ADVANCING HUMAN
DEVELOPMENT
THROUGH THE ASEAN COMMUNITY

THAILAND HUMAN DEVELOPMENT REPORT 2014

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PREFACE

Since 1980, UNDP has promoted the idea of human development as a goal with more meaning for humanity than simple measures of economic growth. Human development is best defined as building the capacity for individuals and communities to lead better lives, free from want and fear. Three main contributing factors are income, education, and health which UNDP measures in the Human Development Index to chart the progress of countries. Since 1990, a series of global Human Development Reports have examined many other factors including the environment, human rights, gender, equality and the community.

Over the time that this approach to human development has evolved, Thailand has been through extraordinary changes. In 1990, the economy was at the peak of a tearaway boom which collapsed in the Asian financial crisis of 1997, followed by recovery against the background of a crisis-ridden global economy. Bangkok has been transformed from one of the region's more traditional cities into one of its most globalised. The stark division between urban and rural has been substantially eroded. Lifestyles and mentalities have changed in ways that few could predict.

UNDP in Thailand has tracked this era through a series of Thailand Human Development Reports beginning in 1999 and through the production of a Human Achievement Index, initiated in 2003, which measures progress on eight key areas of human development. This report begins by summarizing the country's record on advancing human development as measured by this index over the past decade. The gains have been impressive. Average per capita income has risen by two-fifths. Many more children are now getting many more years of education. Virtually everyone is now covered by healthcare insurance. Other forms of social security have expanded. Access to safe water and basic sanitation is almost universal. Mobility and connectivity have increased remarkably.

But there are also downsides. The quality of education is a cause for concern. The natural environment has been badly treated and is beginning to suffer the impact of climate change. Family and community are under pressure from the stresses of change. Political participation has increased but political security has become a challenge.

Over the last decade, inequality in income, and inequalities in access to public goods, have improved over recent years but still remain high compared to many other countries of similar income levels.

This report's review of the recent past suggests an agenda for advancing human development in Thailand over the years ahead: improving the quality of education; sustaining the successes in healthcare; completing the framework of social protection; confronting the issues of environmental decline and climate change; and tackling inequalities.

But there is a new feature on the political landscape that needs to be taken into consideration in this task. At the end of 2015, Thailand will become part of the ASEAN Community. ASEAN has been in existence for over half a century as a security grouping, and more recently as an evolving free trade area. But its transformation into a "Community" signals something new and potentially momentous in the region. What are the implications of this innovation for advancing human development in Thailand? That is the focus of this report.

The impact of the ASEAN Community on human development in Thailand will depend in part on the opportunities and difficulties in the new environment that are already known or relatively safe to expect. But it will also depend on which of the many elements in the ASEAN Community's plans are realised. These considerations shape the approach of this report.

From the review of the current state of Thailand's human development, the report selects seven key areas on the agenda for the future; examines current trends and problems in these areas; looks at opportunities and difficulties that can be expected in the new environment; and identifies elements in the ASEAN Community's plans that Thailand should promote as priorities and contribute to their realisation.

The advent of the ASEAN Community is a landmark in the history of Asia. This report aims to raise issues and provoke debate on how Thailand should approach this landmark, not just in the months remaining before December 2015 but in the years beyond.

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ABBREVIATIONS

ACMECS	Ayeyawady-Chao Phraya-Mekong Economic Cooperation Strategy
ACDM	ASEAN Committee on Disaster Management
ACWC	ASEAN Commission on the Promotion and Protection of the Rights of Women and Children
ADB	Asian Development Bank
AEC	ASEAN Economic Community
AFTA	ASEAN Free Trade Area
AICHR	ASEAN Intergovernmental Commission on Human Rights
AIPR	ASEAN Institute for Peace and Reconciliation
APSC	ASEAN Political-Security Community
ASCC	ASEAN Socio-Cultural Community
CLMV	Cambodia, Lao PDR, Myanmar, Vietnam
CVM	chain volume measure
FDI	foreign direct investment
GDP	gross domestic product
GMS	Greater Mekong Subregion
GNI	gross national income
HAI	Human Achievement Index
HDI	Human Development Index
ICT	information and communication technology
IITD	International Institute for Trade and Development
ILO	International Labour Organization
IOM	International Organization for Migration
IPSR	Institute for Population and Social Research
JETRO	Japan External Trade Organization
Lao PDR	Lao People's Democratic Republic
MOU	memorandum of understanding
MRA	mutual recognition agreement
MRC	Mekong River Commission
MSDHS	Ministry of Social Development and Human Security
NESDB	Office of the National Economic and Social Development Board
NGO	non-governmental organization
NQF	National Qualifications Framework
NSO	National Statistical Office
NV	nationality verification
OECD	Organization of Economic Cooperation and Development
PISA	Programme for International Student Assessment
SARS	severe acute respiratory syndrome
TDRI	Thailand Development Research Institute
THDR	Thailand Human Development Report
TIMSS	Trends in International Mathematics and Science Study
TOT	Telephone Organization of Thailand
UHC	Universal Healthcare
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
USD	US dollars
WTO	World Trade Organization

OVERVIEW

On the last day of 2015, the people of Thailand become part of the ASEAN Community. What impact this will have on their lives is difficult to foresee. The ASEAN Community is a new idea, unlike any other regional grouping. At present it consists of three plans, known as Blueprints. What the ASEAN Community will become and what impact it will have on human development, depends on how the member governments work to realize these plans.

1. Human Development in Thailand: Achievements and Agenda

Thailand's score on the UNDP's Human Development Index (HDI) has risen steadily for over 30 years. In 2013, Thailand ranked 103rd out of 186 countries, close to the top of the "medium human development" category. Since 2003, UNDP in Thailand has tracked progress on human development in greater detail using the Human Achievement Index (HAI), a composite index covering all the key areas of human development. The trends revealed by ten years of this index help set the agenda for this report.

Almost everyone now is covered by health insurance, largely as a result of the Universal Healthcare scheme launched in 2001. Life expectancy has increased by around 3 years. Other forms of social protection have also improved. But there is a continuing need to develop systems in parallel with social changes such as rising incomes and the advent of an ageing society.

Access to education has improved. Enrolment ratios and mean years of schooling have increased. But there is a legitimate concern over the quality of education at all levels, and over remaining inequalities in access.

Average incomes have improved steadily and the incidence of poverty has diminished, but inequality in income and wealth remain high.

The living environment is a major cause for concern as the depredations caused by increased human activities and prosperity are now compounded by the impacts of climate change.

The Thai family is under strain. The number of divorces has risen sharply. With the rapid approach of the ageing society, almost a third of households are now headed by an elderly person.

The Royal Thai Government has been planning for the advent of the ASEAN Community for several years, and already has a comprehensive range of policies in place. Several academic institutions, finance groups, and business corporations have produced reports on the prospects and challenges, focusing especially on the economic dimension. These reports reach broadly similar conclusions on the priorities for maximizing the benefit for Thailand's economy, namely: upgrade human resources through improved education and skills development; invest in infrastructure; overhaul logistics systems; and upgrade the capabilities of small and medium enterprises.

This report endorses these findings but will not repeat them. Instead it focuses on the implications of the ASEAN Community for Thailand's human development through vectors other than economic growth. The key areas are: education; health and social protection; people moving across borders; the environment; development of the outer provinces; security and human rights.

2. What is the ASEAN Community? Hopes, Fears, Blueprints

The approach of this new grouping has excited both hopes and fears. In Thailand, both the government and the business sectors have been largely enthusiastic. Some others are more fearful. They are worried about competition for jobs and resources. They predict that the strong may benefit but the weak will lose out. They fear that that ordinary people will have even less influence over policy-making than at present. They have special concern that the environment will suffer even more at the expense of economic growth.

The ASEAN Economic Community (AEC) aims to create a "single market and production base" with free flows of goods, services, investment, and skilled labour, and freer flow of capital. The free trade area, first planned over two decades ago, will be almost completed by 2015, and its effects are already evident. Plans to facilitate flows of investment capital, services, and skilled professional labour are much less advanced.

The ASEAN Political-Security Community (APSC) formalizes the grouping's original role in security and its expansion into non-traditional areas of security over recent decades, but then extends its scope into the promotion of democracy, the rule of law, human rights, good governance, and the control of corruption. The Blueprint presents ASEAN as a "Rules-based Community of shared values and norms." How this will work in practice remains to be seen. The grouping has already pioneering steps in the area of human rights and conflict resolution.

The first subject in the agenda of the ASEAN Socio-Cultural Community (ASCC) is "Human Development," covering education, health, work, poverty, environment, and community participation. This agenda will require many new mechanisms to become effective but the commitment is impressive.

3. Education for the New Generation

Although the ASEAN Community's current plans for labour mobility are limited and obstructions are many, in truth the movement of people around the region is already increasing and this trend is likely to intensify. ASEAN offers a broader field of opportunity for the new generation of Thais to gain better employment and live fuller lives. Those who can embrace these opportunities will need language skills, both in English and in ASEAN languages. They will need the qualifications for employment, especially in the expanding service sector, and especially in the sub-sectors with rising demand such as ICT. They will also need adaptability and readiness to work in different environments.

Thailand significantly expanded access to secondary and tertiary education over the past two decades. However, this laudable effort has had two major drawbacks. First, the quality of education has fallen. Thailand's students perform inadequately in international tests. In the context of the ASEAN Community, the lack of skill in English is critical. Second, the output of the education system does not match the needs of the labour market. Too few students enter the vocational stream. Little attention is given to workplace skills.

A major research study drew attention to the lack of accountability at all levels from the school to the ministry. There is also a lingering problem of inequity in access to and quality of education. Children from the top household income quintile have a six times better chance of entering tertiary education than children from the bottom quintile. Students from schools in poor areas perform much worse on comparative international tests. These inequities deny many children opportunities in life and deprive the nation of the potential benefits from their ability.

The approach of the ASEAN Community has sharpened attention to these issues. The Ministry of Education has a wide-ranging plan, focusing especially on English language competence, workplace skills, and the vocational stream. The Ministry also aims to make Thailand an educational hub within ASEAN, focusing on the vocational stream.

Achieving these goals will need stamina. Given the rapidly changing state of the labour market, more facilities are needed for re-training in mid-career. Serious plans are needed to address the issues of inequity.

4. Social Protection and Health: Sustaining Success under Pressure

Over the past decade, Thailand has made great strides in providing its people with better access to healthcare and fuller social protection. Gaps still remain, especially social security for the large informal workforce and the multiple problems of a rapidly ageing society. Thailand is addressing these issues within the context of a Social Protection Floor.

The demand for health services and hence the demand for medical personnel will increase rapidly in coming decades. The ASEAN Community will contribute to this pressure. Anticipating this rising demand will be difficult because it stems from several sources. The large semi-permanent population of low-skilled migrant labour presents special problems. The demand for private healthcare is rising. Government promotes the country as a hub for medical tourism and retirement tourism. Thailand's very rapid transition to an ageing society over the next two decades will dramatically increase the need for healthcare services.

Medical services are one of the areas slated for liberalization under the AEC. Although the details are not yet worked out, it is possible that Thailand will experience an inflow of patients from neighbouring countries and a leakage of medical personnel to other countries within ASEAN. Thailand has a low ratio of medical staff to population compared to many of its ASEAN neighbours. As a shortage of personnel develops, staff will drain from the government hospitals to the private sector. Most at risk are the rural hospitals and health centres where doctors have heavy loads and inadequate resources. Careful planning is needed to meet these strains. Thailand should consider tapping the AEC mechanisms to attract more medical staff.

In the longer term, Thailand should help ASEAN work towards alignment of social insurance and healthcare schemes.

5. People across Borders: Low-skilled Migrant Labour

While AEC's provisions on movement of labour focus on skilled labour and may take time to be fully effective, flows of low-skilled labour between ASEAN countries are already large. In December 2012, there was a total of 1.1 million people from Myanmar, Cambodia, and Lao PDR working in Thailand with proper documentation. Estimates of total migrant labour range between 2 million and 4 million. Studies show these workers make a significant contribution to the economy.

Thailand has been developing systems to regularise this migration stream for over a decade. However, there is still a very large number of undocumented migrants who are at risk of exploitation and abuse in many forms.

Schools, hospitals, and other social services have reacted to this migration stream with extraordinary compassion and commitment, often providing services ahead of changes in policy. Since 2005, children have had access to schools irrespective of their nationality status, and since 2010 hospitals have been able to secure funding for patients irrespective of their nationality status. However, migrant families' access to these services is still imperfect for many reasons, including their own special needs.

Migrant workers are now spread through all sectors of the economy, and across the country. Although policy-making assumes they are a temporary phenomenon in a transitional stage of the labour market, many of the migrant workers are long or semi-permanent residents. Given the difference in income levels between Thailand and its neighbours, and Thailand's much more rapid transition to an ageing society, this migration stream is not likely to dwindle soon.

Thailand will benefit from taking a longer-term view of labour in-migration which will enable the country to gain more from the migrants' presence and the migrants to enjoy fewer risks and more benefits. Documented migrants should be fully integrated into the systems of health and social protection, and the ambit of the labour laws. Thailand should take more account of migrant workers in its planning processes.

6. Environment: More Exploitation or Better Management?

There is a widespread fear that the economic stimulus from the ASEAN Community will result in excessive use of natural resources and energy, increased community and industrial waste, illegal logging and wildlife trade, loss of biodiversity and wildlife's natural habitat due to expanded tourism and mono-crop culture, illegal movement of hazardous chemicals and hazardous waste across borders, GMO contamination, and pollution.

Activists are aware that environment was proposed as a fourth pillar of the ASEAN Community but was eventually relegated to a component of the ASCC, and they fear this indicates that environmental issues will be neglected. Perhaps to counter this impression, the ASCC's environment agenda is quite massive and ambitious.

At the same time, ASEAN is potentially important in managing environmental issues since these issues are often not confined within national boundaries. A prime example is the "haze" or air pollution caused by forest and peat fires. Beginning in the early 1980s, ASEAN member states launched several national and regional initiatives to control this problem, resulting in 2002 in an Agreement on Transboundary Haze Pollution that was considered as a global role model for the tackling of transboundary issues.

However, moving from this agreement to action proved far from straightforward. After many rounds of negotiation, in 2012 Indonesia signed an agreement with four other ASEAN countries (Brunei, Singapore, Malaysia, and Thailand) to tackle the haze issue.

ASEAN's justification is that consensus works, though it sometimes takes time. The story of attempts to control haze seems to support that optimism. Prompted by devastating Nargis cyclone in 2008, ASEAN has moved quickly to establish co-ordinating mechanisms for disaster relief. In the case of responding to climate change, time seems to be shrinking. ASEAN has responded relatively quickly to the growing urgency of this issue by issuing an ASEAN Action Plan on Joint Response to Climate Change in 2012. Thailand has been allotted responsibilities to foster research and networking on issues of adaptation to climate change.

One way to modify ASEAN's working systems without abandoning their time-tested principles is to allow more weight for civil society in discussions and implementing mechanisms.

7. Development of the Outer Provinces

One of the AEC objectives is to create "a region of equitable economic development". Income inequality in Thailand remains high. One factor in that high level is spatial. The gap between the highest and lowest provinces in terms of gross provincial product per capita is 29 times.

Under plans for ASEAN Connectivity, lower barriers and better communications should erode the spatial factors behind high inequality. A lattice of roads and "economic corridors" is now taking shape in mainland Southeast Asia. Early measurements show that towns and provinces along these routes do indeed benefit.

Border trade and investment is flourishing, especially in areas where common cultural ties across national boundaries can overcome lack of a common legal framework.

Border crossings on these new routes are already boom towns. However, local people feel that most of the benefits have accrued to outsiders. They complain of lacking information and being excluded from policy which was all made elsewhere.

Government has a framework for planning regional development based around these new routes and opportunities, but implementation is still problematic.

There is need for a more focused and targeted approach to planning for the future of these routes, both in order to maximise the benefit in the border towns, and to spread the benefits wider into their hinterlands.

8. Security and Human Rights

The Blueprint of the APSC extends ASEAN's involvement in security issues in three ways. First, it codifies ASEAN's involvement in many areas of non-traditional security, especially matters that cross borders. Second it promises greater involvement in preventing and resolving internal disputes. Third, it aims to create "A Rules-based Community of shared values and norms" which will work to strengthen democracy, enhance good governance and the rule of law, and to promote and protect human rights and fundamental freedoms".

On non-traditional security issues including epidemic control, disaster relief, and transnational crime, ASEAN has shown a capacity for learning-by-doing that gradually changes the organization's working methods and culture.

In 2012, ASEAN established the ASEAN Institute for Peace and Reconciliation. Although this new body is defined as a research institute rather than a mechanism for resolving disputes, some observers have interpreted its foundation as a further signal that ASEAN is overcoming its reluctance to discuss disputes within member states or between them.

The establishment of an ASEAN regional human rights mechanism has been beset by controversy. The early years of the body have raised questions whether the ASEAN principle of non-interference makes it impossible for ASEAN to fulfil a promise to protect the human rights of the region's peoples.

These new initiatives in an expanded area of security are tentative. They raise major issues about the capacity of ASEAN's existing mechanisms to confront these issues. However, these issues are so important to the mission of human development that they deserve sympathetic support.

9. Community, History, People

In the popular perception, ASEAN is a very bureaucratic organization. It sometimes describes itself as "an organization of governments", in contrast to an organization of people. But adding the term "Community" signifies a change. It suggests a greater involvement by ordinary people. In order to gain the internal dynamic which will allow the big aspirations of the Blueprints to be fulfilled, the "community" needs to put down roots. How might that happen?

Many descriptions of ASEAN focus on its diversity-in language, ethnicity, economic level, political system, religion, or whatever. Unfortunately, such descriptions militate against any "sense of community". But there is another perspective, focusing on what the people of the member states share: a common geography, a common position in the world; a common history in the long run; and a common transition to modernity, involving colonialism, postcolonialism, development, and globalization.

The histories of the various ASEAN states were created in the era of nation-building. Often they portray neighbours as rivals in order to heighten a sense of national unity. These histories have served their purpose but now need to be replaced by histories that emphasise sharing and commonality.

Communities (with a small "c") come into being when enough people imagine they share something in common. Such imagination develops when people meet and share a common experience. Communities need park benches where such encounters can happen. While cyberspace can substitute for physical contact to some extent, centres of learning and excellence can play a big role as the nodes of a new community. They need to be fostered.

ASEAN has developed channels to interface with the outside world in its two established areas of defence and economy. If ASEAN's expansion into the social and cultural sphere is to succeed, it must develop equivalent mechanisms to interface with civil society.

10. Conclusion: Key Recommendations

The launch of the ASEAN Community expands the grouping's scope beyond its existing agenda of security and economic cooperation to include all the main priorities of human development. The Community that comes into being at the end of 2015 will be work-in-progress. The task of advancing human development in Thailand through the ASEAN Community is thus not only about preparing Thailand to grasp the opportunities and counter the threats of becoming part of the Community, but also about contributing to the work-in-progress in ways which will advance human development.

Prioritizing English and putting equity into the education agenda. The approach of the ASEAN Community has resulted in a strong commitment to upgrade the quality of education at all levels with a particular emphasis on English language competence and the vocational stream. Stamina will be needed to sustain this commitment for the time needed to achieve real results. Inequality in access to education must be tackled as it denies a large proportion of youth a chance to realize their own potential and deprives the country of much talent.

Confronting multiple challenges for healthcare. The staffing of the public health system faces multiple pressures from the expansion of universal health care, health issues surrounding migrant labour, ageing society, competition from private hospitals, medical and retirement tourism, and possible changes under the AEC. These challenges are difficult to meet because they are many, varied, and often difficult to project. Confronting this issue in a timely fashion will be critical to sustaining the delivery of healthcare for the mass of the population.

Migrant labour: status, education, health. Three tasks are crucial for the human development issues surrounding migrant labour: intensifying efforts to regularize the status of all migrants in order to minimize human trafficking and the possibility of human rights abuses; removing the barriers to the education of migrant children so that they have the opportunities to develop their own potential; and ensuring good healthcare for migrants without prejudicing the delivery to the host population.

Targeted planning for the development of outer provinces. Targeted regional planning is needed to maximize the benefits from the new "corridor" routes in Thailand's outer provinces. Local people should be informed about opportunities and threats and be invited to participate in policy making on major projects in their areas.

Environment: make haze an example of ASEAN environmental collaboration. Thailand should persist in pursuing a cooperative solution to the problem of haze in order to develop the experience and mechanisms for confronting other transboundary environmental issues.

Human rights: too important to surrender. Thailand's government, human rights body, and human rights advocacy community should persist with efforts to develop a human rights mechanism within ASEAN.

Nurturing a community: connecting people. The ASEAN goals of security, prosperity, and human development will become much easier to achieve when a sense of fellow-feeling replaces the sense of difference in the past. Sweeping away the nationalist histories composed in the last century, developing centres of excellence which serve the whole region, encouraging everyday people-to-people exchanges, and involving civil society more in ASEAN will all contribute to this goal.

PART I
ADVANCING HUMAN DEVELOPMENT
THROUGH THE ASEAN COMMUNITY

HUMAN DEVELOPMENT IN THAILAND: ACHIEVEMENTS AND AGENDA

1

Human development is about people, and about expanding their choices to live full, creative lives, in good health and security, and with freedom and dignity. That means creating an environment in which people can develop their full potential, and providing them with the tools to enhance their own human capabilities - to accumulate knowledge, to preserve their health, to gain access to resources, and to participate in the community. Without these capabilities, many choices are simply not available, and many opportunities in life remain inaccessible.

Thailand has made great strides in human development over recent decades. What are the areas that still need attention? How might the ASEAN Community help address those concerns? That is the focus of this report.

The first task is to identify an agenda for human development in the years to come.

Since 2003, UNDP has tracked progress on human development in Thailand using a purpose-built index. This chapter reviews the results from this index in order to identify the key areas for this agenda.

Human development trends in Thailand

Since 1980, UNDP has measured countries on its Human Development Index (HDI). Thailand's score has risen steadily for over 30 years (Figure 1.1). In 2013, Thailand ranked 103rd out of 186 countries on the index, close to the top of the "medium human development" category.

Since 2003, UNDP in Thailand has tracked progress on human development in greater detail using the Human Achievement Index (HAI), a composite index covering all the key areas of human development: health, education, employment, income, housing and living environment, family and community life, transport and communication, and participation. Although the calculation of the index has been adjusted over time (see Part II of this report), the index provides an overview of the trends of human development over the past decade.

Health

Thai people are significantly healthier. They live longer. Life expectancy has increased by around 3 years (from 75 to 78.1 years for women and 67.9 to 71.1 for men).[1] Credit goes to the continued improvement in the quality of health services and the expansion of access to healthcare, especially through the Universal Healthcare scheme launched in 2001. Now 99.9 percent of people are covered by health insurance.[2]

Expansion of health services has also contributed. The ratio of population per physician dropped from 3,433 to 2,893

Figure 1.1 Thailand on the UNDP Human Development Index, 1980-2013

Source: UNDP, *Human Development Report 2013*, Statistical Annex tables 1 and 2.

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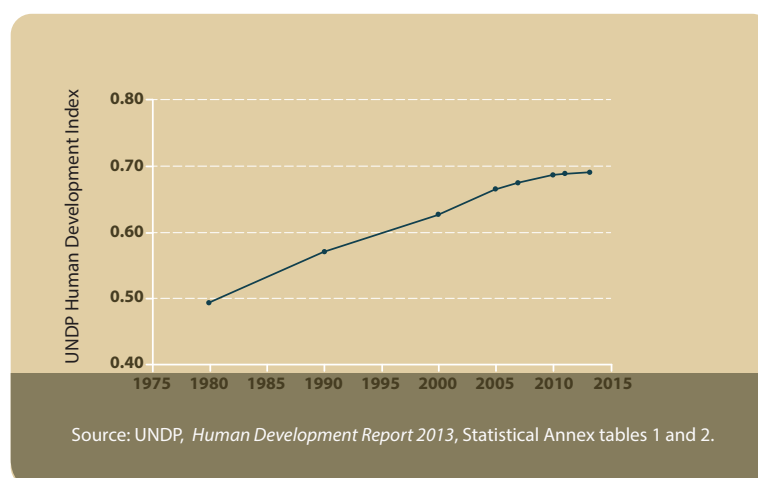
1   IPSR, *Population Gazette,* Mahidol University, January 2013.

2   NESDB, *Social Outlook,* 3rd Quarter 2012.

over 2001-2011, and became somewhat more even across the nation, though variation among provinces and between urban and rural areas remains significant.[3]

Thailand has achieved the Millennium Development Goals (MDG)[4] targets for HIV/AIDS and malaria, but may miss those for TB and coronary artery diseases.[5] The rising threats are the diseases that come with prosperity. Heart diseases, diabetes, hypertension, and cerebrovascular disease have become the principal health risk. Government now emphasises preventive measures, such as discouraging risky behaviour, and the approach has enjoyed some success. For example, the proportion of those aged 11 and above that smoke or consume alcoholic beverage dropped from 35.2 percent to 26.8 percent over 2001-2011.[6]

Mental illness has increased from 22 to 26.1 per 1,000 population during 2001-2011,[7] though some of this increase may be due to better monitoring.

