorcycle
		Color	Black & White						
	1	2	3	4	5	6	7	8	9
Udon Thani	1,770,669	36.2	25.2	22.0	20.0	40.5	65.0	62.3	28.7
Loei	535,842	30.2	28.4	21.8	20.5	38.1	57.1	58.2	44.7
Nong Khai	797,344	28.4	21.9	19.9	15.3	34.4	58.9	75.3	30.5
Maha Salakham	878,675	25.5	26.6	15.2	15.1	37.7	67.3	55.1	26.1
Roi Et	1,122,021	23.9	27.1	14.7	14.7	37.8	69.2	69.9	30.9
Kalasin	845,546	26.0	26.9	16.2	17.5	37.3	65.6	63.7	24.7
Sakhon Nakhon	943,348	25.2	32.8	17.1	17.9	34.1	57.1	74.6	26.1
Nakhon Phanom	623,165	30.7	22.0	19.8	19.2	36.8	57.3	71.1	30.0
Mukdahan	264,593	24.1	19.2	19.1	15.6	35.4	51.5	65.8	29.3
Northern Region	**10,584,443**								
Chiang Mai	1,367,183	51.2	16.5	40.2	20.1	52.3	69.4	51.5	56.0
Lamphun	409,862	52.0	22.0	41.0	23.7	50.5	73.5	63.7	62.6
Lampang	728,843	50.8	22.3	45.7	20.8	52.6	73.7	62.4	56.5
Uttaradit	440,342	41.0	21.3	30.0	16.4	49.7	72.0	65.8	39.5
Phrae	483,270	39.6	22.2	42.1	22.2	57.6	76.6	70.8	55.9
Nan	416,686	29.4	8.7	25.7	13.8	36.1	61.1	55.5	45.3
Phayao	474,524	43.5	25.2	32.9	18.4	48.0	67.6	68.5	47.7
Chiang Rai	1,052,234	47.3	24.7	33.7	17.8	48.2	67.6	67.0	49.6
Mae Hong Son	158,385	25.6	1.0	21.2	8.7	28.4	36.7	16.5	28.8
Nakhon Sawan	1,040,054	44.0	31.6	29.3	17.4	47.1	73.1	64.1	45.4
Uthai Thani	295,050	28.6	34.5	20.1	11.8	35.3	55.3	71.9	47.8
Kamphaeng Phet	643,795	28.9	37.8	19.0	12.9	34.1	61.4	70.2	37.2
Tak	335,201	38.6	13.6	32.5	13.1	43.9	55.3	48.0	40.7
Sukhotai	560,375	34.0	29.4	24.6	12.0	42.9	65.1	77.1	36.4
Phitsanulok	757,209	42.1	27.9	29.7	17.6	47.1	71.6	67.4	41.7
Phichit	550,608	43.3	34.3	26.2	20.5	49.8	80.0	75.8	50.6
Phetchabun	870,822	35.2	32.7	22.1	19.9	45.2	65.9	65.1	38.2
Southern Region	**6,966,455**								
Nakhon Si Thammarat	1,400,598	47.6	26.3	30.3	13.8	54.1	63.5	31.1	42.1
Krabi	276,243	43.0	26.8	32.3	12.7	44.1	53.0	30.5	62.6
Phangnga	209,415	48.2	13.1	37.8	22.1	58.7	61.6	29.2	58.4
Phuket	166,308	80.7	9.4	65.7	26.3	85.3	88.8	29.4	77.0
Surat Thani	747,049	56.0	24.6	40.2	15.1	58.6	66.4	35.4	58.7
Ranong	116,913	49.6	12.9	41.5	15.9	55.9	61.6	21.0	42.2
Chumphon	373,918	46.3	12.8	32.4	12.7	46.5	50.3	32.8	49.9
Songkla	1,094,323	52.3	24.5	41.0	16.8	59.8	71.9	40.4	54.3
Satun	208,918	39.1	17.2	26.7	13.2	46.6	57.1	41.5	56.7
Trang	528,568	42.1	21.6	28.2	13.2	47.0	53.5	35.9	55.9
Phattalung	441,093	40.5	30.5	27.8	12.4	47.4	62.4	57.2	50.6