Education

More children have access to more education, but there remain questions over quality and over inequalities.

Mean years of schooling for population aged 15 years and over increased from 7.3 to 8.2 years over 2001-2011. Enrolment rates have increased significantly at all levels. Gross enrolment at the upper secondary level, which is free but not compulsory, increased from 52 percent to 71.6 percent.[8]

Thailand achieved the MDG education targets on universal primary education and gender equality. Girls now outnumber boys at secondary and tertiary levels.[9]

While the quantity of education has increased, the quality has become a concern. The average score by upper secondary students in national tests on eight major subjects dropped from 36.4 percent in 1997 to 34 percent in 2011.

In 2011, Thai children aged 6-15 had an average intelligence quotient (IQ) of 98.6 which is in the "normal" range of 90-109, but almost half of the children were in the low range (under 100), and 6.5 percent fell into the "mentally inadequate" category, more than the international standard of 2 percent.[10] The education system is not equipping many Thai youth with the ability to lead productive and fruitful lives in a highly competitive world where the knowledge-based economy is increasingly important.

Strikingly, the provinces where students' average IQ falls in the low range include 17 out of 19 provinces in the Northeast but only 21 out of 57 provinces in other regions.

This contrast signals the severe remaining inequalities in the provision of education.

Employment

Finding work has not been problematic. Over the decade, the labour market has tightened and several sectors faced shortages. Unemployment fell from 2.6 percent in 2001 to 0.7 percent in 2011.[11] Thailand achieved the MDG target of full employment for women and young people.

But there is still a long way to go toward the MDG target of "decent work for all". The proportion of workers having social security[12] expanded from 17.1 percent in 2001 to 26.7 percent in 2011,[13] but around 24.8 million people working in the informal sector are still outside this scheme.

Occupational injuries fell from 29 per 1,000 workers in 2005 to 15.8 per 1,000 workers in 2011, but this statistic counts only 8.2 million workers in the formal sector who were members of the Workmen's Compensation Fund.[14]

Income

Incomes have improved and poverty has fallen, but inequality and debt remain causes for concern.

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[3] In 2001, the ratio of population per physician in the Northeast was over ten times than in Bangkok (8311:793); by 2011 it dropped to under 5 times (4947:1052). *THDR 2003* citing Ministry of Public Health, *Health Personnel and Resource 2000* and *THDR 2014* citing http://bps.ops.moph. go.th/Healthinformation/index.htm

[4] The Millennium Development Goals (MDGs) are a set of development goals and targets that are based on the Millennium Development Declaration to which 189 countries including Thailand pledged support in September 2000. The Goals place priority on human development and the narrowing of development gaps. Almost all of the MDGs are set against the 2015 timeframe.

[5] NESDB, *Thailand Millennium Development Goals Report 2009*.

[6] *THDR 2003* citing NSO, *Health and Welfare Survey 2001* and *THDR 2014* citing NSO, *Survey of Cigarette Smoking and Alcohol Consumption Behaviors of the Population 2011.*

[7] *THDR 2003 and 2014.* Number of mental patients from Department of Mental Health, Ministry of Public Health.

[8] *THDR 2003 and 2014.* Mean years of schooling are calculated from NSO, *Labour Force Survey 3rd Quarter 2001.* Enrolment rates are from the Ministry of Education

[9] NESDB, *Thailand Millennium Development Goals Report 2009*.

[10] Department of Mental Health, *Survey of Intelligence Quotient of Thai Students 2011.*

[11] *THDR 2003 and 2014* citing the NSO, *Labour Force Survey, 3rd Quarter, 2001 and 2011,* respectively.

[12] With seven kinds of benefit namely sickness or injuries, maternity, invalidity, death, child allowance, old-age, unemployment.

[13] *THDR 2003 and 2014*'s calculation. Number of workers with social security from the Social Security Office, *Social Security Statistics 2001 and 2011.* Number of total workforce from the NSO, *Labour Force Survey, 3rd Quarter 2001 and 2011.*

[14] *THDR 2007 and 2014* citing the Social Security Office, *Social Security Statistics 2005 and 2011.*

Since 2001, average per capita GDP has grown at the modest trend of 3.4 percent a year (Figure 1.2).

Over 2000 to 2011, Thailand achieved the MDG target of cutting the incidence of poverty by two-thirds from 42.6 percent to 13.2 percent.[15]

In the same period, average monthly income increased from 3,372 to 8,027 baht/person, and the ratio of expenditure to income fell from 71.4 percent to 65.6 percent. But the poorest 20 percent of the population still cannot make ends meet although their situation slightly improved. Their income accounted for 71.8 percent of their expenditure in 2000, increasing to 75.8 percent in 2011.[16]

Inequality of income has trended downwards over the past decade, but remains rather high compared to other countries in the same income range and to others in ASEAN. The Gini Coefficient of household income in 2011 was 0.48, and the gap between the top and bottom income quintiles was 11.8 times.

During the same period, the proportion of households with debt fell slightly from 56.3 percent to 55.8 percent, but the average debt of indebted households increased from 121,501 to 241,760 baht.[17] A large element of the debt was for consumption, not investment. In 2011, 37.1 percent of all households had consumption debt, and the average amount per indebted household was 186,533 baht.[18]

Housing and living environment

Housing and household facilities are generally good, but the living environment is under threat.

In 2000, 97.5 percent of the houses were built of permanent materials, 98.9 percent had safe sanitation and safe drinking water, and 98.3 percent had electricity in the dwelling.[19] In terms of housing security, 78.8 percent of Thai people lived in their own house on their own land, falling slightly to 76.0 percent in 2011.

Four targets were set for the MDG goal of ensuring environmental sustainability. Thailand has achieved the goal of halving the proportion of people who lack access to safe drinking water and basic sanitation, and is likely to achieve the goal of significantly improving the lives of slum dwellers. However, the chance of achieving the other two targets–of reducing biodiversity loss and integrating sustainable development into national policies – is rated only "potentially."

Thailand has begun to experience the impact of climate change. Over the past half century in Southeast Asia, average temperature has increased by 0.1 to 0.3° Celcius per decade, and sea levels have risen around 1-3mm per year.[20] In 2005, Thailand's total emission of greenhouse gas emissions was estimated at 366.4 megatonnes of CO_2

Figure 1.2 Real GDP per capita, 1980-2012 (at 1988 prices)

Source: NESDB, quarterly GDP tables

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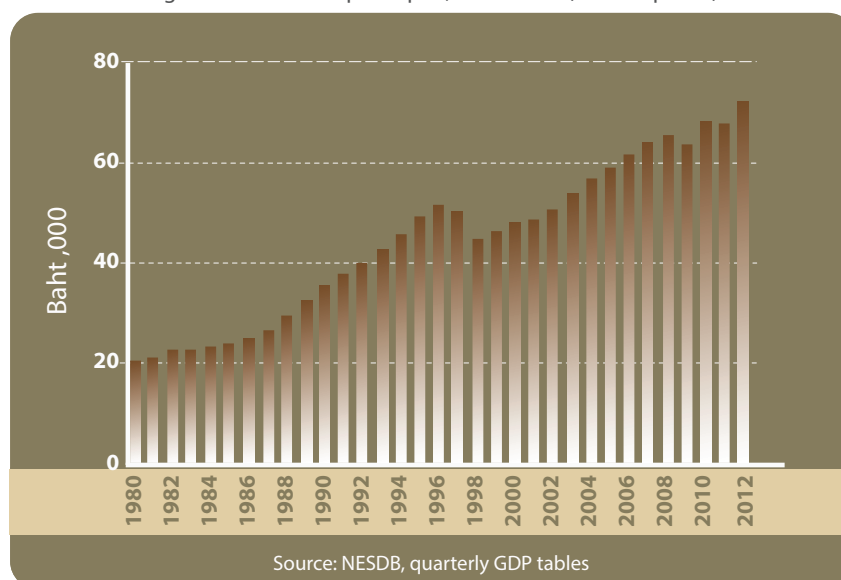
[15] NESDB, www.social.nesdb.go.th. Table 1.2 Poverty Incidence (expenditure based) by region and administrative area, 1988-2011. Data from NSO, *Household Socio-Economic Survey*. Note that the NESDB changed the poverty calculation method from income-based to expenditure-based in 2004.

[16] NESDB, www.social.nesdb.go.th. Table 11.2 Proportion of Household Expenditure by Quintile, 1988-2011. Data from NSO, *Household Socio-Economic Survey*.

[17] NSO, *Household Socio-Economic Survey 2000 and 2011*.

[18] *THDR 2014* citing NSO, *Household Socio-Economic Survey 2011*.

[19] *THDR 2003* citing NSO, *Household Socio-Economic Survey 2000*.

[20] ADB, *The Economics of Climate Change in Southeast Asia: A Regional Review*, April 2009, p. 22.

equivalent.[21] The energy sector contributed 70 percent of this total, and crops and livestock another 23 percent. The estimated annual increase in emissions rose from 2 percent in 1994-2004 to 3.8 percent in 2000-2004.[22]

Environmental degradation and climate change have increased vulnerability to natural disasters. The proportion of population affected by flood increased from 2 percent in 2004 to 3.7 percent in 2007, and reached an epic level of 25.3 percent in 2011 when Bangkok, several industrial areas, and large tracts of agricultural land went under water for months. Population affected by drought also increased from 19.8 percent in 2004 to 20.3 percent in 2007 and 25.8 percent in 2011.[23] The 2004 Indian Ocean tsunami claimed over 5,000 casualties in Thailand.

Family and community life

The family is showing signs of increasing strain.

The proportion of female-headed households grew from 25.9 percent to 32.7 percent over 2000-2011, the proportion of elderly-headed households from 23 percent to 32.1 percent,[24] and the number of marriages that ended in divorce from 1-in-4 to 1-in-3.[25] In 2011, 22.7 percent of household heads were widowed, divorced, or separated, and 8.6 percent of the elderly lived alone.

Drugs are a growing threat to community life and safety. The number of drug-related arrests per 100,000 population rose from 438 in 2000 to 618 in 2012. There were 119 crimes against life and body and sexual crimes reported per 100,000 population in 2012.[26]

One piece of good news is that the proportion of children aged 15-17 years old who are working declined from 21.6 percent to 15.9 percent.[27]

Transport and communication

Mobility and access to communications have greatly increased.

Thailand has an extensive road network. In 2001, 82.3 percent of the villages had an all-season road to the nearest district headquarters. In 2011, this figure dropped to 51.6 percent.[28]

This was apparently a result of inadequate road maintenance after bureaucratic decentralization.

The ratio of registered vehicles per 1,000 population increased from 344 in 2001 to 481 in 2011 when 58.6 percent of registered vehicles were motorcycles.[29] Motor accidents have increased in parallel, especially among motorcyclists. WHO ranks Thailand as the third worst country with 38.1 deaths from road accidents per 100,000 population.[30]

The number of households with a television grew from 89.3 percent in 2000 to 97.1 percent in 2011.[31] The rapid penetration of mobile phones has increased access to the telephone quite remarkably. In 2011, 7-in-10 of Thai people owned a mobile phone,[32] compared with 1-in-10 for a fixed line telephone in 2000.[33]

Participation

Voter turnout in the general election was 69.8 percent in 2001, 72.6 percent in 2005, 74.5 percent in 2007, and 75 percent in 2011.[34] The higher turnouts were partly due to the polarization of Thai politics in the past decade that witnessed large and prolonged political protests, street violence, a coup d'état, dissolution of political parties, a political ban on hundreds of political party executives, and high-profile court cases and convictions. Political participation expanded at the expense of political security.

There was more continuity and stability at the community level. Community groups expanded from 203 to 212 per 100,000 population during 2001-2012.[35]

Human development and spatial disparity

Although human development in Thailand has improved greatly over this decade, there is great disparity among provinces, and this has remained rather constant.

The four Thailand Human Development Reports since 2003 have each ranked provinces on the composite HAI. Strikingly, there has been little variation in ranking, especially at the top and the bottom.

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[21] World Resources Institute database.

[22] King Mongkut's University of Technology, Thonburi, Kan jat tham banchi kas ruean krajok khong prathet thai [Compiling an account of greenhouse gas for Thailand], submitted to the Office of Natural Resources and Environmental Policy and Planning, April 2010.

[23] THDR 2007, 2009 and 2014's calculation. Number of population affected from the Department of Disaster Prevention and Mitigation.

[24] THDR 2003 and 2014, citing NSO, Household Socio-Economic Survey 2000, 2011

[25] Department of Provincial Administration. Serial data compiled by NSO.

[26] THDR 2003's and THDR 2014's calculation. Number of the arrests and crimes reported from the Royal Thai Police.

[27] THDR 2003's and THDR 2014's calculation. Number of working children from NSO, Labour Force Survey 2001 and 2011.

[28] THDR 2003's and THDR 2014's calculation. Number of villages having an all-season main road to the nearest district from the Community Development Department, National Rural Development 2C.

[29] THDR 2003 and THDR 2014's calculation. Number of vehicles from the Department of Land Transport.

[30] WHO, Global Status Report on Road Safety 2013.

[31] THDR 2003 and THDR 2014, citing NSO, Household Socio-Economic Survey 2003 and 2011.

[32] THDR 2014's calculation. Number of population having mobile phone from NSO, ICT Household Survey 2011.

[33] THDR 2003 citing TOT Corporation Public Company Ltd. (including telephone lines leased by TOT, TA and TT&T).

[34] THDR 2003, 2007, 2009 and 2014 citing the Election Commission of Thailand.

[35] THDR 2003 and THDR 2014, citing the Community Organization Development Institute. (Public Organization)

- Five provinces always appeared in the top-ten (Bangkok, Nonthaburi, Nakhon Pathom, Phuket and Songkhla) and another four made the list three out of four times (Pathum Thani, Phra Nakhon Si Ayutthaya, Rayong, and Samut Songkhram). All but one of this exclusive club are in the Central Region.

- Three provinces always appeared in the bottom ten (Mae Hong Son, Si Sa Ket, and Nakhon Phanom) and another four made the list three out of four times (Tak, Buri Ram, Phetchabun, and Surin). All of these are in border regions, and all but one are in the North or Northeast. Two provinces from the southern border region also appeared in this club (Pattani twice, Narathiwat).

From this review of HAI trends over a decade, the current state of human development in Thailand can be summarised as follows:

- Access to healthcare has increased remarkably, but there is a continuing need to develop systems in parallel with social changes such as rising incomes and the advent of an ageing society

- More people now have access to more education, but there is a legitimate concern over the quality of education at all levels, and over remaining inequalities in access.

- Average incomes have increased and poverty has diminished, but inequality of incomes remains persistently high.

- The living environment is a major cause for concern as the depredations caused by prosperity are now compounded by the impacts of climate change.

Key issues for human development in Thailand in the ASEAN Community

As we shall see in the next chapter, government, business, and others appear confident that the ASEAN Community will be positive for Thailand's economic growth. Stronger growth will undoubtedly improve human development. Over the last two years, many government agencies, banks, corporations, think-tanks, and research houses have compiled reports on the projected impact of the ASEAN Community on Thailand's economy. These reports have analyzed the strengths, weaknesses, opportunities, and threats. They have identified the sectors with high prospects and the sectors at high risk. Generally they reach similar conclusions on the priorities for maximizing the benefit for Thailand's economy, namely: upgrade human resources through improved education and skills development; invest in infrastructure; overhaul logistics systems; and upgrade the capabilities of small and medium enterprises.

Table 1.1 Top and bottom ten provinces on HAI 2003, 2007, 2009 and 2014

HAI 2003	HAI 2007	HAI 2009	HAI 2014
Top ten provinces			
Phuket	Phuket	Phuket	Bangkok
Nonthaburi	Bangkok	Bangkok	Phuket
Chon Buri	Pathum Thani	Pathum Thani	Nonthaburi
Nakhon Pathom	Phra Nakhon Si Ayutthaya	Songkhla	Trang
Songkhla	Nonthaburi	Samut Songkhram	Phayao
Rayong	Songkhla	Nakhon Pathom	Nakhon Nayok
Bangkok	Sing Buri	Phang-nga	Nakhon Pathom
Samut Songkhram	Nakhon Pathom	Rayong	Songkhla
Lamphun	Rayong	Phra Nakhon Si Ayutthaya	Phra Nakhon Si Ayutthaya
Pathum Thani	Samut Prakan	Nonthaburi	Samut Songkhram
Bottom ten provinces			
Mae Hong Son	Nong Bua Lam Phu	Kampaeng Phet	Phetchabun
Nong Khai	Phetchabun	Nakhon Phanom	Kanchanaburi
Mukdahan	Nakhon Phanom	Pattani	Pattani
Udon Thani	Chaiyaphum	Buri Ram	Buri Ram
Sakhon Nakhon	Narathiwat	Surin	Sa Kaeo
Amnat Charoen	Si Sa Ket	Phetchabun	Surin
Nong Bua Lam Phu	Kampaeng Phet	Si Sa Ket	Nakhon Phanom
Buri Ram	Surin	Tak	Si Sa Ket
Si Sa Ket	Tak	Sa Kaeo	Tak
Nakhon Phanom	Mae Hong Son	Mae Hong Son	Mae Hong Son

This report endorses these findings but will not repeat them. Instead it focuses on the implications of the ASEAN Community for Thailand's human development through vectors other than economic growth.

Thailand's strategy

In preparation for the ASEAN Community 2015, the Royal Thai Government announced **Thailand's ASEAN Community Strategy** as follow:

1) Competitiveness in product, service, trade and investment: productivity, standard, market.

2) Quality of life and social protection: labour protection, social security, working condition.

3) Infrastructure and logistics development.

4) Human resource development: English proficiency, skills development / entrepreneurship, curriculum, collaboration network.

5) Legal and regulatory development: legal obligation, trade facilitation, national interest.

6) Awareness and understanding about the ASEAN Community: age-appropriate awareness, ASEAN content, cross-cultural exchange.

7) Security: collaboration, crime, disaster, border area management, good governance.

8) Urban development: capital city, industrial city, tourist / service city, border town.

These strategies are incorporated into the **Country Strategy** that emphasizes 1) growth and competitiveness, 2) inclusive growth, and 3) green growth.

In addition, the Government outlined **11 urgent issues** to be addressed prior to the ASEAN Community 2015.

Areas of focus

Seven areas have been selected for this report. The selection has been made on the basis of the above analysis of human development trends, four sessions to hear the expectations and concerns of civil society about the ASEAN Community, and an extensive review of academic research and public commentary.

Education. Education is a fundamental tool to develop human capacity and enable each human being to realize his or her potential. Thailand has greatly expanded the quantity of education but now faces problem over quality and over the mismatch with the labour market. The advent of the ASEAN Community heightens the importance of improving English language skills, while creating both challenges and opportunities from the increasing flow of students and academics, including challenges in facilitating academic mobility, and opportunities from closer collaborative research. How can the ASEAN Community contribute to

Table 1.2 Thai Government's 11 urgent issues

For AEC	Develop basic infrastructure and logistics to expand physical connectivity, improve the efficiency of border management to facilitate trade, and accelerate the implementation of National Single Window.
	Accelerate legislation/amendment to enhance the country's competitiveness.
For ASCC	Extend social protection and social services to migrant workers.
	Improve the English, Chinese and other ASEAN language skills of public officials, SMEs, etc.
	Pilot the standard for ASEAN curriculum and develop a manpower development plan in response to the ASEAN market.
	Coordinate with other ASEAN countries to develop joint management of natural resources and the environment.
For APSC	Support justice system development and legal reform.
	Promote good governance in the public and private sectors.
	Use the ASEAN networks to combat narcotic problems, terrorism, transnational crimes, human trafficking, and illegal immigration.
	Accelerate the E-Government and E-Service system to facilitate Thai and ASEAN business.
	Accelerate the establishment of an ASEAN unit and the development of personnel to coordinate ASEAN affairs in line ministries and in the provincial administration.

Source: NESDB, *Senthang prathet thai su prachakhom asiyan, [Thailand's route to the ASEAN Community]*, documents for NESDB Annual Conference, 2013, pp. 183-192.

Box 1.1 Driving the ASEAN initiatives

The Thai Government's drive toward the ASEAN Community is spearheaded by the Ministry of Commerce as the coordinator on the part of the AEC, the Ministry of Social Development and Human Security as the coordinator on the part of the ASCC, and the Ministry of Foreign Affairs as the coordinator on the part of the APSC, with the Office of the National Economic and Social Development Board as the national focal point integrating plans and programmes under the three pillars.

improvement in the quality of education in Thailand? Chapter 3 argues that the approach of the ASEAN Community has placed education reform high on the national agenda but it will need a sustained effort to achieve results.

Social protection and health. This is an area of human development where Thailand has excelled. All major indicators have improved. The Universal Healthcare system is now over a decade old and has become a model for other countries. Health professionals are powerful public advocates for reforms in such areas as preventive care. In the new era of the ASEAN Community, this progress faces challenge arises from the multiple demands on health systems. Medical tourism is already considerable and government is intent on further developing Thailand as a hub. Will the supply of medical professionals be sufficient to meet the expanding demands of the Universal Healthcare system itself, of rising medical tourism, of a growing market for private care, of the consequences of an ageing society, of the provision of healthcare to migrant workers and dependents, and of a possible outflow of doctors and nurses to other ASEAN countries? Chapter 4 addresses this issue.

People across borders. One aspect of the ASEAN Community that excites both hopes and fears is the prospect of greater movement of people across borders. As we shall see below, how the plans for liberalising cross-border move will work in practice are uncertain. But there are already large flows of unskilled migrant labour, largely from the ASEAN countries. Thailand now hosts a semi-permanent stock of foreign unskilled labour that has contributed immensely to the Thai economy. Many are undocumented migrants who are prey to human trafficking, exploitation, and human rights abuses. The Thai government is intent on regularizing their status and providing social services but the systems are far from perfect. The presence of these migrants also affects the lives of members of the host nation in multiple ways. While government agencies have been responsive in managing the immediate problems of a rapidly changing situation, it is perhaps now time to take a longer-term view of the human development issues raised by this migration flow. This is the subject of chapter 5.

Environment. The environment is one area of human development where the trends are challenging. The environment is also a litmus test for the ASEAN Community. Many civil society activists believe the ASEAN Community will intensify the trend for states and corporations to over-exploit the environment. But the ASEAN Community is also an opportunity because many environmental issues are cross-border in nature. What has been learned from attempts to manage cross-border environmental issues in the past? Can the ASEAN Community help address the issues raised by climate change? Chapter 6 addresses these issues.

Development of the outer provinces. One of the key factors behind Thailand's high and persistent inequality is the great difference between regions, and especially between the capital and the outer provinces. The lattice of "economic corridors" taking shape in ASEAN has the potential to counter excessive centralization and stimulate new growth poles in the outer provinces. But how well are these corridors working? Who is benefiting from the expansion of cross-border trade and investment? What new mechanisms are needed to maximize the benefits? Chapter 7 addresses these issues.

Security and human rights. Peace and security are prerequisites of human development. ASEAN's major achievement in the past has been its contribution to maintaining peace in the region. Under the ASEAN Community, this role is both confirmed and extended to include a larger role in human rights, dispute settlement and prevention and management of emerging and non-traditional security issues. Will these innovations contribute to human development? Chapter 8 addresses these questions.

Community. The ASEAN Community offers a vision to move beyond the era of post-colonial nation-building to something more in line with the region's borderless past. Communities are imagined into being by a conception of common experience. To make this possible, nationalist and state-centric histories have to be revised, people-to-people contacts appreciated and expanded, and civil society involved. Chapter 9 explores how the ASEAN Community could contribute to the people and communities, and vice versa. It concludes by pondering how to make the ASEAN Community more meaningful for its member peoples over the long term.

First, however, we must ask: What is the ASEAN Community?

2 WHAT IS THE ASEAN COMMUNITY? HOPES, FEARS, BLUEPRINTS

On the last day of 2015, the people of Thailand become part of the ASEAN Community. What impact this will have on their lives is difficult to foresee.

ASEAN is a grouping of ten neighbouring nations in Southeast Asia that has existed for over half a century, but has been concerned primarily with security and seems remote from the lives of ordinary people. The transformation of the grouping into the "ASEAN Community" promises something new and more meaningful for more people.

What is the ASEAN Community? Or, more exactly, what might it become? This question is not as simple as it seems.

The ASEAN Community is often presented as a house that is already built so the members can enter on the last day of 2015 by turning a key. But in truth the ASEAN Community is an idea, a set of plans, and some work-in-progress. Ong Keng Yong, who was secretary-general of ASEAN for 2003-2007 and one of the main architects of the ASEAN Community, explained it this way:

> By 2015 we should have this house. Whether or not we have enough furniture in this house to declare this a beautiful house, we do not know.... The challenge for us today is to put in all the necessary comforts in this house.... By 2015 I think we can have a basic house with a kitchen to survive, but I don't think we can have a very luxurious ASEAN house... but if we keep on working we should be able to make this ASEAN into a very concrete regional body.[36]

The eventual shape of the Community will depend on the contributions of Thailand and other members in the years to come. At present, that is far from clear and certain.