Pattani	515,372	39.2	12.5	27.2	20.8	59.8	68.8	50.1	56.8
Yala	340,982	44.7	17.1	38.2	19.8	61.1	68.1	46.3	68.0
Narathiwat	546,755	47.4	16.6	31.0	23.0	61.1	72.0	45.5	64.4

Table 11 Women's Indicators by Region and Province (I)

Location	Labour Force (%) 1990		Looking for job (%) 1990		Without formal education (%) 1998		Educational Attainment Levels, women (%) 1998		
	Men	Women	Men	Women	Men	Women	Upper Primary	Lower secondary	secondary and vocational secondary
	1	2	3	4	5	6	7	8	9
Kingdom	**60.5**	**50.9**	**3.4**	**2.6**	**2.5**	**4.9**			
Bangkok	**59.8**	**46.6**	**3.7**	**3.0**	**0.9**	**2.3**	**18.38**	**14.54**	**12.44**
Bangkok Vicinity	**61.3**	**52.0**	**3.1**	**2.3**	**1.0**	**2.2**			
Nakhon Pathom	62.7	56.8	2.0	1.4	0.6	3.8	27.34	12.37	4.86
Nonthaburi	58.5	47.5	3.2	2.5	0.2	2.6	8.23	14.74	17.76
Pathum Thani	61.5	53.5	3.4	2.2	1.6	2.6	16	17.80	12.89
Samut Prakan	60.6	48.6	3.7	2.9	1.2	1.4	15.80	26.54	15.92
Samut Sakon	64.8	56.9	3.1	2.1	1.6	3.5	30.01	8.21	9.23
Central Region	**60.4**	**54.2**	**2.9**	**2.0**	**0.7**	**5.2**			
Chai Nat	62.4	58.0	2.3	1.5	1.0	5.8	15.28	6.93	6.27
Pra Nakhon Si Ayuthaya	56.8	51.8	3.4	2.3	0.3	2.6	15.91	15.33	12.67
Lop Buri	62.7	55.3	2.5	2.0	1.2	7.3	20.67	8.78	3.37
Saraburi	61.6	50.8	3.4	2.5	0.5	4.1	12.63	11.50	10.94
Sing Buri	60.1	56.6	2.9	1.7	0.4	6.9	12.55	11.71	7.22
Ang Thong	58.9	56.0	3.0	1.7	0.4	3.1	8.81	17.06	7.23
Eastern Region	**62.1**	**53.1**	**2.5**	**1.8**	**1.7**	**4.6**			
Chanthaburi	65.9	59.6	1.4	0.9	1.2	3.4	22.21	7.50	6.58
Chachoengsao	59.5	53.3	2.4	1.6	2.4	6.1	13.15	13.73	7.07
Chon Buri	63.0	51.4	3.0	2.3	1.6	5.2	22.07	11.96	9.29
Trat	63.0	53.7	1.0	0.8	3.5	6.9	20.50	9.88	7.16
Nakhon Nayok	59.1	48.5	3.4	2.2	0.5	1.1	23.36	6.52	5.19
Prachin Buri	61.0	52.8	2.7	2.0	0.9	4.9	16.49	13.61	5.25
Rayong	63.2	53.0	2.7	1.6	1.1	1.5	18.35	10.53	6.81
Sa Kaeo	na	na	na	na	3.2	8.1	24.56	9.93	2.46
Western Region	**61.0**	**54.3**	**2.0**	**1.4**	**3.9**	**6.7**			
Ratchaburi	60.3	53.1	2.4	1.6	1.3	6.6	20.39	7.18	4.85
Kanchanaburi	61.6	54.6	1.6	1.2	10.8	13.0	17.89	4.69	8.11
Suphan Buri	61.7	57.9	1.5	1.1	2.5	5.2	20.53	7.88	5.35
Samutshongkhram	59.7	53.7	2.6	1.8	2.6	5.3	18.86	10.25	5.07
Phetchaburi	60.0	53.1	2.6	1.8	2.3	2.6	18.24	7.81	5.49