What is certain is that the ASEAN Community is a complex, ambitious, and visionary project - a step into the unknown. And the unknown can excite both hopes and fears. This chapter first examines the hopes and fears of Thai people about this change, and then introduces the plans for the ASEAN Community.

Hopes and fears

In Thailand, the advent of the ASEAN Community in 2015 has generated interest and excitement in business,

government, the media, and parts of civil society. No transnational project in living memory has attracted such attention in Thailand.

High hopes

Since 2010, government agencies have been preparing themselves and the country for the change. Through 2012, the National Economic and Social Development Board (NESDB) held a series of meetings to evolve a national approach, subsequently disseminated as a strategy document. Individual ministries have pursued their own plans, including training programmes of ASEAN awareness for their own staff. The Ministry of Education commissioned a large programme of research on the opportunities and threats in each segment of the education system. These efforts have extended beyond officialdom. Many government agencies, companies, and other organizations now sport signboards announcing they are "prepared for the ASEAN Community 2015".

While two major universities have issued degrees in Southeast Asian Studies for several years, many other universities have launched centres, degrees and courses in the past two years, and several of these are branded as "ASEAN Studies" rather than Southeast Asian Studies. At a new Pridi Banomyong International College in Thammasat University, ASEAN Studies sits beside Indian Studies and Chinese Studies, an eloquent conceptualization of Asia today. Countless academic conferences have been held on various aspects of the ASEAN Community, especially the political and cultural implications.

The media have also reacted with unusual enthusiasm. An ASEAN channel appeared on satellite transmission, and several regular programmes about ASEAN on terrestrial channels. Newspapers have sprouted ASEAN columns and ASEAN supplements.

Unsurprisingly, this enthusiasm is most obvious in the ranks of business. As one Thai executive-cum- academic explained, "ASEAN is not just important for the Thai economy and business, it is imperative."[37] His assessment, and those of other business analysts, focus on two main aspects.

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36 Speaking at the seminar "Looking towards ASEAN Community 2015: Constraints, Obstacles, and Opportunities" at Chulalongkorn University, Bangkok on April 21, 2011, retrieved April 12, 2013 from https://www.youtube.com/watch?v=mTiako866ac

37 Veerathai Santiprabhob, "Significance of ASEAN to the Economy of Thailand", speech (in Thai) at Walailak University, Nakhon Si Thammarat, February 18, 2013.

First, Asia has much better prospects for growth than the United States and the European Union, and ASEAN has particularly strong prospects because of its size, its stock of natural resources, its production of goods enjoying strong world demand, its relatively good demographics, its growing urban middle classes, and its relative lack of conflict and instability.

Second, these analysts believe that Thailand is strategically placed to benefit from ASEAN. It can act as a "land bridge" connecting north and south, east and west. It can serve as China's key link to ASEAN as a whole. It can act as a hub in the mainland part of ASEAN, drawing in labour, power, and natural resources from its neighbours, and serving a centre for finance, tourism, and other services. As the executive-cum-academic concluded, "ASEAN is more important to Thailand than to other ASEAN members".

Beyond the business community, there is little systematic information on attitudes to the ASEAN Community across the member countries. In 2008, the ASEAN Foundation conducted a survey on a sample of 2,170 bachelor-level students in leading universities in all the member countries. The results from Myanmar, which were low and inconsistent, have been omitted from the graphs below (Figure 2.1). In general, the respondents' familiarity with ASEAN, and expectations that they would gain personal benefit from their country's membership, were higher in the less developed economies, and lower in the more developed

economies. It appears that students in the less developed countries have high hopes that the ASEAN Community will have a levelling-up effect, while those in the more advanced countries are less interested, more sceptical.

Thailand seems to be showing much more public enthusiasm for the ASEAN Community than other member states. For business and government, it offers opportunities for growth and prosperity, an external stimulus to replace the fading star of globalization. Beyond that, the ASEAN Community is a novelty which many people invest with hopes for achieving their personal agendas. For example, some hope that the ASEAN Community will succeed where they believe the Thai government has failed, including in areas such as environmental protection, inequality, social justice, and human rights. And some hope that strong growth will overcome what they perceive as problems of populism and social conflict.[38]

Doubts and fears

But not everyone is so enthusiastic and optimistic.

Fear arises from a sense of ignorance about ASEAN, a lack of information, and a conviction that others will benefit more from having better access to information and authority. One labour representative said, "I don't know much about ASEAN. I asked friends at work. They don't know much either."[39]

Figure 2.1: Awareness and perceived benefit from ASEAN Community
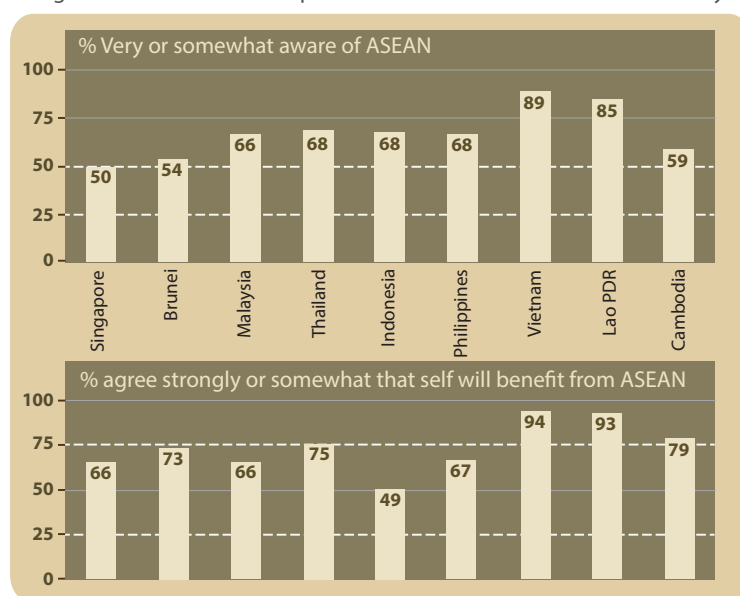
Source: E.C. Thompson and C.Thianthai, *Attitudes and Awareness towards ASEAN: Findings of a Ten - Nation Survey*, ISEAS Singapore, with support from the ASEAN Foundation, 2008.

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[38] The opinions summarized in this paragraph and in the next section were mainly expressed at three sessions held as part of this project, another at Naresuan University, Phitsanulok, as part of the conference "Conversations with ASEAN Difference: Security, Prosperity and Diversity" on January 19-20, 2013, and two at Walailak University, Nakhon Si Thammarat as part of the 2nd Walailak International Conference on Asian Studies, February 18-19, 2013.

[39] Forum on "Social Protection and ASEAN: Concerns, Opportunities, and Recommendations from the People," Thammasat University, January 14, 2013.

Box 2.1 Concerns over the ASEAN Community

"In the future when we have the AEC, skilled labour in agriculture, construction, and manufacturing will be sucked away elsewhere and unskilled labour from neighbouring countries will flood freely in its place. Frightening."
(Columnist in Naew Na, May 15, 2012)

"In a while, Thais will all be unemployed because smart neighbours will come and compete for work." (Columnist in Khao Sot, August 10, 2012)

"The ASEAN Community is a pure copy of the European Community which is falling apart before our eyes. So will ASEAN." (Columnist, Ban Mueang, September 13, 2012)

(All quoted in Somkiat Tangkitwanich, Prathet thai nai krasae AEC: mayakati khwam pen jing okat lae khwam thathai [Thailand and the AEC Prospect: Myth, Reality, Opportunities, and Challenges], TDRI annual conference, 2012.)

Some are concerned that they will lose out personally, and Thailand will lose out as a whole, because of weakness at English language.

Some wonder what will happen to Thai identity. They have heard that the ASEAN Charter states, "The working language of ASEAN shall be English." They have seen the phrase "One Identity" in the ASEAN motto.

Several concerns focus on the influx of foreign labour. Workers and labour activists believe that foreign workers will take away jobs, depress wages, and reduce Thai labour's bargaining power. Some point out that migrants have already moved into informal sector work such as vending which is the fallback of Thailand's poor. They expect the numbers of migrants to increase and the problems to worsen because the government seems incapable of managing the inflow. Some fear for the impact on Thai culture. Some are concerned that Thai taxpayers will have to foot the bill for the migrants' healthcare, education, and other social support.

Some activists believe that all the advantages of the ASEAN Community will accrue to state and capital at the expense of ordinary workers and farmers. They reason that big capital will crowd out small capital, and that no country in the region has shown ability or willingness to control big capitalism and protect the poor. They argue that civil society in the region is still poorly developed and generally not accepted by the state, that human rights are not well defended, and that a non-representative body such as ASEAN will confirm these trends rather than reverse them.

Some fear risks for agriculture. There have been several reports of growing covert foreign ownership of land, including tracts of agricultural land in the north, central region, and the northeast. Activists suggest this follows a worldwide trend and ultimately will pose a risk to food security.

Some point to a more general risk to the environment and natural resources. They know that the environment was proposed as a fourth pillar of the ASEAN Community, but the proposal was rejected, and they suggest this proves that environmental issues will be treated negligently.

A report of the possible impact of the ASEAN Community on "vulnerable groups" expected increased competition for jobs, further marginalization of the disadvantaged, increased demands for social protection, and strains in the transition to a more multicultural society.[40]

A final concern focuses on the opportunity to debate and influence policy. Over the past generation, activists have fought hard to stem authoritarianism, build democratic institutions, create public space for political and policy debate, and develop channels for talking to those in power. They fear that the ASEAN Community will make policy-making more remote, less accessible to public pressure. Although ASEAN has developed mechanisms for talking with civil society organizations, these mechanisms remain a very minor part of its operations.

From hopes and fears to realities

There was nothing systematic about the collection of these opinions, and there is no way to gauge the weight of feeling behind any one of them. What is striking is the intensity. The hopes are high and the fears are dark.

There are many regional groupings in the world, but none is quite like the Community that ASEAN is proposing. Several of these groupings (e.g., the Organization of African Unity) are associations of governments, just like ASEAN until now. Some have an exclusively economic purpose, like the North American Free Trade Area. And the European Union is an economic grouping that has transferred some sovereignty to a central authority. Unlike any of these, the ASEAN Community not only combines defence and economics but also proposes to be a "social and cultural community".

To understand the ASEAN Community we need to examine its evolution to date, and its plans for the future.

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[40] Sirinun Kittisuksathit et al, *Patjai thi song phon krathop to kan khumkhrong lae phitak sitthi phu doi okat jak prachakhom asiyan [Factors that affect the protection and empowerment of vulnerable people in the ASEAN Community]*, MSDHS and IPSR, Mahidol University, 2013.

ASEAN and the "ASEAN way"

ASEAN was founded in 1967 as a grouping of five nations designed to overcome differences between themselves and maintain some independence during the international conflict of the Cold War. Over almost half a century since, the grouping has transcended its time, its context, its scale, and its original purpose in ways that few would have predicted. It has not only survived, but expanded to ten members; transformed itself from an agent in Cold War politics to a mediator in their aftermath, widely credited with helping to keep the region peaceful; become an intermediary between neighbouring countries with far more economic and political clout than itself; and holds together despite the immense diversity of its member nations on any measure – size, development level, political system, language, religion, or ethnicity.

ASEAN's survival and success are usually attributed to three principles evolved in the grouping's early years and sustained through great changes in its internal composition and its external context. These principles are:

- decisions are reached through consultation and consensus;
- the grouping does not interfere in the internal affairs of its member states;
- the execution of its decisions relies on the authority and resources of the governments of its member states – there is no alienation of sovereignty to a supranational institution.

These principles place limitations on what the grouping can do, and how fast it can do it. Many areas are off-limits. A lot of talk is needed to achieve any decision, and sometimes a lot more talk to translate that decision into action. ASEAN is often criticised for being slow, clumsy, and ineffectual.[41]   Yet it is valued by its members and neighbours for what it can achieve. Its distinctive way of operation has earned its own descriptor, "the ASEAN way", and ASEAN's record is regularly cited as evidence that international relations can be based on shared principles, particularly those created by mutual cooperation, rather than on naked power.[42]

Table 2.1 ASEAN: Basic data

Country	Year of joining	Population (million)[a]	GNI/head[b]	Major ethnicities[c]
Indonesia	1967	251	4,154	Javanese 41% Sundanese 15%
Malaysia	1967	30	13,676	Malay 50% Chinese 23% Indigenous 11%
Philippines	1967	106	3,752	Tagalog 28% Cebuano 13%
Singapore	1967	5	52,613	Chinese 77% Malay 14%
Thailand	1967	67	7,722	Thai 75% Chinese 14%
Brunei Darussalam	1984	0.4	45,690	Malay 66% Chinese 11%
Vietnam	1995	92	2,970	Kinh (Viet) 86%
Lao PDR	1997	7	2,435	Lao 55% Khmou 11%
Myanmar	1997	55	1,817	Myanmar 68%
Cambodia	1999	15	2,095	Khmer 90%

[a] United States Census Bureau International Data Base estimate for 2013

[b] In constant 2005 USD by PPP method, from UNDP, *Human Development Report 2013,* Table 1.

[c] Central Intelligence Agency, *The World Factbook 2009.*

The original members are sometimes referred to as ASEAN-5. Cambodia, Laos, Myanmar and Vietnam are sometimes grouped as CLMV. ASEAN has several outreach mechanisms, most importantly ASEAN Plus Three, a cooperation with China, Japan, and South Korea, initiated in 1996.

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[41] There is a massive literature assessing ASEAN. For an early array of opinions, see Noordin Sopiee, Chew Lay See and Lim Siang Jin, eds., *Asean at The Crossroads: Obstacles, Options and Opportunities in Economic Cooperation*, Kuala Lumpur, Institute of Strategic and International Studies, 1987.
[42] An approach termed constructivism. See especially Amitav Acharya, *The Making of Southeast Asia*, Cornell University Press, 2011.

Beyond security

In the second half of its history-to-date, the scope of the grouping has expanded beyond its original focus on traditional security.

First, in 1992, at the height of an economic boom in the region, ASEAN resolved to become a free trade area. Although the project took longer than expected, the tariff-free zone is on course to be achieved by 2015 (see below).

Second, after the economic crisis which ended the boom in 1997, ASEAN and its neighbours cooperated to establish measures to prevent or manage any such financial crisis in the future, including reserve swap agreements and a monitoring centre.[43]

Third, against the background of intense globalization and the lowering of borders, ASEAN expanded its security role into a host of non-traditional and human security issues that cross borders, especially drugs, human trafficking, transnational crime, arms trading, disaster management, atmospheric haze, and migrant labour.

As ASEAN's scope broadened, its internal operations became more complex. Much of the work is now done by annual or biannual meetings between the parallel ministers of the member states (e.g., ministers of defence, of law, of social development, etc.). In total, there are now over 500 such meetings a year. These meetings are supported by committees staffed by bureaucrats of the member states and invited experts. Special windows have been installed to interact with outsiders, especially other governments and some civil society organizations. An ASEAN Summit, attended by the heads of government of the member states, was introduced in 1976 and became a virtually annual event since 2001 as a means to shorten the process of making major decisions on policy. A technique was created to allow other members to proceed on certain issues where certain members wish to opt out.

These adjustments attest to ASEAN's capacity to change and especially to accelerate its procedures for taking decisions.

The ASEAN Community: Extending "the ASEAN way"

In the early 21st century, processes began which culminated in the signing of an ASEAN Charter and the commitment to form an ASEAN Community, now timed for the end of 2015.

From one angle, the Charter is an updating exercise, refreshing the organization's internal documentation to reflect current realities following the expansion of the grouping's size and scope since the 1990s. But from another angle, the Charter represents another significant expansion of the organization's scope. Among the 15 items listed as the "Purposes of ASEAN" (see box), seven relate to security matters, both traditional and non-traditional; five relate to economic matters, going some way beyond the organization's current scope; one commits to a new involvement in political matters; and two others aim to "promote a people-oriented ASEAN" and to "promote an ASEAN identity".

These definitions of purpose apply the "ASEAN way" to a much larger range of issues than before.

Box 2.2 Purposes of the ASEAN Community

1. To maintain and enhance peace, security and stability and further strengthen peace-oriented values in the region;

2. To enhance regional resilience by promoting greater political, security, economic and socio-cultural cooperation;

3. To preserve Southeast Asia as a Nuclear Weapon-Free Zone and free of all other weapons of mass destruction;

4. To ensure that the peoples and Member States of ASEAN live in peace with the world at large in a just, democratic and harmonious environment;

5. To create a single market and production base which is stable, prosperous, highly competitive and economically integrated with effective facilitation for trade and investment in which there is free flow of goods, services and investment; facilitated movement of business persons, professionals, talents and labour; and freer flow of capital;

6. To alleviate poverty and narrow the development gap within ASEAN through mutual assistance and cooperation;

7. To strengthen democracy, enhance good governance and the rule of law, and to promote and protect human rights and fundamental freedoms, with due regard to the rights and responsibilities of the Member States of ASEAN;

8. To respond effectively, in accordance with the principle of comprehensive security, to all forms of threats, transnational crimes and transboundary challenges;

9. To promote sustainable development so as to ensure the protection of the region's environment, the sustainability of its natural resources, the preservation of its cultural heritage and the high quality of life of its peoples;

10. To develop human resources through closer cooperation in education and life-long learning, and in science and technology, for the empowerment of the peoples of ASEAN and for the strengthening of the ASEAN Community;

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[43] C. R. Knowles, *East Asian Financial Cooperation*, Washington DC, Institute for International Economics, 2002; see also http://www.bot.or.th/Thai/AboutBOT/index/Pages/ASEAN3.aspx

11. To enhance the well-being and livelihood of the peoples of ASEAN by providing them with equitable access to opportunities for human development, social welfare and justice;

12. To strengthen cooperation in building a safe, secure and drug-free environment for the peoples of ASEAN;

13. To promote a people-oriented ASEAN in which all sectors of society are encouraged to participate in, and benefit from, the process of ASEAN integration and community building;

14. To promote an ASEAN identity through the fostering of greater awareness of the diverse culture and heritage of the region; and

15. To maintain the centrality and proactive role of ASEAN as the primary driving force in its relations and cooperation with its external partners in a regional architecture that is open, transparent and inclusive.

Source: ASEAN, The ASEAN Charter, pp. 3-5

The ASEAN Community is subdivided as three projects, known as the three pillars. Each of these has a master plan, termed a blueprint, agreed between the member countries in 2007.

ASEAN Economic Community (AEC)

Of these three pillars, the ASEAN Economic Community (AEC) is the easiest to grasp. Its first aim is to create a "single market and production base" with free flows of goods, services, investment, and skilled labour, and freer flow of capital (meaning finance).

The elimination of tariffs, begun under the agreement to create an ASEAN Free Trade Area (AFTA) in 1992, has proceeded on a split timetable. In six countries it was completed in 2010, and in the four remaining (Cambodia, Myanmar, Lao PDR, Vietnam, known as CLMV) is due to be completed in 2015 with only a few minor exceptions. Some non-tariff barriers remain, including quotas, licenses, and other restrictions, particularly on agricultural products, but these cover a small fraction of traded goods. In effect, ASEAN is now a free trade area for goods.[44] There are still difficulties over rules of origin, customs procedures, and other processes which inhibit trade, and measures to eliminate these are part of action plans for the immediate future.

The next aim is to create a free market in services, by allowing freer movement of investment and labour. Here the progress is patchier.

The ASEAN Framework Agreement on Services was signed in 1996 but progress on implementation has been slow. To date, only five sectors have been earmarked for liberalization namely ICT and telecommunications, health, tourism, construction, and logistics. Within these areas, member governments can choose which sub-sectors to liberalise. Under the agreement, they undertake to allow buying and selling across borders, to allow inward investment up to 70 percent, to remove other restrictions such as quotas, and to accord national treatment to foreign companies.

In effect, buying and selling of services across borders already face little restriction. The target of 70 percent investment is hindered by many national laws, especially in Thailand by the Foreign Business Act which imposes a cap of 49 percent. In August 2012, Cabinet waived this law and allowed 70 percent for only a handful of sub-sectors, mostly of low significance with the exception of some in the health sector (see box). Moves to remove other restrictions and ensure national treatment have not progressed very far. The review of progress across ASEAN reveals a similar picture elsewhere with the sole (and partial) exception of Singapore.[45]

Box 2.3 Subsectors allowed 70 percent foreign investment by Thai Cabinet resolution

ICT/Telecoms
    Telex, telegram, and fax services
    Consultancy services on telecommunications

Tourism
    6-star hotels
    Tourism information services (excluding booking)
    Amusement parks

Logistics
    Transport of frozen and chilled goods, liquids. gas, and containers
    Agencies for customs procedures
    Agencies for goods transport by sea
    Warehousing for marine transport
    Marine transfer services

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[44] Chettha Intharawithak et al, "Kan kha sinkha lae kan amnuai khwam saduak thang kan kha" [Trade in Goods and Trade Facilitation], TDRI annual seminar 2012; Pratiwi Kartika and Raymond Atje, "Deadline 2015: Free Flow of Goods within ASEAN", presentation at ASEAN Roundtable "Examining the Scorecard", ISEAS Singapore, May 25, 2012.

[45] Deunden Nikomborirak and Supunnavadee Jitdumrong, "An Assessment of the Implementation of the AEC Liberalization Milestones", presentation at ASEAN Roundtable "Examining the Scorecard", ISEAS Singapore, May 25, 2012; Deunden Nikomborirak and Wirawan Phaibunjitari, "AEC kap kan pathirup sakha borikan" [AEC and reform of the service sector], TDRI annual seminar, 2012.

Health
  In-patient services in private hospitals
  Veterinary services
  Remedial physiotherapy services in hospitals
  Convalescence homes outside hospitals

Source, Deunden et al., "AEC kap kan pathirup sakha borikan" [AEC and Reform of the Service Sector], TDRI, 2012.

Reluctance about the free movement of labour is even more pronounced. The ASEAN Charter promised "facilitated movement of business persons, professionals, talents and labour". In the AEC Blueprint, this had narrowed to "skilled labour". In implementation, this has narrowed further to eight professions: engineers, architects, surveyors, accountants, nurses, doctors, dentists, and tourist professionals.

To facilitate the movement of these categories of skilled labour, member countries have entered into Mutual Recognition Agreements whereby they recognize professional qualifications and other forms of certification from the country of origin. This has begun in eight fields namely physician, dentist, nurse, accountant, architect, engineer, and surveyor, and the tourist sector. But foreign professionals are still bound to conform to national laws. These impose many barriers. For example, in the Philippines, the constitution specifies that professional jobs are reserved for nationals. In Thailand, doctors, dentists, and nurses have to pass oral and written exams in Thai language.

Again, a review of progress across ASEAN revealed a similar picture elsewhere with the sole (and partial) exception of Singapore, and concluded, "most ASEAN countries have yet to move away from barriers aimed at protecting domestic professionals and skilled workers from foreign competition. These domestic regulations override the impact of MRAs in facilitating skilled labour mobility."[46]

An assessment by the Thailand Development Research Institute (TDRI) concurred that, "in practice, developing countries do not want to open their service sectors" and as a result this part of the AEC Blueprint "is completely meaningless".[47]

The inauguration of the ASEAN Community in 2015 will not be a "Big Bang" for the liberalization of trade (already largely achieved), the liberalization of services (still facing many obstructions), or the movement of labour (proceeding under other processes). Yet, as we shall see in chapter 3, investment and labour have already begun to flow around ASEAN at increasing rates. Regionalization is real, and is not solely dependent on the AEC. The AEC's vision of freer mobility of labour may not follow the Blueprint and may not be as quick as some hope and others fear, but the trend will move in that direction.

The innovation of the AEC resides in its three further objectives: a highly competitive economic region, a region of equitable economic development, and a region fully integrated into the global economy. Under these headings, the Blueprint has plans to promote fair competition, consumer protection, support for intellectual property rights, accelerated development of infrastructure, development of small and medium enterprises, deeper integration into global supply networks, and greater coordination in economic relations with the outside world.

ASEAN Political-Security Community (APSC)

Much of the Blueprint for the APSC formalizes the grouping's original role in security and its expansion into non-traditional areas of security over recent decades. But then it goes far beyond this scope by tabulating commitments to promote democracy, the rule of law, human rights, good governance, and the control of corruption, and by establishing new mechanisms to mediate and settle disputes between member states.

Box 2.4 Characteristics and Elements of the APSC (extracts)

6. It is envisaged that the APSC will bring ASEAN's political and security cooperation to a higher plane. The APSC will ensure that the peoples and Member States of ASEAN live in peace with one another and with the world at large in a just, democratic and harmonious environment.

7. The APSC shall promote political development in adherence to the principles of democracy, the rule of law and good governance, respect for and promotion and protection of human rights and fundamental freedoms as inscribed in the ASEAN Charter. It shall be a means by which ASEAN Member States can pursue closer interaction and cooperation to forge shared norms and create common mechanisms to achieve ASEAN's goals and objectives in the political and security fields. In this regard, it promotes a people-oriented ASEAN in which all sectors of society, regardless of gender, race, religion, language, or social and cultural background, are encouraged to participate in, and benefit from, the process of ASEAN integration and community building. In the implementation of the Blueprint ASEAN should also strive towards promoting and supporting gender-mainstreaming, tolerance, respect for diversity, equality and mutual understanding.

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[46] Chia Siow Yue, "AEC-Free Flow of Skilled Labour", presentation at ASEAN Roundtable "Examining the Scorecard", ISEAS Singapore, May 25, 2012.

[47] Deunden Nikomborirak and Supunnavadee Jitdumrong, "An Assessment of the Implementation of the AEC Liberalization Milestones", pp. 1, 5.

10. Based on the above, the ASEAN Political-Security Community envisages the following three key characteristics:

    a)   A Rules-based Community of shared values and norms;

    b)   A Cohesive, Peaceful, Stable and Resilient Region with shared responsibility for comprehensive security; and

    c)   A Dynamic and Outward-looking Region in an increasingly integrated and interdependent world.

Source: ASEAN, The ASEAN Political-Security Blueprint, 2009, pp. 2-3

In effect, these new commitments compromise the hallowed principle of non-interference, but in a very delicate and discreet fashion. The Blueprint presents ASEAN as a "Rules-based Community of shared values and norms", implying that the shared principles evolved within ASEAN in the past are now encoded as rules that the signatories are bound to follow or perhaps face some form of sanction. How this will work in practice remains to be seen.

For the purposes of this report, the two main points of significance of the APSC are that it extends ASEAN's role in resolving conflict with the formation of the ASEAN Institute for Peace and Reconciliation, and that it extends the scope of ASEAN into areas of law, justice, and especially human rights. The immediate innovation has been the formation of the ASEAN Intergovernmental Commission on Human Rights inaugurated in 2009 and the ASEAN Human Rights Declaration adopted in 2012. These are considered in chapter 8.

ASEAN Socio-Cultural Community (ASCC)

The third pillar is more difficult to grasp, and is therefore more difficult to assess the impact. Its statement of objectives pushes the grouping into totally new areas of human activity.

The primary goal of the ASCC is to contribute to realising an ASEAN Community that is people-centred and socially responsible with a view to achieving enduring solidarity and unity among the nations and peoples of ASEAN by forging a common identity and building a caring and sharing society which is inclusive and harmonious where the well-being, livelihood, and welfare of the peoples are enhanced. (ASCC Blueprint, p. 1)

The first of the four chapter headings in the ASCC Blueprint is "Human Development," and the scope maps the full range of human development concerns including education, health, work, poverty, environment, and community participation.

Box 2.5 Headings and subheadings of the ASCC Blueprint

A. Human Development

    A.1.   Advancing and prioritising education

    A.2.   Investing in human resource development

    A.3.   Promotion of decent work

    A.4.   Promoting Information and Communication Technology (ICT)

    A.5.   Facilitating access to applied Science and Technology (S&T)

    A.6.   Strengthening entrepreneurship skills for women, youth, elderly and persons with disabilities

    A.7.   Building civil service capability

B. Social Welfare and Protection

    B.1.   Poverty Alleviation

    B.2.   Social safety net and protection from the negative impacts of integration and globalization

    B.3.   Enhancing food security and safety

    B.4.   Access to healthcare and promotion of healthy lifestyles

    B.5.   Improving capability to control communicable diseases

    B.6.   Ensuring a drug-free ASEAN

    B.7.   Building disaster-resilient nations and safer communities

C. Social Justice and Rights

    C.1.   Promotion and protection of the rights and welfare of women, children, the elderly, and persons with disabilities

    C.2.   Protection and promotion of the rights of migrant workers

    C.3.   Promoting Corporate Social Responsibility (CSR)

D. Ensuring Environmental Sustainability

    D.1.   Addressing global environmental issues

    D.2.   Managing and preventing transboundary environmental pollution

        D.2.1. Transboundary Haze Pollution

        D.2.2. Transboundary Movement of Hazardous Wastes

    D.3.   Promoting sustainable development through environmental education and public participation

    D.4.   Promoting Environmentally Sound Technology (EST)

    D.5.   Promoting quality living standards in ASEAN cities/urban areas

    D.6.   Harmonizing environmental policies and databases

    D.7.   Promoting the sustainable use of coastal and marine environment

    D.8.   Promoting Sustainable Management of Natural Resources and Biodiversity

    D.9.   Promoting the Sustainability of Freshwater Resources

    D.10. Responding to Climate Change and addressing its impacts

    D.11. Promoting Sustainable Forest Management (SFM)

E. Building ASEAN Identity

    E.1.   Promotion of ASEAN awareness and a sense of community

    E.2.   Preservation and promotion of ASEAN cultural heritage

    E.3.   Promotion of Cultural Creativity and Industry

    E.4.   Engagement with the community

F. Narrowing the Development Gap

Source: ASEAN, The ASEAN Socio-Cultural Community Blueprint, 2009, pp. 2-24.

Under these headings are listed no fewer than 329 different "actions".

However, the style of this blueprint is very different from the other two, reflecting the novelty of this expansion of ASEAN into the socio-cultural domain. In the blueprints for the AEC and APSC, the actions are often very specific and refer to work in progress. In the ASCC blueprint, the items are broader and mostly new initiatives, especially on social topics. The other two blueprints often refer to existing ancillary bodies and working committees. In the ASCC, these are almost completely absent.[48]

Given the slow pace built into ASEAN's operating culture, little of this will be achieved soon. Given that implementation depends on the authority and resources of member governments, initial progress is likely to be patchy according to national agendas. There will need to be a phase of developing intermediate institutions and working systems, as has happened within the other two pillars already.

For all these qualifications, the ASCC Blueprint seems to flag human development as its third major agenda alongside its first, security, and second, free trade.

This is quite a step.

ASEAN Connectivity

The three community blueprints are complemented by a Master Plan on ASEAN Connectivity that envisions a three-pronged strategy namely physical connectivity, institutional connectivity and people-to-people connectivity.

On *Physical Connectivity*, the plan includes infrastructure projects on land, sea and cyberspace; improving procedures to facilitate the movement of goods, investment, and people; and longer-term visions of a power grid, gas pipeline grid, single aviation market, single shipping market, and integration of ICT.

With regard to *Institutional Connectivity*, the plan aims to resolve a number of key issues including impediments to movements of vehicles, goods, services and skilled labour across borders. This plan will address issues of non-tariff barriers, standard harmonization, implementation of key transport facilitation agreements, the National Single Window arrangement to bring about seamless flow of goods within and across national borders, Single Aviation Market and ASEAN Single Shipping Market, and liberalization of investments.

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[48] ASEAN has promoted cultural and educational exchanges and cooperation since 1977, and has established mechanisms including the ASEAN Cultural Heritage Information Network and the ASEAN University Network that now has 26 member universities.

For People-to-People Connectivity, the plan aims for deeper intra-ASEAN social and cultural interaction and understanding through community building efforts and greater intra-ASEAN people mobility through progressive relaxation of visa requirements and development of mutual recognition arrangements.

Conclusion

The ASEAN Community is an ambitious project that will take shape over the decades to come. Perhaps the key reason to be optimistic about its prospects is that it is launched at a time and place of enormous dynamism.

The prospect for advancing human development in Thailand within the ASEAN Community will depend in part on leveraging the opportunities available from freer flows of goods, capital, and talent. But that is only part of the story. The prospect will also depend on how Thailand and other member states contribute to the mass of new plans and projects laid out in the Blueprints, especially the many projects on the human development agenda in the ASCC.

This fact has major implications for the scope of this report. The prospects for advancing human development in Thailand through the ASEAN Community are dependent not only on ASEAN as it is at the end of 2015, but also on what it might become through the efforts of Thailand and other member states in the years to come.

In the chapters that follow, we examine the priorities for Thailand's human development through this lens.

3 EDUCATION FOR THE NEW GENERATION

The acquisition of education and skill is the single most important factor in human development. In keeping with its human development emphasis, the first two objectives of the ASCC Blueprint are about these two items:

A.1. Advancing and prioritising education

11. Strategic objective: Ensuring the integration of education priorities into ASEAN's development agenda and creating a knowledge based society; achieving universal access to primary education; promoting early child care and development; and enhancing awareness of ASEAN to youths through education and activities to build an ASEAN identity based on friendship and cooperation.

A.2. Investing in human resource development

12. Strategic objective: Enhance and improve the capacity of ASEAN human resource through strategic programmes and develop a qualified, competent and well-prepared ASEAN labour force that would benefit from as well as cope with the challenges of regional integration.

Although the ASEAN Community's current plans for labour mobility are limited and obstructions are many, in truth the movement of people around the region is already increasing and this trend is likely to intensify. ASEAN offers a broader field of opportunity for the new generation of Thais to gain better employment and live fuller lives. But they will face competition from their peers in other ASEAN countries.

Those who can embrace these opportunities will need language skills, both in English and in ASEAN languages. They will need the qualifications for employment, especially in the expanding service sector, and especially in the sub-sectors with rising demand such as ICT. They will also need adaptability and readiness to work in different environments.

The gradual maturing of the single market will also create more opportunities in the Thai economy, especially in manufacturing and services, including health and tourism. Embracing their opportunities will require much the same skills and mindset.

For several decades, Thailand's education system has struggled to keep pace with the country's rate of change. In each of the last three decades, there has been a major project of education reform. In each case, critics have challenged that the changes were insufficient. The approach of the ASEAN Community has again shone the spotlight on education. Students are concerned whether the current education system equips them with the skills needed in a widening labour market. Planners are concerned whether the education system equips the country with the human resources needed to prosper in the new environment.

These concerns have stimulated a renewed commitment to reform of education. Will there be the stamina, the strategy, and the resources to see it through?

Investing in the new generation

In the past decades, both households and government have made substantial investment in education, raising education expenditures from 2.7 percent of GDP in 1990 to 3.7 percent in 2011 (Table 3.1). This investment is critical as the country's demographic profile shows a decline in both proportion and number of children and youth and an increase in both proportion and number of the aged. Starting in the 2020s the number of those of working age (15-59 years) will shrink (Table 3.2), and the number of working age per each elderly person will drop from 6.99 in 2000 to 5.68 in 2010, 3.76 in 2020 and 2.44 in 2030. Hence, it is important that today's children and youth become highly productive and high-value members of the workforce so that they can take care of their parents and sustain economic growth.

Table 3.1 ASEAN government expenditure on education (percent of GDP)

Regional Member	1990	1995	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Brunei Darussalam	4.0	4.6	4.2	4.0	4.7	6.0	3.0	3.7	3.3	3.0	3.0	3.9	3.8	3.4
Cambodia	0.8	0.9	1.3	1.3	1.7	1.6	1.5	1.4	1.5	1.4	1.4	1.6	1.6	1.4
Indonesia	1.7	1.3	-	0.8	0.7	1.0	0.8	-	-	-	-	-	-	-
Lao PDR	0.5	0.1	1.0	1.7	-	-	-	-	-	-	-	-	-	-
Malaysia	5.5	4.8	5.6	7.0	7.7	7.0	5.4	4.9	5.2	5.5	5.8	7.0	6.3	5.6
Myanmar	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Philippines	3.1	3.2	3.3	3.0	3.0	2.8	2.5	2.3	2.3	2.4	2.4	2.6	2.5	2.8
Singapore	4.0	2.9	3.9	4.2	4.3	3.9	3.5	3.2	3.2	2.9	3.1	3.2	3.2	-
Thailand	2.7	2.9	3.1	3.4	3.4	3.4	3.4	4.1	4.1	4.2	3.9	3.7	3.9	3.7
Vietnam	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Source: ADB. *Key Indicators for Asia and the Pacific 2012: Green Urbanization in Asia*, 2012

Table 3.2 Population by age group 2000-2030

(numbers in thousands)

Age group	2000		2010		2020		2030	
	(number)	(%)	(number)	(%)	(number)	(%)	(number)	(%)
0-14 years	15,344	24.7	13,803	20.5	11,655	16.6	9,535	13.5
15-59 years	41,030	66.0	45,499	67.6	46,173	65.9	43,350	61.4
60 years and over	5,838	9.4	8,011	11.9	12,272	17.5	17,744	25.1
total	62,212	100.0	67,313	100.0	70,100	100.0	70,629	100.0

Source: NESDB, *Population Projections for Thailand 2000-2030*

Quantity up, quality down

Over the past two decades, education in Thailand has made enormous progress in terms of quantity. The gross enrolment in upper secondary level has roughly doubled to 70 percent, and in tertiary level has more than doubled to 56 percent (Table 3.3). This has been achieved by making 9 years of education compulsory and 15 years theoretically free, and by greatly expanding the number of tertiary institutions, both private and public.

Compared to other ASEAN states, Thailand now has higher secondary enrolment than all but Singapore, Brunei, and the Philippines, and higher tertiary enrolment than all but Singapore (Figure 3.1).

Table 3.3 Students as percentage of age-group by education level 1994-2009

Education Level	1994	1999	2004	2009
Lower Secondary (12-14 years)	70	81	93	95
Upper Secondary (15-17 years)	36	57	64	70
Tertiary (18-21 years)	25	37	53	56

Source: NESDB

Figure 3.1 ASEAN countries, comparison of education enrolment
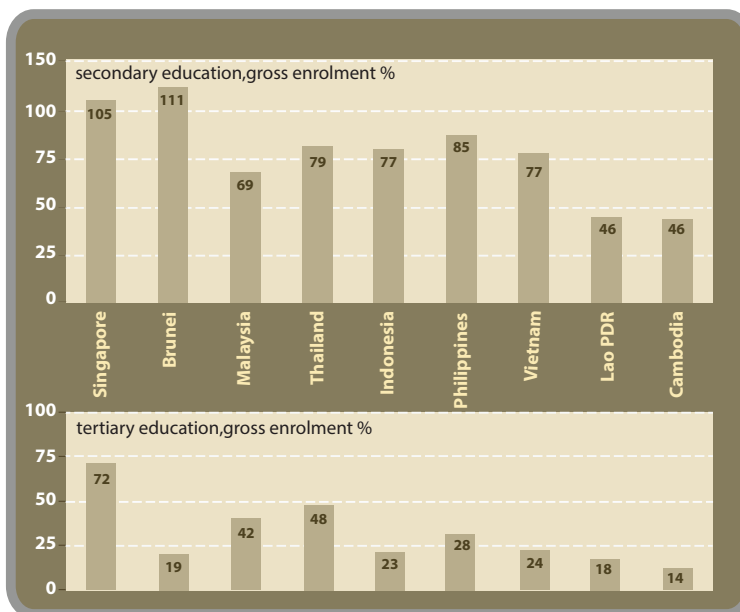
Source: K. Schwab, *The Global Competitiveness Report 2012-2013*. World Economic Forum, 2012.

This has been achieved by a major social commitment to education. Thailand's spending on education is now higher than other ASEAN members except Malaysia and Brunei, though lower than OECD levels (see Table 3.1).

However, the quality of Thai education is a matter of concern. In the general rating of the quality of education systems in the World Competitiveness Report, Thailand ranked lowest in ASEAN (though Myanmar and Lao PDR were not included in the ratings (Figure 3.2).

Figure 3.2 ASEAN countries, quality of education
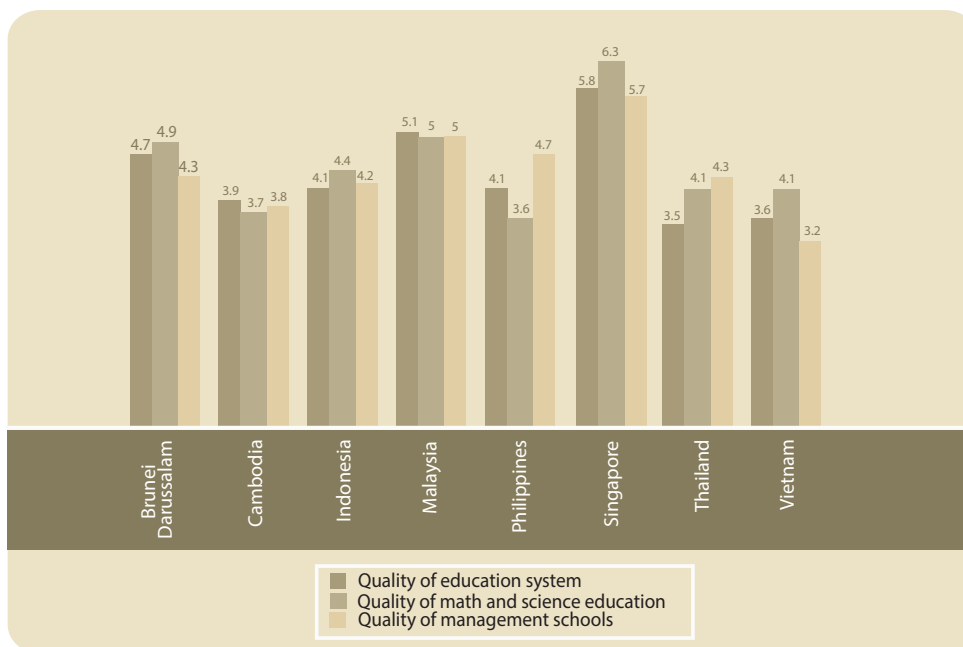
Source: K. Schwab, *The Global Competitiveness Report 2012-2013*. World Economic Forum, 2012.

International comparisons

The PISA[49] score is an OECD standard for measuring 15-year-old students' competency in the key areas of reading, mathematics, and science. In the 2009 rankings, Thailand ranked 50th out of 65 participating countries (Table 3.4).

Among other Asian countries included in the survey, China, Korea, Japan, and Singapore came in the top echelon while only Indonesia ranked below Thailand. Thailand ranked far below countries that are on a similar level in terms of GDP and the Human Development Index such as Chile, Turkey and Romania.

On all three of the PISA scales, only a tiny fraction of Thai students came in the top rank and most were bunched at the bottom. There was also a big difference by socio-economic background. On the reading score, the most socially disadvantaged group in the Thai sample scored 373 compared to 542 for the most advantaged group. By region, there was large variation, with Bangkok scoring highest and the Lower Northeast lowest (Figure 3.3).

What is more, Thailand's performance on PISA has been roughly static since the scoring system was first applied in 2003 (Table 3.5). As a result Thailand is being bypassed in the rankings by countries where the scores have improved.

Table 3.4 PISA scores for selected countries, 2009

	PISA Score (Ranking out of 65 countries)					
	China (Shanghai)	Korea	Japan	Singapore	Average	Thailand
Reading	556 (1st)	539 (2nd)	520 (8th)	526 (5th)	493	421 (50th)
Mathematics	600 (1st)	546 (4th)	529 (9th)	562 (2nd)	496	419 (51st)
Science	575 (1st)	538 (6th)	539 (5th)	542 (4th)	501	425 (49th)

Source: OECD, PISA 2009

Figure 3.3 Thailand PISA scores by region
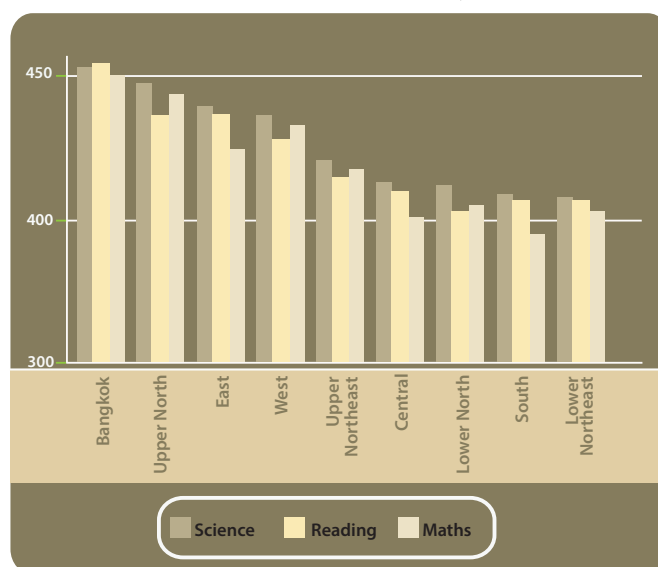
Source: Pasuk Phongpaichit and Pornthep Benyaapikul, Economy of Tomorrow: A Technical Note on Thailand, Asia Foundation, 2013

Table 3.5 Thailand PISA scores, 2003-9

	Reading	Mathematics	Science
2003	420	417	429
2006	417	417	421
2009	421	429	425

49   Programme for International Student Assessment, see www.nces.ed.gov/surveys/pisa/

On TIMSS,[50] a US-based international ranking, Thailand's scores for 8th-year students on mathematics and science declined steadily over successive surveys (Table 3.6).

Most countries had improved over successive surveys. Few had fallen as steeply as Thailand. In ratings of 4th-year students first surveyed in 2011, Thailand again ranked low at 38th out of 52 on maths and 35th out of 50 on science, with scores well below the median.

At the tertiary level, the story has been similar. Between 2003 and 2008, the number of tertiary institutions increased from 120 to 166. A World Bank survey of Thailand's tertiary education in 2009 flagged a general concern over static or declining quality.[51] The top Thai universities have tended to slip down international league tables. In scholarly publications, Thailand outstrips some ASEAN neighbours, but has fallen behind Singapore and East Asia (Table 3.7).

Explaining low quality, and correcting it

In each of the past three decades, there has been a major effort at education reform, driven by public dissatisfaction. The last round, conceived in the late 1990s and implemented in the early 2000s, was focused on "student-centred learning" as well as curriculum reform, technology, and other aspects. The publication of these international results and other measures has prompted public debate on why all these efforts have not produced better results. Three main conclusions emerge from this debate.

The Thai school system in the past emphasized discipline and relied heavily on rote learning. Srinakharinwirot University vice president for international relations explained in interview that Thai students "are kind of passive learners, because they respect teachers, they have to be quiet, sitting, listening and jotting down – which is something teachers expect from them."[52]

Average scores are brought down by wide range in quality which runs along an axis from centre to periphery (Bangkok–provincial town–village). In healthcare, doctors are financially incentivised to work at the periphery. In education, the incentives work the other way round, and the results are predictable.

In 2011, the Thailand Development Research Institute (TDRI) devoted its annual research seminar to the issue of education quality. The TDRI team's main conclusion was that the poor education quality resulted from a lack of accountability on the part of teachers, school directors, and administrators up to the minister of education.[53] The TDRI team proposed decentralization of control of education, including more freedom for institutions to innovate; more involvement by parents; and an incentive system that rewarded or penalised teachers and administrators on the basis of the results achieved by students on standardised tests.[54]

Table 3.6 Thailand TIMSS scores, 8th-year students, 1999-2011

	Mathematics	Science
1999	467	482
2007	441	471
2011	427	451

Source: TIMSS 2011 International Results in Mathematics, Exhibit 1.5, p. 58

Table 3.7 Yearly average number of scholarly publications

	1980-84	1985-89	1990-94	1995-99	2000-05
Thailand	394	446	557	926	2,059
Singapore	253	597	1,142	2,501	5,177
Malaysia	259	298	421	745	1,221
Philippines	237	207	246	329	474
Indonesia	104	141	198	366	524
Korea	341	1,043	2,756	9,813	21,471
Taiwan	642	1,644	4,326	8,608	13,307

Source: World Bank, *Thailand Social Monitor 2009: Towards a Competitive Higher Education System in a Global Economy*, p. 55

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50   Trends in International Mathematics and Science Study, see www.tmiss.bc.edu
51   World Bank, *Thailand Social Monitor 2009: Towards a Competitive Higher Education System in a Global Economy.*
52   In an interview with Channel News Asia, quoted in Kaewmala, "Thai Education Failures – Part 4: Dismal English-language Training," http://asiancorrespondent.com/78647/thai-education-failures-part-4-dismal-english-language-education/
53   http://www.bangkokpost.com/news/local/280208-free-education-policy-needs-overhaul-ombudsman-report-sa
54   The findings are in two papers for the TDRI Annual Seminar 2011, retrieved on April 12, 2013 from www.tdri.or.th: Dilaka Lathaphiphat, "Phon kratop khong kan sang khwam rap phit chop than kan sueksa to samritphon khong nakrian thai" [Impact of Creating Accountability in Education on the Achievement of Thai Students]; Ammar Siamwalla et al., "Kan patirup kan sueksa rop mai: su kan sueksa thi mi khunaphap yang thua thueng" [A New Round of Education Reform: for Education of Comprehensive Quality].

The challenge of English language

The approach of the ASEAN Community has made many in Thailand aware of the low level of competency in English. They believe other ASEAN countries have an advantage. Thais have extra difficulty because the structural difference between English and the local language is much greater than in the case of Myanmar and Malay languages.

Better performance by Malaysia and Singapore is hardly surprising as English counts among their official languages. But according to a recent EF English Proficiency Index 2012, Thailand was ranked 53rd out of 54 countries, below Indonesia (ranked 27th) and Vietnam (ranked 31st).[55]

The result is fear. In focus groups conducted among students for this project, the lack of competence in English is a key factor for feeling negative or fearful about the prospects of Thailand entering the ASEAN Community.[56]

Education and the labour market

While the output of the education system has expanded, there are growing complaints from employers that the schools and universities are not producing people with the skills that they need.