Prachuap Kiri Kan	61.9	50.3	1.9	1.3	2.1	4.1	23.20	7.84	7.2
Northeastern Region	**60.1**	**50.0**	**4.0**	**3.1**	**1.1**	**2.6**			
Nakhon Ratchasima	58.8	46.4	3.2	2.3	0.4	2.6	12.10	12.10	4.46
Buri Ram	59.7	50.6	2.8	1.8	2.2	7.2	25.72	7.53	2.91
Surin	57.3	32.0	4.2	2.6	2.2	3.5	23.22	6.37	1.74
Sisa Ket	60.7	56.5	2.1	1.6	3.5	3.6	25.55	8.18	1.52
Ubon Ratchathani	60.0	51.5	2.0	1.5	0.9	1.3	33.41	8.58	3.71
Yasothon	63.9	60.5	2.2	1.6	0.4	0.0	29.69	6.69	3.92
Chaiyaphum	63.9	56.5	2.7	1.9	0.3	2.8	28.67	6.32	4.49
Amnat Charoen	na	na	na	na	0.0	1.3	31.36	7.87	3.72
Nong Bua Lam Phu	na	na	na	na	0.4	2.9	39.48	4.43	1.89
Khon Kaen	60.8	51.8	3.1	2.1	0.3	2.2	23.89	6.72	4.76

Location	Labour Force (%) 1990		Looking for job (%) 1990		Without formal education (%) 1998		Educational Attainment Levels, women (%) 1998		
	Men	Women	Men	Women	Men	Women	Upper Primary	Lower secondary	secondary and vocational secondary
	1	2	3	4	5	6	7	8	9
Udon Thani	57.6	43.7	9.4	7.1	0.5	2.5	28.79	6.06	5.52
Loei	64.5	57.3	1.4	1.2	3.7	5.8	26.95	12.25	5.33
Nong Khai	60.2	49.4	4.0	2.6	1.0	4.3	36.58	5.62	1.96
Maha Salakham	61.6	57.4	2.7	2.1	0.3	1.4	28.97	5.40	2.51
Roi Et	61.1	57.3	2.7	2.2	0.0	0.9	28.49	9.71	2.43
Kalasin	62.7	57.1	2.2	1.7	0.4	0.9	31.66	4.15	2.3
Sakhon Nakhon	58.5	43.3	6.9	4.4	0.7	0.7	31.13	6.36	2.85
Nakhon Phanom	59.1	47.4	13.7	16.1	1.7	1.5	22.25	12.54	3.3
Mukdahan	59.9	43.8	8.9	6.6	5.3	8.9	27.24	14.00	3.18
Northern Region	**63.0**	**53.9**	**2.5**	**2.0**	**5.4**	**10.0**			
Chiang Mai	64.7	53.9	1.9	1.4	5.7	11.0	14.51	12.78	5.59
Lamphun	64.7	54.9	2.1	1.4	6.1	7.8	14.82	14.55	4.2
Lampang	64.7	50.7	2.3	1.5	4.2	6.6	18.55	6.35	6.79
Uttaradit	64.1	54.7	2.3	1.7	1.6	3.3	19.29	6.76	6.07
Phrae	62.9	50.4	3.7	2.5	3.0	3.8	10.43	6.97	5.02
Nan	61.2	51.4	1.9	1.7	13.6	16.2	18.06	5.19	5.08
Phayao	64.1	50.3	2.9	2.0	9.0	14.8	21.44	6.89	5.21
Chiang Rai	62.3	51.0	2.9	2.3	10.5	15.5	18.82	7.68	6.58
Mae Hong Son	60.9	51.2	1.8	1.3	36.4	44.5	14.05	3.32	1.9
Nakhon Sawan	61.4	54.1	2.8	2.1	2.9	9.1	17.55	7.96	3.72
Uthai Thani	62.8	58.4	2.4	1.8	3.9	7.4	16.41	2.75	2.87
Kamphaeng Phet	63.6	58.0	2.8	3.3	1.1	15.6	18.82	4.76	2.7
Tak	61.0	49.4	3.6	2.7	8.9	9.9	14.39	9.00	4.19
Sukhotai	63.3	58.8	2.5	2.0	1.6	4.2	20.39	6.27	2.77
Phitsanulok	61.2	55.1	2.2	1.8	2.4	6.9	14.67	8.27	6.99
Phichit	61.6	55.4	2.9	2.1	2.7	4.8	17.99	7.27	5.15