The Japan External Trade Organization (JETRO) found that Japanese firms in Thailand were more likely than Japanese firms in other ASEAN countries to complain about the difficulties of recruiting regular staff, middle management, and engineers. Thai engineers were also found to lack practical skills and language ability (Table 3.8).

Box 3.1 Thai new generation on the approach of the AEC

In 2011, Bangkok University Research Centre conducted a survey of 1,266 people aged 15-24 in Bangkok about AEC.

Understanding and readiness to ASEAN: 66 percent said they did not have enough understanding to become part of ASEAN community. Only 14 percent said they were ready. This was mainly due to lack of information. Most information was issued from the government and they were not tangible and practical at the personal level. Most information has been communicated was largely focused on the trade aspects of ASEAN Economic Community which most felt irrelevant to them.

Competitiveness of ASEAN members: Among 10 ASEAN members, countries that Thai youth perceived to be highly competitive are Singapore (39 percent), Vietnam (32 percent), and Malaysia (11 percent).

Competitiveness of Thailand: Two-thirds thought that Thailand was in the mid range of ASEAN competitiveness; 18 percent ranked Thailand at the lower end; and only 15 percent ranked Thailand as one of the most competitive countries in ASEAN.

Self capability and competitiveness: 49 percent were confident that they could compete with young people from other countries in the ASEAN job market while 14 percent believed that they could not compete and another 37 percent were not quite sure.

School engagement and ASEAN focus: 31 percent said that their school or college included certain topics about ASEAN in teaching material; 26 percent said there had been an increase in English teaching; and 23 percent said their school held events such as exhibitions and competitions about ASEAN.

Impact of ASEAN integration: Three-quarters believed that the AEC would have a positive impact on their career while the remaining quarter believed that it would be harmful.

Obstacles towards ASEAN integration: The major obstacles towards ASEAN integration were ranked as following: political conflict (29.6 percent), lack of English proficiency (26.7 percent), and the fraud and corruption (18.8 percent).

Government initiatives and support to successful ASEAN integration: the support wanted from government are promoting the teaching of English (59 percent); improving the teaching quality and providing more educational opportunities for youth (18 percent); and providing knowledge to prepare for the ASEAN Community (12 percent).

Source: http://bangkokpoll.bu.ac.th/poll/result/poll594.php?pollID=455

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[55] EF English Proficiency Index 2012; www.ef.com/epi. Note that the survey covered only 5 countries in ASEAN.
[56] Summary of responses from the focus group meeting, "New Generation of Thais as ASEAN Citizen", conducted on December 14, 2012

Table 3.8 Difficulty in hiring workers needed (percent of responses)

	Difficulty in recruitment of local staffs (general workers)	Difficulty in recruitment of local staffs (middle management)	Difficulty in recruitment of local staffs (engineers)
ASEAN	13.7	39.8	39.6
Thailand	**24.6**	**43.2**	**53.3**
Malaysia	17.8	36.1	37.9
Singapore	19.1	29.8	27.7
Indonesia	3.9	37.4	27.7
Philippines	3.3	38.1	37.6
Vietnam	14.5	59.0	50.6

Source: JETRO report, "Actual Management Conditions of Japanese Manufacturing Industry in Asia", released March 2006

A changing labour market

Over recent years, the labour market has gradually tightened and raw unemployment has fallen as low as 1 percent. In line, real wages have edged upwards (Figures 3.4, 3.5).

The TDRI 2011 study shows that over the past two decades the labour market has not only tightened but changed in shape.[57] As the Thai economy has become more globalized, there has been a rising demand for people with higher levels of skill. As a result the wage premium (i.e., the higher pay) for those with tertiary education rather than secondary education has markedly increased (roughly doubling from 250 percent in 1986 to around 500 percent in 2010). More students have thus been incentivised to stay on to the tertiary level, and the education system has responded by providing more courses and degrees.

But not always the right courses and degrees, and not always of the right quality. Too many students have gravitated to the humanities and social sciences, and too few to science and engineering (the proportions now are around 70:30). More importantly, more graduates are of poor quality. As a result, the variation in the pay for graduates has widened, and there is growing unemployment of graduates, even of graduates in science and engineering which are in high demand.

The TDRI team recommended several measures to correct these problems including assistance and incentives to upgrade low-quality tertiary institutions, and better information to encourage students to pursue courses which will lead to employment.

Figure 3.4 Unemployment, seasonal unemployment, and underemployment, 2000-2010
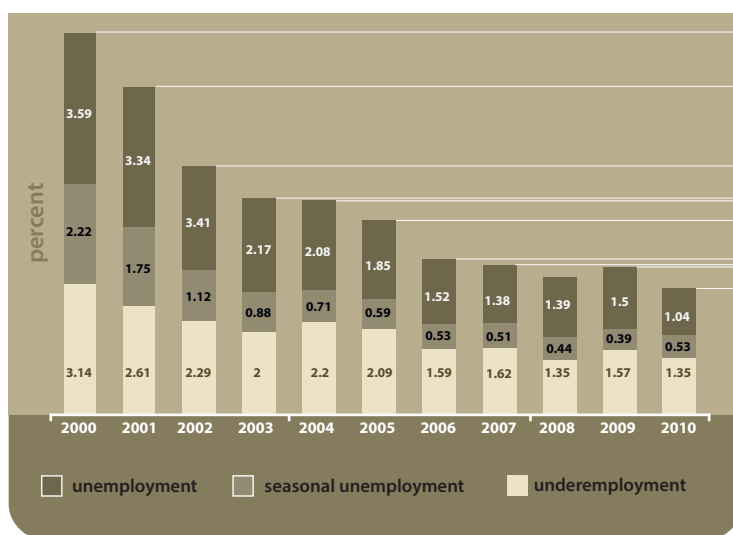
Source: Pasuk Phongpaichit and Pornthep Benyaapikul, "A Technical Note on Thailand", Bangkok, Friedrich Ebert Stiftung, March 2012, using NSO data.

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[57] The findings are in two papers for the TDRI Annual Seminar 2011, retrieved on April 12, 2013 from www.tdri.or.th: Yongyuyth Chalamwong et al., "Kan sang khwam choemyong khong kan sueksa kap talat raeng ngan" [Coordinating Education and the Labour Market]; Niphon Puapongsakorn et al., "Khwam choemyong rawang sathan sueksa kap talat raeng ngan: khunaphap phu samret kan sueksa lae kan kat klaen raeng ngan thi mi khunaphap" [Coordination between Educational Institutions and the Labour Market: Quality of Education and Lack of Quality Workers].

Figure 3.5 Nominal and real wages (at 2001 constant prices)

Source: Pasuk Phongpaichit and Pornthep Benyaapikul, *A Technical Note on Thailand,* using data from NSO and NESDB

Vocational education: struggling to keep pace

The TDRI team also analysed the vocational stream. Surveys of labour shortages in key industries such as automotive show that there is a large and increasing shortage of vocational graduates. Yet, average pay levels for graduate students have been flat for a quarter-century, and have declined against the pay levels for those from the general secondary stream. How come there is unfulfilled demand yet declining pay?

The problem starts upstream. According to government's plans, the ratio between the vocational stream and general stream at the secondary level should be 50:50, but had slipped nearer to 35:65. In addition, students prefer to pursue a higher degree before they enter the labour market. Each year, over 800 public and private vocational colleges produce approximately 400,000 graduates at certificate and diploma level. Eighty percent of the graduates at certificate level opt not to enter the labour market but continue on the diploma level, while 30-40 percent of the graduates at diploma level opt to pursue higher education.

For those who remain in the vocational stream, the problem again is quality. In the past round of educational reform, the vocational stream was neglected. Institutions have declined; teacher turnover is high; good students are not attracted. In addition, course content has not been adjusted to the changing needs of the labour market. There is excessive concentration on technical skills, and little or no attention to other skills. Surveys by the Thailand Productivity Institute show that the skills which employers most find lacking are English language, IT capability, and numeracy, and that the problem is worsening (Figure 3.6).

The TDRI team recommended an urgent programme to upgrade the quality of vocational schools; to adjust their curricula to include language, IT, and workplace skills; and to increase the flow of information about the labour market so that more students will be attracted to the vocational stream.

In addition, TDRI studied a handful of vocational institutes started by large corporations to overcome the labour shortage. The study found that the training was much better

Figure 3.6: Percent of surveyed firms reporting workers lack specified skills
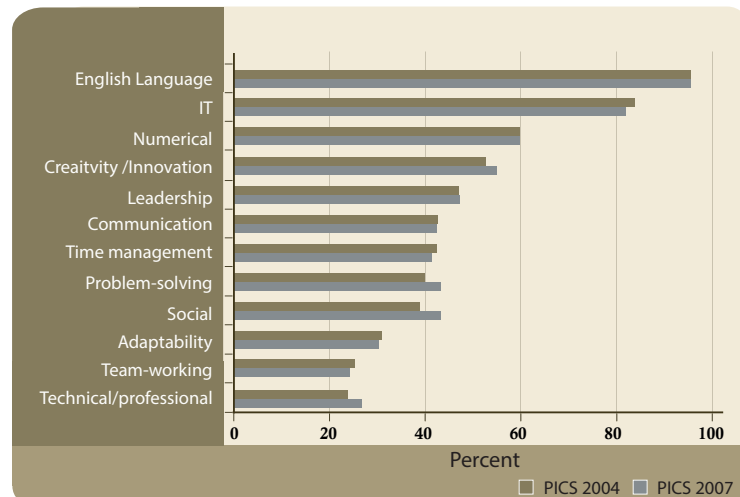
Source: Thailand Productivity Institute surveys on the productivity and investment climate, from Yongyuth, TDRI 2011

attuned to the labour market needs, and as a result virtually all graduates easily found employment. TDRI recommended that government investigate ways to expand the direct involvement of corporations in the vocational education system.

The Ministry of Education has moved in this direction. 268 out of 416 vocational institutes under the Commission on Vocational Education have launched a dual-system in which vocational colleges collaborate with industries to produce vocational graduates. In the 2012 academic year, 37,694 graduates were produced by this system. This represents less than one-tenth of total graduates and about one-fourth of all public and private vocational colleges. Upscaling and continued quality improvement requires long-term commitments from all the parties concerned.

Workplace attitudes

Professionals and workers will need more than the right knowledge and skills, but also the right attitudes to do well and excel in ASEAN. How well do Thais work compared with their ASEAN counterparts and how well do Thais work with their ASEAN and foreign co-workers in multicultural workplaces?

The new generation of Thais needs to refine their work attitudes and develop flexibility and readiness for working with peoples from a different culture, language and environment, in Thailand and elsewhere. Education has to equip Thai youth and workers with a new outlook, knowledge and skills. It is evident that this task cannot be accomplished in the classroom. At the very least, the workplace and the media have an equally important role and responsibility. This is not an easy task, but it needs to start now.

Box 3.2 Workplace attitudes

New-generation Thais cite the key features of the workplace attitudes of Thai workers as follows:

- avoid confrontation, like to save face, find it hard to adjust to a working culture which demands "speaking directly to the boss" and "accepting constructive criticism".
- believe they must repay those who have helped them, and stay loyal, even in situations where this is obstructive and inappropriate.
- prefer to work as part of a group rather than an individual.
- have a fun-loving orientation that suits creative environments but can lead to indiscipline.

They perceive workers from other ASEAN states as follows:

Singaporean

- Have confidence and commitment
- Systematic thinking
- Have a good thinking process
- Fast to catch the point
- See everything as black and white
- Very strict about rules

Indonesian

- Good at follow the plans or guidelines
- Not aggressive
- Humble solve problems
- Not very creative
- Don't like to stray out of line
- Need detail instructions

Filipinos

- Western style of thinking based on rationalism
- Seek new knowledge
- Relaxed, friendly, not very serious
- Do not work well in a team
- Accept leadership

Malaysian

- Think and work very systematically
- Keep their word
- Obey orders but dare to comment to supervisor
- Somewhat flexible in certain situations

Vietnamese

- High endurance
- Have skill in finding solution or shortcut to solve problem
- High personal discipline
- Interested in learning
- Sometimes unprincipled

Cambodian

- Patient
- Eager to learn and better themselves
- Accept their status but will fight if feel they are being taken advantage of

Source: http://www.thai-aec.com/157#ixzz2I9IJ0bVK

Inequities of access and quality

In all these analyses of the reasons behind the poor quality of Thai education, one critical factor is being overlooked. There is still inequality in access to education and especially to education of high quality.

At upper secondary level, inequality in access has strikingly reduced due to government policies.[58] In the late 1980s, a youth from a household in the top income quartile had a 6 times better chance of enrolling at the upper secondary level compared to a youth from the bottom income quartile. Today that difference has been reduced to one-and-a-half times (Figure 3.7a).

At college level, however, the inequality remains severe. Today, 60 percent of youths from the top income quartile enrol at college, but only 10 percent of youths from the bottom quartile, a gap of six times. Moreover, since the mid 1990s, this gap has widened, with youths from the top quartile showing the most gains (Figure 3.7b).[59]

Dilaka Lathapipat examined the reasons behind this gap. Over the past decade, factors such as location, household size, and education level of the household head have become less significant in explaining the difference, while sheer income has become by far the most important factor. This is partly because children of poorer households cannot afford the costs. It may also be because wealthier and academically less able youths are able to unduly monopolise the opportunities for enrolment and crowd out less advantaged children.[60]

Many children are denied the education they deserve. The nation suffers because it is failing to provide opportunities to children of talent. Thailand performs badly in international test comparisons because the average is dragged down by a long tail of low scores mostly from schools serving remote areas and low-income communities.

This inequity begins from the poor quality of such schools, starting from the primary level. Recent research on early child development shows that the quality of early schooling has a major influence on a child's success at higher education levels.[61] Children who start their study in poor schools have difficulty climbing each rung of the education ladder. The inequity in education is reinforced by the fact that education is supposed to be free for all but in fact still has many hidden costs.

Figure 3.7 (a and b): Male enrolment at upper secondary (left) and tertiary levels (right) by household income quartile (percent)
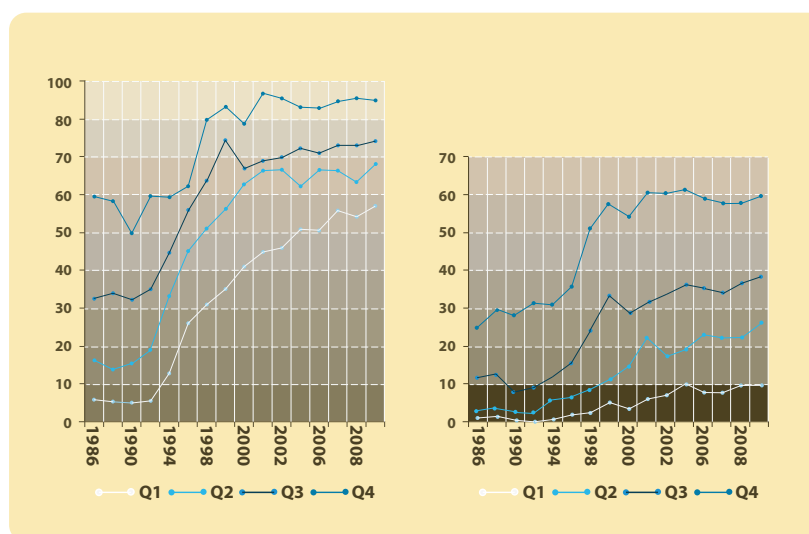
Source: Dilaka Lathapipat, "The Influence of Family Wealth on Educational Attainments of Youths in Thailand".

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[58] This analysis and Figure 3.7 are taken from Dilaka Lathapipat, "The Influence of Family Wealth on Educational Attainments of Youths in Thailand", *Economics of Education Review* (forthcoming).

[59] These charts show male students. The pattern for females was not very different. A recent World Bank study found that in 2006, a family in the top fifth of the income pyramid had a 1-in-2 chance of entering tertiary education while a child in the bottom fifth had a 1-in-25 chance; see World Bank, *Towards a Competitive Higher Education System in a Global Economy*, p. 37.

[60] Dilaka Lathapipat adds that this is a hypothesis that can only be confirmed through analysis of data on academic competence, which are not available.

[61] "Why Invest in Early Child Development?" retrieved April 12, 2013 from web.worldbank.org.

Concentrating on the issue of education quality should not be allowed to obscure the issue of equity. Easing the inequity in access to education will contribute to the improvement in quality of output by giving more opportunity to more children of talent.

Improving equity in access to education and quality of education should figure among the objectives of national education policy. Research will be required to evolve policies to meet this objective.

At present, there is no comprehensive assessment on the impact of the ASEAN integration on education equity in Thailand. But experts have expressed concerns that it may lead to increasing disparity. Children from well-to-do families will have more access to better quality education at international schools and therefore have additional edges on landing good and high-paying jobs. This could widen the gap between rich and poor children.[62]

Planning in times of change

The mismatch between the output of the educational system and the demands of the labour market may be attributable in part to poor planning, but it is also a function of the country's rate of change. Reforms to an educational system take a generation to affect the profile of labour supply. Thailand is a highly open economy, susceptible to shifting forces from the world economy. It accelerated the production of mainstream secondary graduates and tertiary degree-holders when early industrialization increased demand for ordinary workers and general managers. At that time it would have been hard to anticipate the shift to skill-based industries and services, and at present it is difficult to predict the impact of the ASEAN Community and other changes.

An open, middle-income economy of Thailand needs the ability to adjust its labour profile in response to shifting demand. That requires much more extensive facilities and support for retraining – in technical skills, workplace skills, and language. The Community College scheme addresses that need, but at present is still limited.

The prospect of the ASEAN Community

The expansion of the education system in Thailand over recent decades has given large numbers of people better opportunities in life. The challenge today is to improve the quality of education at all levels, and align the education system better with the labour market, so that those opportunities are further enhanced.

The approach of the ASEAN Community makes that challenge even more salient. The level of education and skills will be critical for both individuals and nation within the context of the ASEAN Community.

The approach of the ASEAN Community has provoked concern about the education system, and stimulated a new wave of reform. Much is expected from the education system especially since the Cha-am-Hua Hin Declaration on Strengthening Cooperation on Education to Achieve an ASEAN Caring and Sharing Community 2009 that regards education as a driving engine for all the three pillars of the ASEAN Community Blueprint. This is very positive. The outcome depends on the strength and stamina of the political will behind this wave.

Box 3.3 Community Colleges

"In 2001, Thailand established community colleges across the nation as a response to growing provincial demand for higher education. The traditional obstacles to higher education access such as high cost, distance and work obligations are addressed as part of the community college mission. At these institutions, skills upgrading is also available for those already in the labor market. Fees charged tend to be low and course offerings include 2-year associate degree programs and short-course trainings catering to local economic and social development needs. The curricula for associate degrees include: Early childhood Education, Community Development, Local Government, Tourism Industry, General Management, Accounting, Computer, Business Computing, Business Electronics, Technology Programs in Livestock Production, Agriculture Industry, Electricity, and Auto-Mechanics." (World Bank, *Towards a Competitive Higher Education System in a Global Economy*, p. 20)

By 2010, there were 19 Community Colleges. The Bureau of Community College Administration oversees the project and provides some ready-made courses, supplemented by local initiative. Each college has a board of trustees including education professionals and local community leaders. USAID has given assistance with entrepreneurship training modules and self-access English language training.

The Ministry of Education is proud of this initiative, and hopes to share this experience within the ASEAN Community.

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[62] Sirinun Kittisuksathit et al, *Study on the Protection and Empowerment of Vulnerable People in the ASEAN Community,* MSDHS and IPSR, Mahidol University, 2013.

Initial response

Beginning in 2011, there was a flurry of activity to "prepare Thai youth for entering the ASEAN Community in 2015". At every level, curricula are being adjusted by adding material on ASEAN to history, geography, religion and other subjects using the ASEAN Curriculum Sourcebook prepared by the ASEAN Secretariat.

The Ministry of Education paid special attention to upgrading English teaching at all levels. Help was sought from the British Council to hire 2,000 teachers of English.

The Ministry identified 54 model schools which were given a budget of 300,000 baht for the initial year. This includes 24 "buffer schools" in border areas with a launch budget of 100,000 baht plus 10,000 baht a month for English teaching. A few larger schools in provincial centres launched an English-language program, and arranged cross-border teacher exchanges with neighbouring countries. However, some local education heads and administrators criticized these policies as inadequate and under-funded.[63] Since this initial phase, the plans for education reform have significantly expanded.

Education and liberalization of services

The Ministry of Education has also examined the prospects of liberalizing education under the ASEAN Framework Agreement on Services.

Thailand has already committed to the first two modes of liberalization (cross-border supply and consumption abroad) under WTO, so the issue concerned the third and fourth modes – commercial presence (i.e., inward investment) and movement of natural persons. After its study of the benefits and pitfalls of this decision, the Ministry embraced the objective of becoming a hub for education in the region as a spur to upgrading the quality. The government agreed to liberalize for inward investment in secondary and vocational education, and also in tertiary education with an added condition that the institution's board must have a Thai majority. The government did not agree to free movement of people at any level.[64]

From its competitive study of the region, the Ministry concluded that Thailand had clear comparative advantage in vocational education, rivalled only by Singapore which had decided against liberalization. Thailand's key weakness is in English-language training which should be resolved by a crash programme to hire more teachers and make more use of online resources.

The Ministry also commissioned a major study to advise on implementation. For vocational education, the study recommended

- to set an objective to become a hub,

- to provide assistance to neighbouring countries, particularly by training staff,

- to establish regional centres of vocational education near the key border crossings,

- to get cooperation from the private sector, especially firms with interests in the cross-border economies,

- and to establish special institutions for providing vocational education to migrant labour in the border areas in order to upgrade productivity.

For the tertiary level, the study made several recommendations for upgrading the quality in universities by setting minimum standards for student entry, setting quality control standards for private universities, seeking corporate sponsorship for endowed chairs in universities of technology, identifying centres of excellence for increased research funding especially in public and autonomous universities, and increasing networking and cooperation, especially among the weaker institutions.

The study also noted that some ASEAN countries already included a third language in their curricula, and recommended that Thailand consider a similar policy to develop competency in other ASEAN languages.

The study surveyed students, teachers, and administrators at all levels on the country's readiness for liberalisation. Teaching staff tended to rate Thailand's readiness as middling but the education industry's readiness as high, while students gave high ratings for the readiness of both the country and the education industry.[65]

The Education Plan

In light of this research, the Ministry in early 2013 has drawn up a plan in preparation for the ASEAN Community. The plan has five key objectives:

- Prioritise education and facilitate access including remote learning, community learning centres, and use of new technology,

- Invest in developing human resources, especially English-language capability,

- Develop quality of vocational education to meet demands of domestic industry,

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63   Chula Unisearch, "Krongkan kan phatthana bukhlakon lae phlitphap buklakon phuea rong rap kan poet seri asiyan", [Project to Develop Human Resources and Productivity in Response to ASEAN Liberalization], December 2012, executive summary, pp. 4-5.
64   Ibid, pp. 4-5
65   Ibid.

- Develop ICT for education, and ICT skills for students,

- Promote learning in science and technology at every level.

The action plan prioritizes five areas, beginning with a strategic plan to develop English-language capability over 2013-22 with seven main elements:

- Strengthen English-language skills of school- children, students, teachers, officials and staff of the Ministry,

- Develop quality of teachers to raise level of English teaching by producing or upgrading 10,000 teachers of English and other languages per year,

- Develop and use ICT for English learning,

- Create activities for using English both inside and outside educational institutions,

- Develop courses in English language,

- Strengthen networks for English teaching both inside and outside the country,

- Announce that English is major element in assessing education institutions, deciding promotions, as well as giving prizes and awards to teachers and ministry staff.

The four remaining areas are:

- Support student transfers within the ASEAN University Network scheme and student exchanges with other member countries.

- Study regulations and conditions for Thai investment in educational institutions, and amend laws to enable inward investment and movement of teachers and educational officers.

- Raise level of vocational education to meet standard ASEAN qualifications now defined for 224 positions in 33 industries.

- Study labour markets in ASEAN to guide production of students, and encourage students to pursue vocational and technical streams in order to find employment easily and be accepted elsewhere in ASEAN.

In addition, two additional special projects are planned for 2013-2018. The first is to prepare Thailand for the ASEAN Community with a budget of 34 billion baht for improving skill training, language teaching, occupational capacity, curricula, and research. The second plans to develop selected regional cities as centres for international education with a budget of 11 billion for upgrading curricula, developing human resources, and networking.

Education and ASEAN cooperation

Within ASEAN, cooperation on education is well established, particularly through the Southeast Asia Ministers of Education Organization and the ASEAN University Network. The ASCC Blueprint has a long list of 21 actions planned for education and another eight for human resource development. What

actions should Thailand give priority support?

One important area is the standardization system. Thailand is developing a National Qualifications Framework (NQF) that specifies learning outcomes or performance competency for each level of formal, non-formal, and informal education. The NQF will cover academic, vocational education and dual vocational training classified by discipline and occupation. It will promote life-long learning and facilitate mobility in education and career development. ASEAN is also developing the ASEAN Qualifications Framework to serve as a framework of guidelines for the development of and comparison among NQFs of the member states. This would expand learning and work opportunities across ASEAN.