Phetchabun	62.5	55.2	2.1	1.7	1.9	5.4	21.72	4.16	4.55
Southern Region	**57.3**	**47.8**	**4.0**	**2.9**	**4.4**	**7.9**			
Nakhon Si Thammarat	56.2	49.2	4.1	3.0	1.6	2.1	18.61	12.77	6.09
Krabi	57.0	44.5	2.8	2.3	1.1	4.2	22.27	9.68	7.41
Phangnga	59.9	42.5	2.5	1.9	4.3	5.5	23.61	7.56	2.93
Phuket	62.5	41.2	3.0	2.7	2.0	4.5	18.91	14.51	14.68
Surat Thani	59.7	52.6	3.0	2.5	1.5	3.7	22.69	7.85	9.79
Ranong	62.3	43.9	3.1	2.0	0.4	7.1	17.84	10.70	13.67
Chumphon	62.1	54.7	2.5	1.8	0.8	3.1	19.58	10.95	8.63
Songkla	57.2	48.3	4.3	3.3	1.7	5.9	18.37	12.77	9.75
Satun	55.8	39.6	3.5	3.1	8.2	10.6	22.97	8.25	6.76
Trang	57.1	49.7	3.2	2.7	1.6	3.7	24.75	11.16	6.96
Phattalung	58.2	52.7	4.0	2.9	0.3	3.2	20.66	10.15	6.21
Pattani	55.1	43.5	6.5	4.1	16.3	21.9	18.52	0.08	3.27
Yala	55.2	44.4	4.8	2.8	12.1	20.6	15.49	7.57	5.23
Narathiwat	53.4	42.1	5.4	3.1	16.0	33.0	20.91	4.69	3.76

Table 12 Women's Indicators by Region and Province (II)

Location	Enrollment Rates 1997, Women (%)		Contraceptive Prevalence Rate 1990(%)	Number of Children per Woman 1990	Incidence of STDs 1996, Women & Men
	Lower Secondary	Upper Secondary			
	1	2	3	4	5
Kingdom					
Bangkok	**65.68**	**67.9**	**48.26**	**2.34**	**0.857**
Bangkok Vicinity					
Nakhon Pathom	82.11	60.54	46.25	3.03	0.531
Nonthaburi	93.19	54.10	46.25	2.45	0.969
Pathum Thani	101.16	55.89	58.97	2.51	0.358
Samut Prakan	95.87	33.25	49.19	2.32	0.541
Samut Sakon	76.75	24.85	50.84	2.62	0.318
Central Region					
Chai Nat	67.15	37.54	65.20	2.60	0.114
Pra Nakhon Si Ayuthaya	80.52	53.98	56.83	3.07	0.409
Lop Buri	76.81	57.41	59.97	2.79	0.739
Saraburi	80.22	44.42	58.07	2.92	0.208
Sing Buri	88.44	63.01	62.74	2.69	0.209
Ang Thong	85.87	57.52	62.06	2.98	0.181
Eastern Region					
Chanthaburi	92.99	47.37	54.87	2.47	0.428
Chachoengsao	78.54	49.71	54.32	2.96	0.486
Chon Buri	96.45	67.74	50.72	2.45	0.845
Trat	79.21	46.02	57.56	2.64	0.557
Nakhon Nayok	81.35	55.19	59.22	3.19	0.167
Prachin Buri	75.00	44.94	56.97	2.95	1.222
Rayong	82.34	48.30	61.61	2.86	1.13
Sa Kaeo	92.59	35.50	na	na	0.283
Western Region					
Ratchaburi	80.01	56.23	53.71	3.03	0.087
Kanchanaburi	70.81	36.96	54.42	2.88	0.395
Suphan Buri	73.62	48.33	59.51	2.93	0.44
Samutshongkhram	75.78	45.02	53.25	3.11	0.887
Phetchaburi	85.16	56.11	57.67	3.00	0.096