In addition, Thailand should give backing to an initiative to develop a system similar to the OECD's PISA system to assess education quality.

Learnings and recommendations

Within a wider market, and in a world economy where skills grow ever more important, the acquisition of education and skill will be vital for both the individual and the national economy.

In an open economy that changes rapidly in response to world forces, adjusting the education system to market demands is a constant toil.

International tests show that the increase in the quantity of education over the past two decades has resulted in serious declines in quality at every level. The approach of the ASEAN Community has spurred new urgency about reversing this trend. Research has diagnosed the problems and proposed solutions. Plans have been laid, criticised, and revised. Budgets have become available. This is a great opportunity.

The current strategy emphasises improvement in English-language capability, upgrading of quality at all levels, overhaul of the vocational stream, and development of Thailand as an educational hub, especially for the vocational and tertiary segments.

These priorities make sense. What is needed now is the stamina to implement them.

- Sustain support for the programmes to improve English language capability.

- Promote "interactive learning" especially with regard to skills that are useful in the ASEAN context.

- Make improving equity in access to education and quality of education a strategic priority, and conduct research to evolve appropriate policies.

- Consider ways to increase accountability for education quality, particularly through incentive systems, decentralization, and increased roles for parents and community leaders.

- Pursue the strategy to become an educational hub within ASEAN both because it challenges the education system to improve quality, and because it will strengthen ties with neighbouring countries, but do not allow this strategy to prejudice plans to improve the national system.

- Accelerate the development of the National Qualifications Framework as well as a competency-based occupational qualifications standard, and a professional qualifications standard.

- Increase facilities for retraining in mid-career in order to ensure the skill base can adjust to the rapidly changing requirements of the labour market in the context of globalization.

- Support actions under the ASCC to coordinate efforts to develop human capital.

4 SOCIAL PROTECTION AND HEALTH: SUSTAINING SUCCESS UNDER PRESSURE

In the ASCC Blueprint, the second chapter devoted to "Social Welfare and Protection" begins with a promise:

> ASEAN is committed to enhancing the well-being and the livelihood of the peoples of ASEAN through alleviating poverty, ensuring social welfare and protection, building a safe, secure and drug free environment, enhancing disaster resilience and addressing health development concerns.

Within this chapter of the Blueprint, the sections on social protection and health lay out these strategic objectives:

> Ensure that all ASEAN peoples are provided with social welfare and protection from the possible negative impacts of globalisation and integration by improving the quality, coverage and sustainability of social protection and increasing the capacity of social risk management.

> Ensure access to adequate and affordable healthcare, medical services, and medicine, and promote healthy lifestyles for the people of ASEAN.

> Enhance regional preparedness and capacity through integrated approaches to prevention, surveillance and timely response to communicable and emerging infectious diseases.

Over recent decades in Thailand, advances in health coverage and social protection have greatly improved the quality of life for most of the population. For social protection, the remaining task is to extend better coverage to the three-in-five of the working population who are in the informal sector under a scheme which is accessible and financially sustainable over the long term. In the realm of healthcare, the issues are more complex, and the uncertainties surrounding the advent of the ASEAN Community contribute to this complexity.

How Thailand manages this issue will have a major impact on human development over the next generation.

The current state of social protection and health coverage

Over recent decades, the Thai government has accepted responsibility for providing social protection for everyone. The milestones were:

• The Social Security Act, promulgated in 1971, now provides benefits for illness or injury, maternity, disability, death, child allowance, old age and unemployment for all employed in the formal sector, financed by contributions from employer, employee, and government. This represents a major addition to the scheme of benefits for civil servants and dependents.

• Over several decades, Thailand has gradually developed a system of public health, focusing initially on delivering primary health care and developing human resources, and gradually extending the system as the funds and skills became available. The impetus for this development has come largely from within the medical profession which has nurtured a strong tradition of commitment to public service. From 2001, Thailand rolled out a Universal Healthcare (UHC) scheme available to all except those already covered by either the Social Security Act or parallel provisions for public servants. The scheme is now recognized as a model for other countries in ASEAN and elsewhere in the world.[66] In 2011, only 31,906 people had no access to health coverage (see Table 4.1).

• Following the success of the UHC scheme, concern focused on extending social security benefits to the 63 percent of population who work in the informal sector.[67] In 2011, informal workers were allowed to voluntarily contract into the Social Security Scheme by paying a monthly contribution supplemented by government. By October 2012, 1,239,557 people had contracted into this scheme, a small proportion of the 24.8 million in the informal labour force.

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[66] Health Insurance System Research Office, *Thailand's Universal Coverage Scheme: Achievements and Challenges: An Independent Assessment of the First 10 Years (2001-2010),* 2012.

[67] According to NSO, in 2012 14.8 million (37 percent) were employed in the formal sector and 24.8 million (63 percent) in the informal sector.

Table 4.1 Access to healthcare, 2002-2011 (unit: persons)

Category	2002	2004	2006	2008	2010	2011
Universal Healthcare	45,352,811	47,099,766	47,542,982	46,949,267	47,729,516	48,116,789
Social Security	7,121,147	8,340,006	9,200,443	9,835,528	9,899,687	10,167,671
Civil servants, etc.[1]	4,045,992	4,267,324	4,061,220	5,002,106	4,918,544	4.965.014
Others[2]	-	-	232,105	237,375	516,254	638,318
Total population	61,120,730	62,537,397	62,394,210	62,546,628	63,471,290	63,919,698
Total covered	56,519,950	59,707,096	61,036,750	62,024,276	63,064,001	63,887,792
Not covered	4,600,780	2,830,301	1,357,460	522,352	407,289	31,906

[1] Also covers employees of state enterprises, and some political appointees
[2] Includes army veterans, teachers in private schools, and stateless persons.
Source: National Health Security Office.

The UHC scheme is credited with lifting many people (estimated as around half a million) above the poverty line and reducing inequality.[68]

Other notable social protection schemes are:

- The right to 12 years of free education is guaranteed by the Constitution. The free education policy was extended to 15 years in 2009 to address the need for education from pre-school through high school and vocational training. It covers assistance for tuition fees, textbooks, learning materials, school uniforms, and other activities which support students' education.

- There are various pension schemes for the elderly, namely the government officials' pension system and the Government Pension Fund, old-age scheme under the Social Security system, and private sector provident funds. Those who are not eligible for any of these schemes can register for a nominal old-age allowance (600 - 1,000 baht per month).

- In preparation for the ageing society, the National Savings Fund Act was promulgated in 2011. The Fund targets workers in the informal sector who are not covered by any other old-age pension scheme. The implementation has been delayed to date and the programme design is now under review.

- People with disabilities who obtain a doctor's certification and register for the scheme receive medical and equipment support plus nominal subsistence support (500 baht per month).

In short, Thailand has made remarkable progress in the area of social protection and health in the past decade. The social safety net is available for disadvantaged groups such as the poor, homeless people, children and youth, women and elderly in distress situations. Several kinds of assistance are available such as day care centres, old-age homes, shelters, rehabilitation, and job training but are unable to reach all the target groups due to weakness in the data system and management.

Box 4.1 One Stop Crisis Centres

The Government's latest initiative to reach out to those in need is the One-Stop-Crisis Centre (OSCC) that serves as the hotline (1300) for all reports and leads on violence against children, women, the elderly, people with disabilities and disadvantaged people including sexual violence, child labour, human trafficking, and unplanned and under-age pregnancy.

In addition to a hotline and website, the OSCC has a countrywide network of centres that are easily accessible by the public. This is an attempt to integrate various kinds of services provided by several government agencies, the private sector, and NGOs at the frontline as well as serve as a gateway so that the victims receive appropriate short-term and long-term care. The OSCC was launched in early 2013 and is managed by the Ministry of Social Development and Human Security.

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[68] Health Insurance System Research Office, *Thailand's Universal Coverage Scheme: Achievements and Challenges: An Independent Assessment of the First 10 Years (2001-2010),* 2012.

Extending social protection

The most important challenge is to extend social protection to the majority of the workforce in the informal sector. They may be at risk as the baht 300 minimum wage policy and the AEC are likely to force a large number of workers from the formal to informal sector as employers will explore new patterns of employment such as piecework payment, subcontracting, and home-work. An immediate measure is to step up efforts to urge them to join the social security system.

On a long-term solution, there has been a debate with two main positions.

On one side there are advocates for applying the same principal of universality behind the health system. In short, basic benefits would be available to all, financed from increased tax revenues. As Thailand's ratio of taxation to GDP is rather low compared to countries at a similar income level (17 percent compared to 25 percent in Venezuela and 32 percent in Turkey), advocates of this route argue that the burden is bearable. Somchai Jitsuchon estimated that the full system would require an extra 2.5 percent of GDP which could theoretically be achieved through improved collection and reduction of loopholes, but in practice would face difficulties because of competing demands on revenue.[69]

On the other side, economists and planners have warned against installing a system that would be financially difficult to sustain.

The Thai government has embraced a new approach to social protection and set a target of providing a comprehensive social protection system by 2017 under the concept of a Social Protection Floor introduced by the UN in 2009 as a comprehensive social protection system based on the rights to basic social services to reduce the risks of poverty in every population group especially the disadvantaged. Achieving this goal is a key part of the Partnership Framework agreed between the Thai government and the UN for 2012–2016.[70] The key objectives are:

- to gradually extend basic protection to everyone throughout the lifecycle to ensure nobody falls below the poverty line

- to extend social insurance to everyone through contributory or partly subsidized schemes

- to ensure everyone is aware of their entitlements

- to create a budgetary framework to ensure all systems are sustainable.

A study by a UN and Thai government Joint Team on Social Protection to close the social protection floor gap in Thailand proposes a combined benefit package composed of income support measures and mechanisms to increase employability and access to markets. The study outlines two scenarios, low and high, which would entail an additional cost of 0.5-1.2 per cent of GDP by 2020 for financing a benefit package including a universal child support grant, extended maternity allowance, extended sickness benefit, increased benefit package for disability, increased old-age allowance, a more efficient vocational training system that would reach 20 per cent of informal workers every year, and an allowance for poor trainees.[71]

Social protection and ASEAN

The ASEAN countries have different mixes of social protection. In comparison, the system in Thailand offers a full range of social security (but the system covers only about one-third of the workforce) but little on social welfare and social safety net. But this may change with the shift toward the social protection floor approach.

The ASEAN countries are at different levels of social security system. For example, Cambodia has no social security system. Only Thailand and Vietnam have unemployment benefit. In the long run, social protection in ASEAN member countries may converge as workers and people move around as in the case of the EU, provided that no strict barriers are put up by governments. Given the chronic labour shortage and changing demographic situation, Thailand should plan the social protection system with the Thai + ASEAN workers scenario, and actively foster consultation among the ASEAN to plan for gradual harmonization.

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[69] Somchai Jitsuchon, "Financing Social Protection in Thailand, TDRI", 2012.
[70] United Nations Country Team in Thailand, *United Nations Partnership Framework 2012-2016*, 2011.
[71] ILO, and United Nations Country Team in Thailand, "Social Protection Assessment based National Dialogue: Towards a Nationally Defined Social Protection Floor in Thailand", 2013, p.69.

Table 4.2 Social protection systems in the ASEAN countries

country	social insurance	social welfare and social safety net					social services
		cash transfer	subsidy	elderly pension	food	public work program	
Cambodia		/	/		/	/	/
Laos	/				/	/	/
Myanmar	/				/	/	/
Vietnam	/	/	/	/	/		/
Indonesia	/	/	/	/	/	/	/
Philippines	/	/	/	/	/	/	/
Thailand	/			/	/		/

Remark: Cambodia passed a Social Security Scheme Act in 2002, but in practice it covers only civil servants.
Source: Nicola Jones and Maria Stavropoulou, *Resilience for All? Towards Gender-responsive Social Protection in South-East Asia*, Report for UN Women Bangkok, 2013, pp. 20-1

Table 4.3 Social security in the ASEAN countries

country	sickness	child birth	old age/ retirement	disability	child support	death	work-related injury	unemployment
Cambodia								
Laos	/	/	/	/	/		/	
Myanmar	/	/	limited	limited	limited		/	
Vietnam	/	/	/	/	/		/	/
Indonesia	in kind		/	/	/		/	
Philippines	/	/	/	/	/		/	-
Thailand	/	/	/	/	/	/	/	/

Source: Jones and Stavropoulou, *Resilience for all?*, p. 22

Meeting multiple demands on healthcare systems

Over the years ahead, Thailand's healthcare systems will be challenged by rising demands not just from one but many sources. Maintaining the past trend of significant improvements in coverage and quality of healthcare will require some skill in planning to meet these multiple sources of demand. Service liberalization under AEC may contribute to these rising pressures, but could also help to ease them.

Domestic demand for private healthcare

The domestic demand for private healthcare in Thailand has risen with the expansion of the middle class and the expatriate communities. Both these trends are expected to continue and perhaps intensify over the coming decade. According to WHO, 24.5 per cent of domestic spending on healthcare in 2011 was private.[72] Private healthcare can add and relieve pressure from the public health system at the same time. Private health facilities cater to the well-to-do and the middle-class, thereby reducing the workload that would otherwise lie with public health facilities. But private health facilities also drain human resources from the public

health system as they can offer better benefits and less workload.

Rising costs

Government health spending as a share of GDP has nearly doubled from 1.5 percent in 1995 to almost 3 percent in 2008. This is a result of increased usage of the UHC, rising costs, the onset of the ageing society, and other factors. This cost inflation is likely to increase.[73] The Ministry of Public Health is now implementing a scheme to decentralize administration of the scheme to 16 zones with the aim of increasing efficiency by sharing resources of manpower and equipment.

Bridging the gap

Thailand now has three health security schemes, namely the Civil Servants Medical Benefit Scheme, the Social Security System, and the Universal Healthcare, which altogether cover the entire population (Table 4.1). Besides inefficiency from fragmentation, a major shortcoming is disparity among the schemes. For example, only the Civil Servants scheme provides health benefit to dependents. The compulsory and contributory Social Security members

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[72] Retrieved 6 June 2013 from http://apps.who.int/gho/data/view.country.19400
[73] World Bank, "Thailand: Sustaining Health Protection for All", August 20, 2012, at http://www.worldbank.org/en/news/feature/2012/08/20/thailand-sustaining-health-protection-for-all

receive a similar benefit package to those covered by the non-contributory UHC which may create a sense of unfairness. In recent years, the government and the agencies concerned have made efforts to harmonize these schemes starting with the cases of emergency medical service, HIV, and renal failure.

Ageing society

Ageing society will increase demands for healthcare. Population aged 60 and above are expected to reach 10.8 million (15.3 percent of total population) in 2015, 15.6 million (21.3 percent) in 2025, and 17.8 million (24.3 percent) in 2030.[74] Moreover, because of the age profile and increasing life expectancy, the oldest of the old (80+) will more than double from 0.8 million in 2010 to 1.7 million in 2025 and exceed 2.2 million by 2030.

At the same time the potential support ratio, an index of the number of people available to support the elderly, is projected to fall by half from 10 in 2005 to 5 in 2025. Because of migration patterns, the highest ratios of elderly in the population will occur in the north and northeast regions (Table 4.4).

Traditionally, the elderly in Thailand are looked after within multi-generational families, but already this is beginning to change because of migration, urbanisation, and demographic strains. Around 10 percent of those over 65 live alone, and the proportion is edging upwards. There will be more elderly people and higher reliance on institutional care.

Government began planning for the ageing society in 1986. It established a National Commission on the Elderly in 1999, formulated a Second National Plan for Older Persons covering 2002-2021, passed an Act on Older Persons in 2003 to provide the policy framework for welfare promotion, protection and empowerment of older persons, and launched a National Pension Fund in March 2011. The wide-ranging plan includes programs to relieve pressure on the health services by promoting employment and activity among the elderly, preventive health care, and community support. Even so, the demand for health services will increase sharply.

Between 2002 and 2008, the number of elderly (60+) visiting government hospitals for health checks increased from 2.1 million to 3.4 million per year, while the numbers of elderly treated for high blood pressure increased from 1.2 million to 2.3 million, for diabetes from 0.5 million to 0.8 million, and for heart problems from 0.4 million to 0.5 million.[75]

Medical and retirement tourism

Medical tourism is well-established and is increasingly significant as a competitor for resources. The numbers treated per year are estimated conservatively at 500,000 and more ambitiously at 2 million. The turnover is estimated to be growing at 16 percent a year to reach 100 billion baht by 2015. The sub-sector contributes 0.4 percent of GDP.[76] Government promotes Thailand as a "medical hub".

Eight hospitals have received the Joint Commission International accreditation from the US. The government's Tourism Authority of Thailand heavily promotes medical tourism, including a very smart website that highlights the accredited hospitals, qualified doctors, low charges, and standard of service. Individual hospitals accessible through the website feature their range of language translators (22 languages in the case of one leading hospital group) and their specializations in dental work, dermatology, cosmetic surgery and so on.

Table 4.4 Percentage of older persons (60+) in total population by region,

	2005	2015	2025
Thailand	10.3	14.0	19.8
Bangkok	8.6	11.9	18.6
Central	10.8	13.1	17.9
North	12.1	16.0	23.9
Northeast	9.6	14.7	21.4
South	10.4	13.2	17.8

Source: Institute for Population and Social Research, Mahidol University, Population Projections for Thailand, 2005-2025, 2006

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[74] United Nations, *World Population Prospects: the 2010 Revision*, 2011.

[75] From Tables 4.1 4.2 of the NESDB's statistics database on the elderly.

[76] Caroline Eden, "The Rise of Medical Tourism in Bangkok", BBC, September 4, 2012, http://www.bbc.com/travel/feature/20120828-the-rise-of-medical-tourism-in-bangkok

To promote Thailand as a medical hub, the government in February 2013 waived visa requirements for people from 21 countries (mainly in the Middle East) arriving for medical treatment.

A little less heavily, the Tourism Authority also promotes retirement tourism by featuring resort locations, low costs, and the availability of healthcare. Private agents and law firms offer services to manage the legal details of visas.

Migrant labour

In the past decades, the inflow of migrant labour has posed great challenges to healthcare systems because of the addition to the patient base, the special needs of migrants who often live in poor conditions and work in dangerous jobs, the special difficulties of delivering services including language barriers, and the added complications of financing. Over the years to come, the scale of these problems is unlikely to diminish. This matter will be discussed in detail in Chapter 5.

Healthcare and the AEC

Nursing, medicine, and dentistry are three of the eight areas identified for service liberalization under the AEC. As these plans are shaping up, there is a strong possibility that liberalization will mean an inflow of patients and an outflow of medical personnel.

In these specified sub-sectors, the AEC Blueprint aims to allow cross-border investment between ASEAN member-states up to 70 percent. In general, this aim is blocked in Thailand by the 49 percent cap in the Foreign Business Act. However, a Cabinet resolution made exceptions to this cap for selected sub-sectors within the eight areas earmarked for liberalisation. Five of these exceptions are in the health sector, namely: in-patient treatment in private hospitals; veterinary; physiotherapy by nursing staff; hospital services excluding outpatient clinics, dentistry, ambulances, and nursing; and convalescent homes.[77]

Among other member states, only Singapore has opened up 100 percent to foreign investment in the medical sector. Brunei and the Philippines have not signed the agreement.

Nurses, doctors, and dentists are among the eight categories of skilled labour earmarked for liberalization under the ASEAN Framework Agreement on Services. Under the Mutual Recognition Agreements within this framework, countries agree to establish systems for certifying the qualifications of their own nationals, and agree to accept the certifications of the other nations. These agreements have been negotiated.

However, the certification is not automatically recognized in the receiving country but requires a further process. Nurses, doctors, and dentists wishing to work in Thailand must each fulfil a list of conditions which are broadly similar in each case, including these three: be accepted as a member of the respective professional association by fulfilling its membership criteria; having a degree from an institution recognized by the professional association; and passing both an oral and written examination in Thai language.

As the agreements on the flow of investment and skilled labour are not yet final, the impact is uncertain but can be roughly projected.

With its established reputation for healthcare and low cost structure, Thailand will have comparative advantage to expand its market within ASEAN. The Ministry of Public Health is planning to develop five ASEAN medical centres sited in the provinces along the major routes from neighbouring countries, and to upgrade 50 hospitals in border areas "in preparation for AEC".[78] Private Thai hospital groups will aim to expand their market within ASEAN both by attracting cross-border patients and possibly by investing overseas under the investment agreements. Singapore is also an established medical hub but with less than half the patient numbers of Thailand. Malaysia has ambitions in this sector but fewer advantages.

Thai medical staff may be attracted to work elsewhere in ASEAN, particularly in Singapore but also possibly in Malaysia. Malaysia currently pays health personnel roughly twice what they earn in Thailand and has much lower patient-to-personnel rates (e.g., 1:200 for nurses compared to 1:600 in Thailand) so the attractions of moving could be considerable.

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[77] Deunden Nikhomborirak, "AEC kap kan pathirup sakha borika" [AEC and Reform of the Service Sector], TDRI, 2012, p. 10.

[78] "Permanent Secretary for Public Health Narong Sahametapat said that, under the plan, five regional medical centers will be established in Chiang Rai province in the North, Ubon Ratchathani province in the Northeast, Chanthaburi province in the East, Hat Yai district of Songkhla province in the South, and Kanchanaburi province in the West. At the same time, he said, 50 hospitals located in border areas will be developed as border hospitals to cope with the expected growing number of patients from neighboring countries entering Thailand for medical services." Ministry of Public Health Prepares for the ASEAN Economic Community (12/02/2013), at http://thailand.prd.go.th/view_news.php?id=6637&a=2

Box 4.2 A medical blogger on the risks of aiming to be a medical hub

"The government invests over 2.5 million baht to produce one doctor….

With more foreigners coming for medical care, there'll be a shortage of personnel, prices will rise, private hospitals will suck staff away from the government hospitals and from the rural areas, because the private hospitals have the funds….

We should increase the number of doctors, nurses, dentists, and medical staff up to a point where it's appropriate to facilitate more foreigners to come and use the service. That will require some serious and urgent investment….

If private hospitals want to attract more clients from the Middle East and Europe, that should be a business matter and they should invest themselves. Government should not use the tax revenues of the whole country to advertise and support a private business that make mega-profits."

https://suchons.wordpress.com/2013/02/11/คอลัมน์-เจิมศักดิ์ขอคิด/

The combined effects of multiple demands

The combined effects of rising domestic demand for private healthcare, ageing society, medical and retirement tourism, migrant labour, plus a possible inflow of patients and outflow of personnel under AEC will undoubtedly increase the demand for health personnel. Gauging the extent of this increase is very difficult because there are several sources of rising demand and many unknowns.

Thailand has a low ratio of doctors to population compared to many of its ASEAN neighbours (Figure 4.1). As a shortage of personnel develops, staff will drain from the government hospitals to the private sector. Most at risk are the rural hospitals and health centres where doctors have heavy loads and inadequate resources. Some 400 to 500 rural doctors resign each year. Until now, doctors in rural and remote areas receive an incentive payment, but this scheme is under review.

Thai medical professionals have a strong tradition of commitment to public service. There are possibilities for doctors to share their time between public service and more lucrative private employment. However, there are very real fears that a steep increase in private demand, both domestic and foreign, will deplete human resources in the public sector at a time when demands on this sector are increasing.

Nurses are even more vulnerable. Thailand now has around 100,000 nurses, and produces around 9,000 to 10,000 new nurses each year, which is fewer than the number in demand. Some hospitals report that they cannot admit patients due to a shortage of nurses.[79] Many nurses are now recruited on annual contracts and do not enjoy the benefits of civil servant status.

In recent months both nurses and doctors have registered complaints about their levels of remuneration in the public sector. Doctors have also complained about rising

Figure 4.1 ASEAN countries, physicians per 10,000 population

Source: UNDP, HDR 2013

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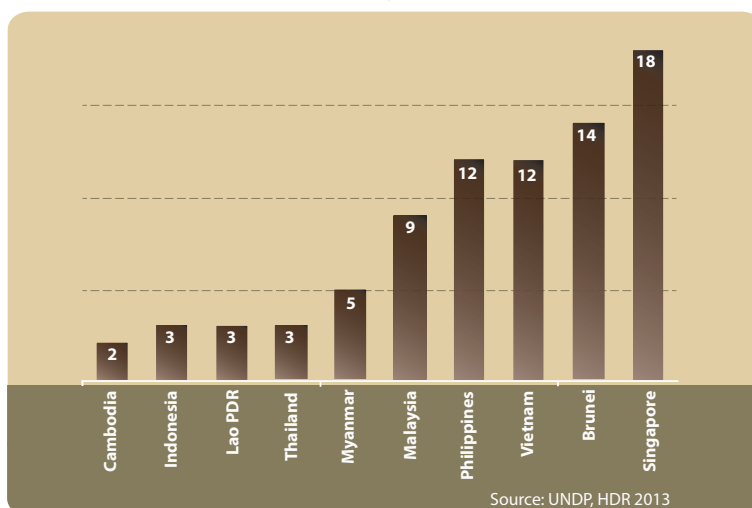
[79] The director of the Ramathibodi School of Nursing, writing in *Krungthep Thurakit,* November 27, 2012, ASEAN+ section, p. 1.

workloads in public hospitals, and potential liabilities due to consumer protection laws.