Prachuap Kiri Kan	79.95	42.1	60.50	2.94	0.484
Northeastern Region					
Nakhon Ratchasima	73.29	44.72	58.92	3.39	0.473
Buri Ram	69.36	35.68	58.31	3.58	0.225
Surin	80.59	41.74	48.88	3.60	0.026
Sisa Ket	77.58	39.72	51.29	3.33	0.079
Ubon Ratchathani	67.25	36.09	58.36	3.57	0.017
Yasothon	77.50	41.93	56.25	2.95	0.02
Chaiyaphum	77.98	39.92	64.84	3.04	0.062
Amnat Charoen	69.40	32.26	58.36	na	0.014
Nong Bua Lam Phu	65.24	22.08	59.20	na	0.031
Khon Kaen	78.91	52.09	62.96	3.29	0.257

Location	Enrollment Rates 1997, Women (%)		Contraceptive Prevalence Rate 1990(%)	Number of Children per Woman 1990	Incidence of STDs 1996, Women & Men
	Lower Secondary	Upper Secondary			
	1	2	3	4	5
Udon Thani	70.25	38.75	59.20	3.39	0.209
Loei	72.56	41.31	67.16	2.99	0.075
Nong Khai	63.94	29.55	59.07	3.52	0.033
Maha Salakham	74.54	44.85	61.24	3.21	0.175
Roi Et	78.76	44.17	57.37	3.11	0.017
Kalasin	91.94	47.30	64.34	3.06	0.32
Sakhon Nakhon	73.18	37.12	55.68	3.31	0.01
Nakhon Phanom	72.81	36.92	55.10	3.25	0.075
Mukdahan	95.14	48.36	62.14	3.34	0.806
Northern Region					
Chiang Mai	90.31	66.47	61.60	2.43	0.104
Lamphun	93.98	57.09	68.00	2.55	0.832
Lampang	88.06	61.08	66.44	2.68	1.438
Uttaradit	75.52	49.03	67.33	2.86	0.115
Phrae	85.11	64.8	65.90	2.53	0.346
Nan	100.49	63.66	70.04	2.65	0.064
Phayao	81.91	52.02	66.97	2.72	0.483
Chiang Rai	82.72	50.64	63.01	2.62	0.128
Mae Hong Son	61.15	31.03	54.54	2.71	0.145
Nakhon Sawan	67.81	48.9	61.11	2.84	0.317
Uthai Thani	76.26	44.71	59.72	2.67	0.257
Kamphaeng Phet	65.86	33.69	63.22	3.07	0.186
Tak	73.44	44.31	56.66	2.77	0.841
Sukhotai	69.56	43.17	63.82	2.95	0.055
Phitsanulok	75.46	60.4	63.73	2.97	0.034
Phichit	65.68	42.81	59.91	3.06	0.017
Phetchabun	70.13	37.86	59.83	3.10	0.092
Southern Region					
Nakhon Si Thammarat	76.04	60.37	49.59	3.40	0.031
Krabi	81.33	40.88	51.60	3.17	1.166
Phangnga	72.23	41.15	56.86	3.20	0.399
Phuket	85.78	89.59	47.70	2.52	1.095
Surat Thani	77.51	53.25	49.35	2.98	0.399
Ranong	73.01	45.53	50.09	2.92	0.292
Chumphon	76.91	53.84	51.42	2.82	0.561
Songkla	75.22	67.8	36.17	3.06	0.062
Satun	86.05	51.23	38.38	3.43	0.016
Trang	74.12	62.74	54.55	3.35	0.264
Phattalung	75.67	58.66	45.77	3.35	0.119
Pattani	73.57	37.33	21.40	3.14	0.478
Yala	90.9	69.27	24.79	2.87	0.559
Narathiwat	66.61	35.17	24.63	2.96	0.454