According to the Ministry of Public Health's manpower plan for 2013-2017, Thailand should produce 11,007 physicians, 2,989 dentists, 333 pharmacists, 17,230 nurses, 995 medical technicians, and 2,546 physical therapists over the five years.[80]

Planning ahead for adequate medical personnel will be a major challenge to ensure that Thailand continues to provide all its population with rising standards of healthcare.

Thailand should also regularly reconsider whether tapping the potential inflow of skilled medical personnel under the AEC might help alleviate the pressure on the healthcare sector.

Learnings and recommendations

Over the past decade, Thailand has made great strides in providing its people with better access to healthcare and fuller social protection. Gaps still remain, especially social security for the large informal workforce and the multiple problems of a rapidly ageing society, but these problems are well understood and the subject of open debate.

However, the processes of regionalization, including the prospect of the ASEAN Community, have generated two new challenges.

First, increased flows of peoples across borders, and the presence of a large and often undocumented body of migrant workers, has placed strain on the provision of medical services, systems for financing them, and the delicate question of relations between migrant and host communities. In general, the response of the medical profession has been extraordinary. Yet problems remain. As noted in the next chapter, Thailand will benefit more from the presence of migrants and migrants will enjoy a better quality of life if Thailand takes a longer-term view of cross-border labour migration, including fuller integration of migrants into mainstream social services.

Box 4.3 Thailand and ASCC

Thailand has developed a reputation in the health sector. The Universal Healthcare scheme has been proposed as a model for adoption within ASEAN and elsewhere across the world.

As a contribution to developing the vision of the ASEAN Socio-Cultural Community, Thailand should play a leading role in progressing several of the tasks within the health-related chapters of ASCC Blueprint:

B.4. Access to healthcare and promotion of healthy lifestyles

xi.   Promote the sharing of best practices in improved access to health products including medicines for people in ASEAN; xiii. Encourage exchange of experts in the field of public health, medicine, physical and health education, to promote sharing of knowledge and experience;

xvii. Promote the sharing of best practises in improving the access to primary health care by people at risk/ vulnerable groups, with special attention to diabetes mellitus, cardiovascular diseases, cancers and disabilities through regional workshops, seminars, and exchange visits among the ASEAN Member States;

xxi. Strengthen existing health networking in ASEAN Member States in order to push forward an active implementation on health services access and promotion of healthy lifestyles, as well as continually exchange of knowledge, technology and innovation for sustainable cooperation and development;

xxiv. Promote the exchange of experiences among ASEAN Member States on public health policy formulation and management.

B.5. Improving capability to control communicable diseases

ii.   Establish/strengthen/maintain regional support system and network to narrow the gap among ASEAN Member States in addressing emerging infectious diseases and other communicable diseases; vii. Promote the sharing of best practises in improving the access to primary health care by people at risk/vulnerable groups, with special attention to HIV and AIDS, malaria, dengue fever, tuberculosis, and emerging infectious diseases through regional workshops, seminars, and exchange visits among the ASEAN Member States;

ix.   Strengthen cooperation through sharing of information and experiences to prevent and control infectious diseases related to global warming, climate change, natural and man-made disasters;

Source: ASEAN, The ASEAN Socio-Cultural Community Blueprint, 2009 pp. 8-10

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[80] "Ministry pushes for 5-year manpower plan to address shortage of doctors and nurses", *Krungthep Thurakit,* June 29, 2012, p. 5.

Second, the demand for medical personnel is likely to grow rapidly in coming years, in part because of the commitment to improved provision of healthcare for the migrant population, in part because of the possibility of leakage of personnel to other ASEAN states under the AEC's service liberalization, and in part because of the ageing society, promotion of medical and retirement tourism, and growth in private healthcare. Meeting this rising demand will require careful planning, commitment of resources upfront, and perhaps some utilization of the AEC.

- The multiple demands converging on Thailand's healthcare systems are very challenging. A major effort of planning is needed to meet these multiple challenges.

- Migrants should be properly counted in planning for health and social services in order to ensure adequate provisions of services for all. They should ultimately be integrated fully into health and social protection systems including UHC.

- Thailand should consider tapping the service liberalization under AEC to meet the demand for health personnel.

- In the medium term, cooperation with the neighbouring countries is needed to improve systems for transferring patients across borders, including standards for medical records, and developing health and social protection systems to alleviate pressure on Thai facilities.

- In the long run, with the increase flows of migrant labour across the region, Thailand should urge the ASEAN to consider establishing the ASEAN Healthcare and Welfare Fund.

- In the longer term, Thailand should help ASEAN work towards alignment of social insurance and healthcare schemes. Current efforts to generalize the Social Protection Floor approach, and to promote the model of Thailand UHC, are moves in the right direction. Thailand's experience in public health care can be an asset for assisting the neighbouring countries and thus cementing closer relations.

PEOPLE ACROSS BORDERS: LOW-SKILLED MIGRANT LABOUR

5

While AEC's provisions on movement of labour focus on skilled labour and may take time to be fully effective, flows of low-skilled labour between ASEAN countries are already large. As more goods and capital move around ASEAN under AFTA, pressures for the movement of people have increased too. Countries welcome these migrants because they add to the productive capacity, and entrepreneurs welcome them because they reduce their labour costs. Thailand is one of the major recipients of such migrants. While these flows are not part of the present plans for the ASEAN Community, they are now a feature of ASEAN society with many implications for human development.

First and foremost are issues concerning the migrant workers themselves. While most may achieve a better income than they might earn at home, some become victims of severe exploitation and infringement on their human rights, particularly when their civil status is undocumented or unclear. While Thailand has provided healthcare and education, migrants still have difficulties gaining access.

Second, these additions to the population place extra demands on social provisions (education, healthcare and social protection) and infrastructure, especially in border areas, which may reduce standards of delivery to the local population if not properly managed.

Third, there are delicate questions of relations with the host community, particularly in places where there are high concentrations of migrants and their families. Differences of language and culture have to be negotiated on a daily basis. In just such environments, the ambition of the ASEAN Community comes under challenge.

In the near future, these migrant labour flows may increase or decline. There are predictions either way, and either way will have an impact on Thailand. Long-range planning is needed.

Economic integration and migration flows

Since ASEAN first conceived ambitions to become an economic unit a quarter-century ago, the countries have gradually become more closely enmeshed. As most of the member states are open economies, replying heavily on exports and foreign investment, the economic relations with the outside world still outweigh the relations among themselves. Even so, over time the economies of the member countries have become more mutually complementary.

AFTA has contributed to this integration. Intra-ASEAN trade increased rather slowly until the early 2000s when tariff reductions began to bite. In the next decade, it increased fivefold (Figure 5.1).[81]

Figure 5.1 ASEAN intra-trade, 1993-2011
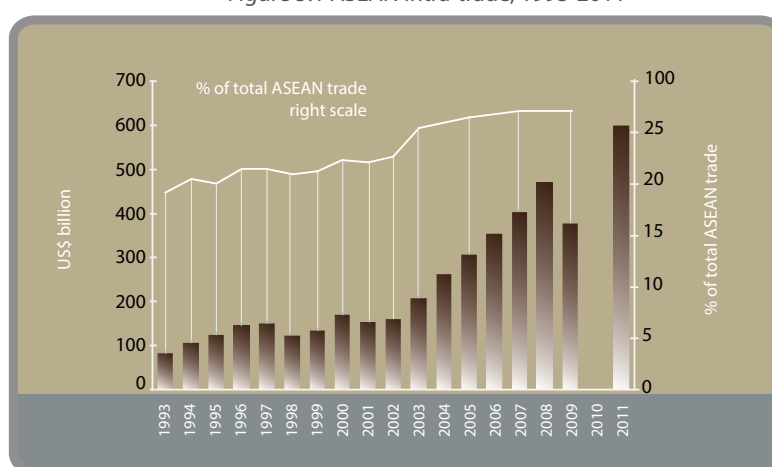
Source: ASEAN Statistical Yearbook

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[81]   However, AFTA increased the region's attraction as a trading partner for the rest of the world almost as much as for its own member countries. Intra-trade as a percentage of total trade eased up to around 25 percent but then plateaued. By comparison, intra-trade is around 68 percent in the European Union and 48 percent in the North American Free Trade Area.

Figure 5.2 ASEAN intra-investment, 2002-2011
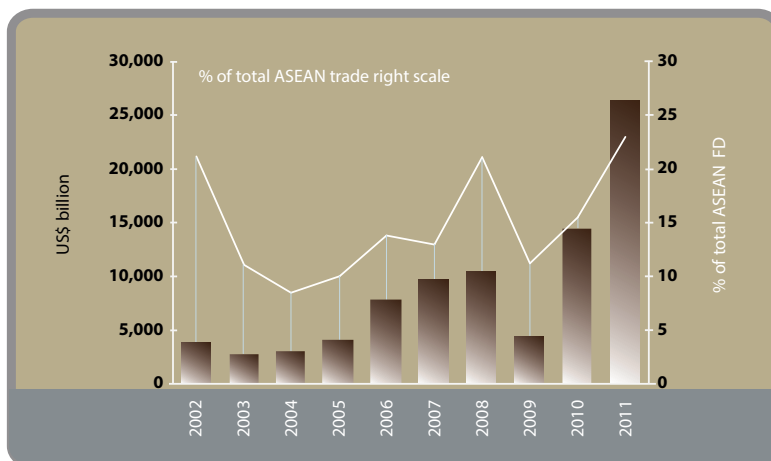
Source: ASEAN Statistical Yearbook

The story on foreign direct investment (FDI) has been similar. Investments between ASEAN countries have increased sharply since around 2005, but investment from the rest of the world has expanded at almost as rapid a rate. Now around a quarter of total FDI comes from within the bloc (Figure 5.2).

Increased flows of goods and capital create pressure for flows of people. Table 5.1 shows estimated numbers of migrants from one ASEAN country to another in 2010. The table underestimates the true picture as it includes only those people that governments define as migrants. Even with this limitation, the picture is impressive. There are at least 4 million migrants, or 1.5 percent of the total population.

Ageing society, labour demand, and migration

Another major factor behind migration flows is demographic change.

Thailand is experiencing a sharp transition to an ageing society. The proportion of the population aged 60 and above will grow from 12.9 percent in 2010 to 21.3 percent in 2025 and 31.8 percent in 2050.

Other countries in ASEAN are experiencing ageing but on a different timetable. By 2025, no ASEAN country other than Singapore and Thailand will have more than 13 percent of their population aged 60 and above. Beyond that date, the trend to ageing will affect more of the region (Figure 5.3).

Figure 5.3 ASEAN countries, population proportion aged 60 and above, 2000-2050
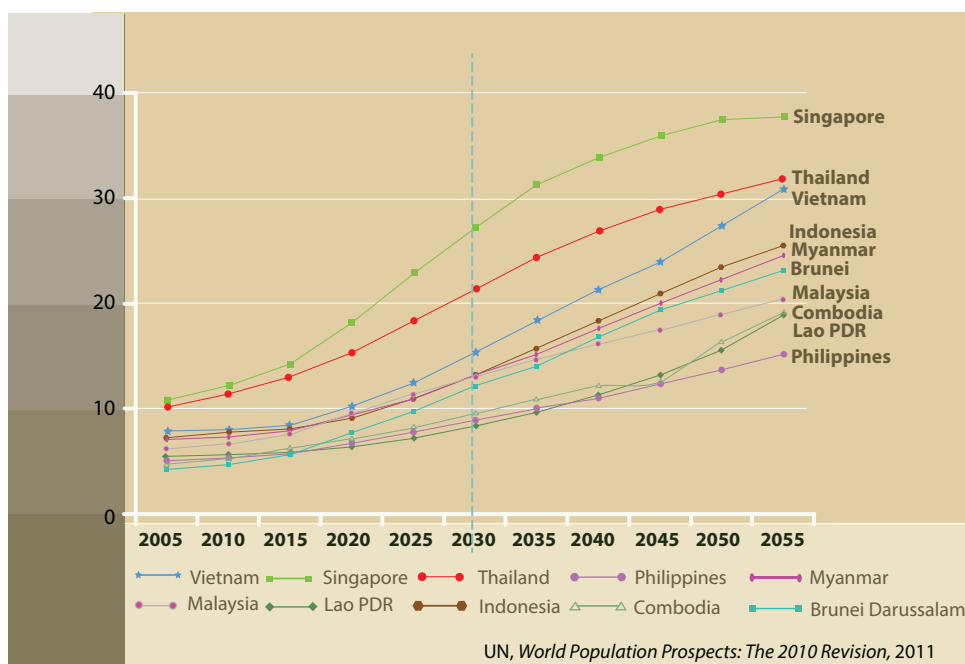
UN, *World Population Prospects: The 2010 Revision,* 2011

Table 5.1 ASEAN migration matrix

From↓　　　To→	Brunei Darussalam	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Vietnam	ASEAN total*
Brunei Darussalam			?		7,905	?	1,003			?	9,313
Cambodia			?	909		?	232		49,750	?	53,722
Indonesia	6,727	505	?		1,397,684	?	5,865	102,332	1,459	?	1,518,687
Lao PDR		1,235	?			?			77,443	?	82,788
Malaysia	81,576	816	?			?	394	1,060,628	3,429	?	1,195,566
Myanmar		247	?	143	17,034	?	415		288,487	?	321,100
Philippines	15,861	728	?		277,444	?			3,360	?	335,407
Singapore	3,033	581	?		103,318	?	288		2,134	?	122,254
Thailand	13,381	142,767	?	916	79,604	?	150				262,271
Vietnam		173,694	?	8,167		?	748		22,156	?	221,956
ASEAN total*	120,578	320,573	158,485	10,134	1,882,987	814	9,096	1,162,960	448,218	21,511	4,123,064

? = missing data
* = totals include estimates for missing data
Source: Gloria O. Pasadilla, Social Security and Labour Migration in ASEAN, ADB Institute, 2011; http://go.worldbank.org/JITC7NYTT0

For the first decade of the ASEAN Community, only Thailand and Singapore will experience rapid ageing society. Even beyond that, two of Thailand's neighbours, Cambodia and Lao PDR, will continue to have relatively young populations.

Within ASEAN, on the one hand there are countries with relatively high income levels and perhaps also an ageing population structure resulting in a demand for labour – Singapore, Brunei Darussalam, Malaysia, and Thailand; and on the other hand countries with lower income levels and still a large proportion of the population of working age – Indonesia, Lao PDR, Philippines, and Myanmar. The result is a large movement of people outside the official definitions of migration. Some are skilled labour working outside their own country on short-term visas. Others are unskilled or low-skilled workers crossing borders illegally.

ASEAN and migrant labour

In 2004, ASEAN agreed to create an ASEAN Instrument on the Protection and Promotion of the Rights of Migrant Workers but the project stalled. In 2007, ASEAN agreed to a Declaration on the Protection and Promotion of the Rights of Migrant Workers and set up a committee to oversee implementation. The Declaration calls on receiving countries to "Intensify efforts to protect the fundamental human rights, promote the welfare and uphold human dignity of migrant workers".[82]

The ASCC Blueprint has a subsection on the protection and promotion of the rights of migrant workers, starting with a strategic objective as follows:

Ensure fair and comprehensive migration policies and adequate protection for all migrant workers in accordance with the laws, regulations and policies of respective ASEAN Member States as well as implement the ASEAN Declaration on the Protection and Promotion of the Rights of Migrant Workers.

Since 2008, the ASEAN Forum on Migrant Labour has met annually. The 5th session in October 2012, held on the theme, "Protection and promotion of the rights of migrant workers: towards effective recruitment practices and regulations", laid out general principles that should govern member states' policies and practices towards migrant labour, without any specific proposals.

There is no proposal on the table to codify the rights of migrant workers, nor to align the social security provisions across countries.

In January 2013, Thailand's National Human Rights Commission held an open forum on the "ASEAN Community and Human Rights", and issued an open letter including the following call:

Encourage agencies concerned with labour and migration to discuss important issues such as protection of worker's rights, the rights of displaced persons and refugees, human trafficking, with an aim toward regional collaboration including the ASEAN Commission on Migrant Workers.[83]

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82   ASEAN Declaration on the Protection and Promotion of the Rights of Migrant Workers, published January 13, 2007, p. 2.

83   National Human Rights Commission of Thailand, *Newsletter*, March 2013.

The aspirations expressed in these ASEAN documents will not be fulfilled without establishing a bilateral or multilateral framework for establishing standards and policies. ILO Recommendation 167 on Model Provisions for the Maintenance of Social Security Rights outlines basic principles for such a framework as follows:[84]

- Equality of treatment – this principle overcomes nationality-based restrictions to ensure application to migrant workers and their families.

- Provision of benefits abroad – these overcome schemes that prohibit payment of benefits overseas, impose stringent conditions for payment or require residence. Provisions can allow for export of benefits to workers' home country or a third country.

- Determination of the applicable legislation – lays down application of social protection systems to workers to avoid double payments in origin and destination countries, particularly for workers who are self-employed or seafarers.

- Totalizing – assists migrants to overcome qualifying periods for social protection, including periods of employment and / or necessity of affiliation to a scheme at the time the right comes to fruition (i.e. being a pensioner for old age pensions). Totalizing means adding together periods of affiliation in all the countries party to an agreement to ensure that qualifying periods are met.

- Administrative Assistance – receipt of documents and evidence to be submitted in a number of different countries can be simplified and certification processes made.

Low-skilled migrant labour in Thailand

In Thailand, figures on migrant labour are uncertain because several agencies enumerate documented migrants in different ways, and because the true number of undocumented migrants is unknown. According to the Ministry of Labour, in December 2012, there was a total of 1,133,851 foreigners with work permits. Within this figure, just under 1 million were low-skilled migrants under various categories (described below). Estimates of total migrant labour range between 2 million and 4 million.[85]

Development of policy

The flow of migrant labour from neighbouring countries into Thailand dates back almost 30 years to the mid 1980s.

Early migrants from Myanmar were fleeing ethnic or political conflicts and finding work as a necessity. Policy to handle these migrants was initially made in the framework of national security. Gradually economic motives became more important than political motives in impelling the migration, and a business lobby developed in Thailand to promote migration as a source of cheap labour. Policy has been made by negotiation between the business and national security interests.

Government first started attempts to regulate the flow in 1992 with a scheme to register migrants in 10 border provinces, later extended to the whole country.

From 1996 onwards, Cabinet passed occasional resolutions (now numbering 14) allowing migrants from Myanmar, Cambodia, and Lao PDR to work in specified sectors on a temporary basis, usually set at one year.[86] In the Cabinet resolution of August 2001, migrant workers were for the first time allowed to register as working in any province and in any sector, even without the cooperation of an employer.

From 2002, the government made several changes recognizing that the economic benefit of these migrants outweighed the security concerns, that the rights of the migrants should be protected, and that the process of migration should be regularized.[87]

Government tried to regularize the flow by signing Memoranda of Understanding (MOUs) with Myanmar, Lao PDR and Cambodia in 2002-3. The objectives of these MOUs was to monitor and control the flow of migrants, provide a system for repatriation (never enforced), ensure protection for the migrants, and prevent illegal entry, human trafficking, and other border-related problems. Under the MOUs, the whole process was tightly systematized. Employers requested a quota of workers; the sending country recruited the workers and prepared the paperwork; on delivery, the employer paid the costs of recruitment and repatriation; workers underwent prior health checks and either purchased a health insurance card or had sums deducted monthly; at the end of the contract period, the workers were repatriated.

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[84] Andy Hall, "Migrant Workers and Social Protection in ASEAN: Moving Towards a Regional Standard?", *Journal of Population and Social Studies*, Vol. 21, No. 1, July 2012, pp. 18-19.

[85] IOM, 2011

[86] K. Archavanitkul, "Thai State Policy to Manage Irregular Migration from Neighboring Countries", 2011, retrieved August 18, 2011 from http://www.migrationcentre.mahidol.ac.th/policy _briefings/policy_briefings_Thai%20State%20Policy.html

[87] Adisorn Koetmongkhon, "Phatthanakan nayobai kan jatkan raenmg ngan khamchat" [Development of Policy on Management of Migrant Labor], at http://http//www.prachatai.com/journal/2012/12/44219; Phruek Thaothawin, "Kan plian (mai) phan khong kan jatkan raengngan kham chat (1)" [(Non)-transition of the Management of Migrant Labour], http://prachatai.com/journal/2012/12/44353

The system did not work well. Employers faced a long delay and high upfront costs. In 2005 only 14,150 workers were processed by this system, rising to 278,447 in 2007. Many more entered Thailand by overstaying a short-term visa, or crossing an unguarded border by wading across a shallow river or walking through the forest.

In 2005, government created an alternative system to allow workers from Myanmar, Cambodia, and Lao PDR who had entered the country illegally, including those permitted to stay under Cabinet resolutions since 1996, to become documented migrants by applying for registration (with the support of an employer), undergoing a health check, and then applying to the Ministry of Labour for a work permit. In 2006, government required migrants to produce an identity document from their country of origin to initiate the process. This process was tagged as "nationality verification".

Again, there have been problems. Cambodia and Lao PDR sent officials into Thailand to facilitate the process, but several workers, especially from Lao PDR, lacked passports or any identity documentation. Between 2005 and 2009, only some 80,000 workers from Cambodia and Lao PDR were documented by this method.

Myanmar workers had to journey home to complete the documentation – a journey which was expensive and sometimes risky. The alternative was to pay brokers or agents who charged high fees. The deadline for completing the scheme was initially set as 28 February 2010, after which undocumented migrants were threatened with deportation. However, the deadline was extended several times as few had completed the process and both employers and migrant workers (through the mediation of NGOs) requested more time.

To speed up the process, Thailand set up 11 one-stop service centres for undocumented migrants, and the Myanmar government eventually established 11 offices for nationality verification in Thailand. For a Myanmar worker, the minimum cost is around 3,500 baht which covers a temporary 6-month Myanmar passport, 2-year visa for Thailand, work permit, and health check. If employers do not cooperate, workers must engage an agent that raises the cost to 15,000-20,000 baht.[88]

The numbers counted under the three schemes (Cabinet Resolution, MOU, and nationality verification) have fluctuated from year to year. Between 2011 and 2012 (counts are for December), the total dropped from 1.8 million to 1 million (see Table 5.2).

Many other migrant workers are undocumented for various reasons: their employer will not cooperate in the process; they find the process of registration too costly or too cumbersome; they have exhausted the four years allowed under the scheme; and so on. The numbers are unknown. A study in June 2012 estimated that the total of undocumented migrants and their family members in June 2012 was 1,444,803.[89] Others cite much higher figures. In addition, there is an unknown number of migrants from other countries including Vietnam, Bangladesh, and the Philippines who do not quality for the existing schemes.

The Alien Employment Act 2008 created a new Committee on the Working of Aliens and a repatriation fund, changed the listing of occupations open to aliens from exclusive to inclusive, and established provisions for a levy on employers, monitoring, and penalties, but made no changes to systems

Table 5.2. Documented migrant workers in Thailand, 2010-2012

	2010	2011	2012
Total	1,335,155	1,950,650	1,133,851
Legal entry			
Total legal entry	379,560	678,235	940,531
Permanent	14,423	983	983
Temporary (general)	70,449	73,841	82,833
By MOU scheme	43,032	72,358	93,265
By national verification	228,411	505,238	733,603
Under BOI promotion	23,245	25,817	29,847
Illegal entry			
Total illegal entry	955,595	1,272,415	193,320
Minorities	23,340	24,351	25,439
From Myanmar, Cambodia, and Lao PDR according to Cabinet resolution	932,255	1,248,064	167,881
Total in 3 highlighted categories	1,203,698	1,825,660	994,756

Source: Registration and Information Division, Office of Foreign Workers Administration, Department of Employment, Ministry of Labour

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88 *Bangkok Post (Spectrum)*, February 17, 2013.

89 Jerry Huguet, Aphichat Chamratrithirong and Claudia Natali, "Thailand at a Crossroads: Challenges and Opportunities in Leveraging Migration for Development", IOM and Migration Policy Institute, Issue in Brief, No. 6, October 2012, retrieved April 10, 2013 from http://publications.iom.int/bookstore/free/MPI_Issue6_10Oct2012_web.pdf

of registration.[90] The Act has an additional section about employment conditions along the border. However, the Act still awaits the ministerial regulations needed for enforcement.

Origins and jobs

Among those documented migrants under the MOU and nationality verification schemes over 80 percent are from Myanmar, and the rest shared roughly equally between Cambodia and Lao PDR.

Many of the migrants are clustered in particular industries and places such as the fishing industry and fish processing around Samut Sakhon, labour-intensive factories in Mae Sot (Tak Province) and Sangkhlaburi (Kanchanaburi Province), the tourist industry in Phuket, and fruit plantations in the

north. But in the course of over two decades of inflow, migrant labour has become very widely dispersed both across the country and across economic sectors (Table 5.3).

Attitudes toward migrant labour

Thai people's attitude toward migrant labour has shifted over the years.

In a 2006 poll,[91] most respondents did not believe that migrants were needed for the Thai economy, feared that migrants affected wages and employment for Thai workers, and did not think that migrants should have the same rights as Thais.

By 2010, in a poll conducted by the ILO with 1,000 respondents in four provinces where there are high concentrations of

Table 5.3 Documented migrant labour from Myanmar, Lao PDR and Cambodia by sector, 2010

	Total	Myanmar	Lao PDR	Cambodia
Total	932,255	812,984	62,792	56,479
Agriculture	171,857	149,333	11,048	11,476
Construction	148,211	129,353	5,812	13,046
Fish processing	101,849	99,031	519	2,299
Housework	87,926	71,771	12,502	3,653
Other services	79,017	68,671	6,024	4,322
Manufacture and sale of clothing	66,870	61,211	4,520	1,139
Agri-processing	59,106	53,633	1,836	3,637
Trade food and drinks	49,472	39,863	7,269	2,340
Retail and vending	38,521	32,900	4,000	1,621
Fisheries	28,918	21,781	906	6,231
Manufacture and sale of plastic goods	20,139	17,376	1,826	937
Manufacture and sale of construction materials	15,359	12,991	1,208	1,160
Trade metal products	14,000	11,745	1,521	734
Recycling	11,954	9,725	854	1,375
Land and water transport and storage	7,577	6,321	216	7,577
Meat processing	5,775	5,228	362	185
Vehicle repair	5,550	4,517	752	281
Manufacture and sale of earthenware	5,231	4,866	238	127
Manufacture and sale of electronic goods	4,149	3,626	231	292
Gas and petrol station	3,971	3,041	706	224
Manufacture and sale of paper goods	3,314	2,856	297	161
Mining	1,224	1,187	25	12
Stoneworking	1,220	1,035	37	148
Education, health, foundation	1,045	923	83	39

Source: Office of Foreign Workers Administration, from Somkiat, TDRI, 2011

[90] Kritaya Archavanitkul and Kulapa Vajanasara, *Kan jang raeng ngan kham chat tam prarachbanyat kan tham ngan khong khon tangtao pho so 2551 kap kan jat tham banchi rai chue achip samrap khon tangtao [Employment of Migrant Workers under the Working of Aliens Act 2008 and the List Allowed to Foreigners]*, IPSR, Mahidol University for IOM, Office of Foreign Workers Administration, 2009.

[91] Assumption Business Administration College (ABAC), *Thai Attitudes Regarding Foreign Workers in Thailand,* Bangkok, 2006.

migrants, 55 percent believed that migrant workers were needed for the Thai economy, and only 24 percent feared that they had an impact on the wages and employment of national workers. Still, most respondents thought that migration should be more restricted (89 percent) and that migrants commit many crimes (78 percent). Some 8 percent agreed that "the number of migrants is threatening our country's culture and heritage".[92]

Impact on the Thai economy

Studies have shown that the short-term benefit of this migrant labour to the Thai economy is positive. Several studies conducted over 2007-2011 estimated that migrant labour contributed around 1 percent of GDP.[93]

But the rapid increase in the number of documented and undocumented migrants in the 2000s has raised concerns that the inflow would reduce wages and increase unemployment for Thai unskilled labour.

Studies suggest that the inflow has not prejudiced Thai labour. Lathapipat showed that unemployment had in fact fallen over the period that migrant labour increased, and calculated that it would have fallen only fractionally more had migrant labour numbers remained constant. He showed that over this period, wages for Thai unskilled workers had generally increased. He calculated that the inflow of migrants had depressed the wages for Thai workers with only primary education by only a fractional amount. Lathapipat also found that wages and productivity of skilled workers had risen over this period, and suggested that migrant labour, by releasing Thai skilled labour from unskilled tasks, might have contributed to these increases.[94]

Some claim that such results explain why Thai labour has not raised greater protests against this inflow. In fact, Thai labour has protested quite consistently as the number of migrants has increased, but its voice is generally ignored. At one of the sessions arranged for this project, a labour activist argued that inflow of cheap labour showed that "there is no hope that ASEAN will have any beneficial impact on workers".[95]

Moreover, the reliance on foreign labour allows companies to evade the pressures to upgrade their technology and their productivity. Some economists claim that cheap migrant labour allows Thai companies a "breathing space" while they make the investments to move to higher productivity. But the "breathing space" now extends over decades and the "lung" of migrant labour is still inflating.

Vulnerabilities

Despite the Thai government's effort to provide protection, migrant labourers are vulnerable to exploitation and abuse by employers, landlords, officials, and criminals. Factors determining the degree of their vulnerability are age, gender, their pre-migration socio-economic background, knowledge of Thai language and their legal status. Among documented workers, employers often demand that workers hand over their identity documents which may make it difficult for the worker to quit that employment or make any form of complaint. It also may make the migrant vulnerable to police harassment.

Undocumented workers are even more at risk. They have little recourse against exploitation by employers, extortion by landlords, harassment by the police, or mistreatment by criminals.

In the border town of Mae Sot, migrant workers are reportedly paid in the range of 65 to 120 baht a day, and often as low as 60 baht, a fifth of the legal minimum wage.[96] One of the reasons for such low payment is that employers make deductions for food, lodging and utilities that they provide. Migrant workers are also vulnerable to violence and to crime. A report on Mae Sot by the International Rescue Committee and Tufts University found that "over the last year, one in five migrants experienced eviction, one in ten suffered physical assault, and one in six was a victim of theft. More than a third of the migrants live in unsafe and unsanitary housing."[97] Other reports claim migrants are forced to work for drug-peddling gangs, arms smugglers, and other criminal operations, especially those working across national borders.

In June 2010, the US placed Thailand on the watch list (Tier 2) for human trafficking, citing forced migrant labour on fishing trawlers, in seafood-processing factories, and the low-end clothing industry. In the same year, the country was among 58 countries listed by the US Department of Labour for having merchandise produced by child labour and forced labour in violation of ILO Convention 182 (which Thailand ratified on 16 February 2001).

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[92] ILO, *Public Attitudes to Migrant Workers: A Four Country Study,* 2011, http://www.ilo.org/asia/info/WCMS_159851/lang--en/index.htm

[93] J. W. Huguet and A. Chamratrithirong, *Thailand Migration Report 2011: Migration for Development in Thailand: Overview and Tools for Policymakers,* Bangkok: IOM, 2011; Dilaka Lathapipat, "The Effects of Low Skilled Immigration on the Thai Labour Market", *The Nation,* December 13, 2011, retrieved December 6, 2012 from http://www.nationmultimedia.com/national/The-effects-of-low-skill-immigration-on-the-Thai-l-30171711.html; P. Martin, "The Contribution of Migrants Workers to Thailand: Towards Policy Development", ILO, Bangkok, 2007; P. Pholphirul, P. Rukumnuaykit, and J. Kamlai, "Do Immigrants Improve Thailand's Competitiveness?", paper presented at the World Bank and IPS Conference on "Cross-Border Labour Mobility and Development in the East Asia and Pacific Region", June 1-2, 2010, Singapore.

[94] Dilaka Lathapipat, "The Effects of Low Skilled Immigration on the Thai Labour Market", 2011.

[95] Forum on "Social Protection and ASEAN: Concerns, Opportunities, and Recommendations from the People," Thammasat University, January 14, 2013.

[96] IITD, "Kan jat tang prachakhom asiyan bon phuen thi rabieng sethakit tawan-ok tawan-tok senthang sai R9 [Establishing the ASEAN Community on the East-West Economic Corridor Route R9]", Bangkok, n.d., pp. 3-42.

[97] Reported in *Bangkok Post (Spectrum)*, February 17, 2013.

In response, Thailand developed the "National Policy, Strategies and Measures to Prevent and Suppress Trafficking in Persons (2011-2016)" as a national framework for all government agencies, NGOs and international organizations to coordinate their actions. The Plan is based on a multi-disciplinary approach and on the basis of 5ps – prevention, prosecution, protection, policy and partnership. The government then developed an annual plan of action.

Despite efforts by the Thai government to interview almost 400,000 individuals in 2012 to identify victims of trafficking, plus periodic inspections of establishments and prosecute errant employers, the 2013 Trafficking in Persons Report[98] alleged that Thailand was still the origin, transit, and destination of human trafficking of men, women and children.

The country remains on the watch list (Tier 2) in 2013 and was

> granted a waiver from an otherwise required downgrade to Tier 3 for presenting a written plan that, if implemented, would constitute making significant efforts to meet the minimum standards for the elimination of trafficking and is devoting sufficient resources to implement that plan. The government disbursed the equivalent of approximately $3.7 million for anti-trafficking efforts in 2012 and reported investigating 305 trafficking cases, versus 83 in 2011, but initiated prosecutions in only 27 cases during the year and obtained only 10 convictions.[99]

According to the multidisciplinary team that investigated the cases, many victims refused to take the cases to justice to avoid long and drawn out trials, and some were afraid to report to their national authorities because they might have broken a law in their country of origin.[100]

Another vulnerability is statelessness. Thai policy on migrant labour assumes that the worker comes alone for a short period. Until recently, children born to migrants could not have their births registered and thus risked becoming stateless. This was changed under the Nationality Act of 2008, but implementation is still difficult.

Access to education

Among the documented and undocumented migrants from neighbouring countries, around half a million are estimated to be dependents, including school-age children. From the early years of the migrant flow, schools in border zones and other areas with high concentrations of migrants often accepted migrant children, but were unable to grant any certificates and received no appropriate funding.

Elsewhere community-based organizations set up informal learning centres with foreign donation.

As part of its attempt to regularise labour migration, the Cabinet approved a landmark Education for All initiative on July 5, 2005, opening up schooling at all level to children of residents, whatever their nationality status, and providing per capita financial support on the same basis as for Thai children. The Ministry of Education directed schools to enrol all students, including those that do not have proper identification documents. In order to ease access to schools, government subsequently removed a restriction on migrant children travelling outside their residential area.

Yet a 2010 study[101] found that only around 60,000 children of migrant workers had enrolled in government schools, far fewer than the estimated total of over 200,000 children.[102]

An ILO report[103] stated that the difficulties for migrant children gaining access to education included the lack of schools in some remote areas, prejudice of Thai parents who do not want their children to be classmates with migrant children, a high drop-out rate among migrant children, and refusal of government schools to accept migrant children.

Some teachers and school administrators are reluctant to admit migrants in fear that they might be contravening the law, or because they doubt the school will receive the per capita allocation. There is also uncertainty about issuing certificates that children could use in seeking further education or employment.

Some parents are unaware of the availability of schooling, and others prefer to put their children to work. Many undocumented migrants fear arrest and deportation. Some are deterred by the language barrier.

A 2010 study[104] found that most government schools make no concessions for the special needs of the children of migrant labour, and apply the standard Thai curriculum. However, a few schools, mostly private or NGO-run, recognize

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[98] http://thai.bangkok.usembassy.gov/tipthaireport12-t.html

[99] US State Department, *Trafficking in Persons Report 2013,* p. 359

[100] MSDHS, "2012 Thailand Situation and Progress Report on Prevention and Suppression of Trafficking in Persons", p. 5.

[101] Kritaya Archavanitkul, "Kan jat rabop khon rai rat nai boribot prathet thai" [Managing Stateless People in Thailand's Context] in *Prachakon lae sangkhom [Population and Society]*, edited by Sureeporn Punpuing and Malee Sunpuwan, Nakhon Pathom, Population and Society Publishing, 2011, pp. 103-106.

[102] In 2011, there were an estimated 128,000 children of documented migrant workers and 82,000 of undocumented. IOM, *Thailand Migration Report 2011,* xiv.

[103] ILO, *Accelerating Action against Child Labour: Global Report under the follow-up to the ILO Declaration on Fundamental Principles and Rights at Work,* 2010.

[104] Bubpha Anansuchatikun, "Khrongkan rup baep la kan jat kan sueksa samrap thayat run thi song khong phu yai thin jak prathet phama" [Project on the Form and Management of Education for the Second Generation Offspring of Migrants from Burma], Thailand Research Fund, 2011.

that the migrant children might need to return to their home countries and thus should have a more flexible curriculum, organized as classes separate from the mainstream. A handful of schools conduct classes in English.

Many migrant workers prefer to send their children to one of the 130 informal learning centres run by NGOs and private foundations either because these centres are closer or cheaper or more attuned to the needs of migrant children. However these centres are not accredited, often do not employ qualified teachers, and cannot provide any certification.

Skills development

To date, there has been no government-sponsored skills development programme for migrant workers. The Skills Development Department is collaborating with the ADB to develop one under the GMS. Yet, learning and training has taken place on the ground at various workplaces by the employers, co-workers, and migrant themselves. With more concerted efforts, there is a great potential for migrants to become the much needed ASEAN's skilled labour pool for Thailand and their home countries upon their return.

Social protection

The framework of social protection has three main parts.

- Compensation for work-related accidents and disease is paid from a Workers Compensation Fund collected from employers.

- Benefits for illness or injury, maternity, disability, death, child allowance, old age and unemployment are available from the Social Security Fund to which employer, employee, and government make contributions. Since 2011, informal-sector workers may join the scheme by paying a monthly contribution, supplemented by government

- Healthcare is available through the Universal Healthcare scheme.

Documented migrant workers have access to the same social security provisions as Thai workers. Indeed, the law requires them to join the social security system within 30 days of obtaining their work permit. However, for a host of reasons, many migrant workers cannot access these benefits.

Box 5.1 Skills acquired by migrant labour in Thailand

"I learned to sew on the job with help from co-workers, supervisor and the manager. I worked as a daily wage worker earning 2,000 baht a month. I would like to have attended some professional tailor training to help improve my sewing but there was never enough free time. A year later I moved to another garment factory. I worked there for two more years until I moved to the factory where I currently work. I earn 4,000 to 5,000 baht a month after deductions for food and accommodation." (Female Myanmar garment factory worker in Mae Sot)

"My first job was to drill rock using a drill machine. My friends showed me how to use the drill machine while we were working. They did not provide proper training. There is no vocational training provided. I learned to operate heavy machinery at my own expense. I think employers should provide vocational training for the workers. I am now a skilled labourer because of my long-term experience in this job. I am able to operate heavy machinery and work as a machine operator. My wages also increased from 100 baht to 320 baht…. At times, I have been in charge of all the workers. I was called a Worker-In-Charge. At those times, I had some problems in dealing with Thai workers." (Male Myanmar mining worker, southern Thailand)

"In the hotel, our supervisor trains us about the working rules, using tools and other safety instruction. During the low season, we have to attend English and Thai language courses to better understand the guests. The courses were provided by the hotel……There have been improvements in the situation of women migrant workers because of the education system. Before, migrant women had to decide whether they went to work or stay at home. They could not leave their children alone at home. Now, the problem is solved because they can send their children to school instead of keeping them at home." (Female Myanmar hotel worker)

"The reason why I can read and write Thai is because I asked someone who is good at Thai literacy to teach me and I practiced on my own…. Now migrants have more chances to study because there are many schools which migrants open on their own, for example, the migrants' learning centres….Vocational training for migrants should also be provided because some migrants don't have the skills necessary to work in new areas. For example, those migrants who work on orange farms don't know how dangerous the chemicals they use are; or on construction sites the migrants don't know how to use new materials and the employer never teaches them how to use them." (Male Myanmar construction workers, Chiang Mai)

Source: Mekong Migration Network and Asian Migration Center, *From Our Eyes: Mekong Migrants Reflections 2000-2012*, 2012, with support of the Rockefeller Foundation and Oxfam Hong Kong, pp. 88-9, 101, 126-7

In November 2012, only 217,972 workers from Myanmar, Cambodia and Lao PDR had joined the social security system. This was less than a quarter of documented workers, and a fraction of total migrant labour.

Many migrants work in the informal sector (agriculture, fisheries, etc) which are not covered by the Social Security Fund, but are not permitted to join the fund voluntarily in the same way as Thai informal-sector workers.

Without Thai language proficiency and their employers' assistance, migrant workers have great difficulty learning about their rights and relevant regulations, as well as getting due benefits. Employers often require their workers to hand over their passport, work permit and social security card, which are needed when the workers deal with officials. If a migrant worker dies on the job, the family often has difficulty accessing the compensation due from the Workmen's Compensation Fund.

Some migrant workers feel that the social security system, with the exception of healthcare, is not relevant to them. The unemployment benefit does not apply as, according to the Cabinet Resolution and the Announcement of the Ministry of Interior in pursuant with the 1979 Immigration Act, they must leave the country if they have not found a new employer within 15 days. The pension benefit does not apply as they have a 4-year work permit but must make contributions for 15 years to qualify. They are, however, entitled to get back their contribution and collect a one-time pay out benefit at the age of 55. But it is doubtful how many would do so, and how the system would work given the long time lag and the cross-border arrangement.

As many migrants work in dangerous occupations, sickness and accident benefits are especially important. However, a worker cannot claim sickness benefits for the first three months after joining the social security scheme. They can buy temporary healthcare insurance to cover this period, but the cost of 650 baht is high compared to their average wage levels. Migrants who are given leave to stay temporarily while undergoing the nationality verification process cannot join the social security scheme. They can become temporary members of the Universal Healthcare system, but this offers no accident benefits, or they can buy insurance.

If a worker is injured but is not covered for compensation because the worker is not documented or the employer is not contributing to the scheme, the employer is legally bound to pay compensation. However, migrant workers have found this provision difficult to enforce, even through court actions.[105]

Many of these difficulties arise because the social security scheme was designed for the permanent workforce, not the special position of migrants. The Thai authorities have made many innovations to overcome these difficulties, including creating a database of insured persons to aid the identification of claimants, introducing provisions for temporary insurance, and making insurance available even to undocumented migrants.

Healthcare

The inflow of migrant labour has posed multiple challenges for health care. By and large these challenges have been met with improvisation, innovation, and compassion.[106] But there still remain difficulties in ensuring migrants have access to healthcare, ensuring the system is financed, and ensuring the resources are adequate.

The healthcare challenge of migrant labour

At present, the threat of diseases which had been eradicated from Thailand such as elephantiasis, meningococcus, TB, plague and polio is small and can be easily controlled. The key exception is malaria where migrants have significantly higher incidence than the local population.[107]

However, there are still three problems.

First, there have been outbreaks of infectious diseases such as cholera in migrant communities in border area which have been difficult to control because the migrants cross the border frequently. The authorities cannot isolate the outbreak and interrupt the cycle of infection.[108]

Second, migrant children often do not have a full set of vaccinations.

Third, migrants may arrive healthy but develop severe health problems as they often live in unhealthy conditions and work at jobs that pose risks to their health and safety.[109] Surveys have found high rates of basic health problems,

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[105] Andy Hall, "Migrant Workers and Social Protection in ASEAN: Moving Towards a Regional Standard?", *Journal of Population and Social Studies*, Vol. 21, No.1, July 2012, pp. 12-38.

[106] See IOM and MSDHS, *Healthy Migrants, Healthy Thailand: A Migrant Health Program Model,* 2009.

[107] Another lesser exception is scrub typhus, a rickettsial disease transmitted by ticks and mites, that might be contracted by people crossing forested frontier areas on foot, IOM, *Thailand Migration Report 2011*, pp. 88-9

[108] IITD, "Kan jat tang prachakhom asiyan bon phuen thi rabieng sethakit tawan-ok tawan-tok senthang sai R9" [Establishing the ASEAN Community on the East-West Economic Corridor Route R9], Bangkok, n.d., p. 3-36/7.

[109] IOM, *Thailand Migration Report, 2011*, pp. 87-8.

sometimes of alarming proportions. For instance, a survey in Mae Sot in 2008 found that almost half of infants born to families of migrant labour did not survive.[110] Tuberculosis is a growing problem among migrants who contract the disease due to poor living conditions, often fail to sustain proper treatment, and may become susceptible to drug-resistant strains.[111]

Providing migrants access to healthcare

In 1998 documented migrants were required to buy health insurance either by paying an annual fee or having regular deductions from wages. Now, migrants under the MOU scheme and those who have completed nationality verification enter the mainstream social security scheme, those undergoing nationality verification have to buy insurance coverage, and undocumented migrants have no insurance or access to social security. However, this coverage applies to the worker alone. The various schemes for regularising labour migration from neighbouring countries were based on the assumption that migrants were short-term workers who came without dependants. In fact, a survey in 2008 estimated there were at least 128,000 children (up to the age of 15) of registered migrant workers and 82,000 of undocumented workers.[112] Since 2006, migrants have been allowed to buy health insurance for dependants, but in practice, few do so.[113] Until 2009 there was no clear policy on the undocumented migrants' access to public healthcare facilities. In reality, Thai medical professionals generally treated migrants and other non-Thais who approached public hospitals, especially in emergency cases. Since many migrants could not afford the treatment, this placed great pressure on the finances of hospitals located in areas with high concentrations of migrants. Many institutions responded to this challenge with compassion and improvisation, redeploying their budgets, seeking donations, and employing other strategies. However, this increased pressure raised concerns over the standard of care provided to both the migrant and local populations.

The medical profession, especially administrators of hospitals in border areas and the Rural Doctors Association, lobbied hard for a change of policy to extend the right of access to health care, as enshrined in the National Healthcare Act of 2002, to all residents including stateless persons, undocumented migrants, and others with irregular status. The proposal was first put to the Cabinet in 2005 but rejected several times on grounds of the strain on the budget and the implications for national security. Eventually an amendment to the Healthcare Act was passed in late 2009 extending the system of financial allocations to hospitals "to cover people who are permanently resident in the country including migrant labourers, so that they all may have access to health care". After further lobbying, in March 2010 the Cabinet established a special fund in the national budget to provide for basic rights to health care for those with problems over their nationality status.

Following this, the Ministry of Health drafted and the Cabinet approved a Master Plan for Health in the Border Areas covering 2012-2016.[114] The priorities of the plan are to improve management of epidemics, to solve problems of reproductive health especially the abnormally high rates of infant mortality, to improve systems of transferring patients across borders, to eliminate import and export of health products that are unsafe and to monitor factors affecting health such as border conflicts and the movement of migrant labour.

Despite all these innovations and improvisations, several problems remain.

1. How to ensure migrant labourers have access to health care.

Among registered migrants with health cards, the usage of healthcare services is low compared to the local population. They may be deterred because of language barriers or because of ignorance about their rights. In some cases, employers impound their workers' health card (and other documents) as surety. Access by undocumented

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Box 5.2 A harassed hospital administrator

"In Tak which has a population of around 640,000 persons, there are 333,000 people or 47.5 percent of the total who have no health insurance ... in the five main provincial hospitals, 58 percent of the patients have no health insurance. The hospitals have no choice but to provide treatment and charge for it, but if the patients are poor, we don't collect anything. It's a humanitarian matter. If we offer no treatment, the disease may spread and other problems arise."

Source: Administrator of Umphang Hospital reported in http://www.medicthai.net/detail.php?idDetail=4588&tableName=news

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[110] IITD, "Kan jat tang prachakhom asiyan bon phuen thi rabieng sethakit tawan-ok tawan-tok senthang sai R9" [Establishing the ASEAN Community on the East-West Economic Corridor Route R9], Bangkok, n.d., p.3-39

[111] Nang Sarm Phong, "Healthcare for migrants is an investment," *Bangkok Post,* March 23, 2013, p. 9.

[112] IOM, *Thailand Migration Report 2011*, p. 96

[113] Chalermpol Chamchan and Kanya Apipornchaisakul, *A Situation Analysis on Health Systems Strengthening for Migrants in Thailand,* Institute for Population and Social Research, Mahidol University, 2012, p. 56.

[114] Ministry of Public Health, *The Second Border Health Development Master Plan (2012-2016),* retrieved June 6, 2013 from www.whothailand/ healthrepository.org/bitstream/123456789/1734/1/Eng.pdf

migrants is undoubtedly lower because of the additional fear of arrest and deportation. Beginning in 2005, some medical facilities in border areas hired migrant workers with Thai language skills to act as translators, but the availability is patchy.

2. How to fund the usage of the health system by migrants.

While border areas have attracted much of the concern, the problem is more widespread as migrant labour has dispersed into many different occupations and many different locations. Over recent years, newspapers have regularly carried reports on the increasing "burden" that migrant labour places on the resources and budgets of hospitals in many locations, for example:

> From an investigation of the burden of providing healthcare for informal migrant workers, hospitals in areas with industry and fisheries are facing a burden that grows year by year. In Chon Buri in 2011, the cost of healthcare for informal migrant workers was 7 million baht increasing to 17 million baht in 2012. In Samut Sakhon, the burden was 30 million baht a year, and in Rayong roughly the same.[115]

> Currently foreign workers are 30 percent of those using hospitals under the BMA [Bangkok Metropolitan Authority], but are unable to pay the charges, resulting in BMA shouldering a growing burden each year, sometimes 800 million baht, and 300-400 million baht in 2011. Because of this problem, doctors, nurses, specialists, staff, and medical administrators have to bear a heavy burden, resulting in many of them resigning and causing a shortage of staff.[116]

This "burden" is largely created by undocumented migrants who have no health insurance and are unable to bear the cost. In effect, where the cost then falls on government funding, this amounts to a subsidy to the employers who choose to use undocumented labour to save on costs.

3. How to improve services provided to migrants and ensure no impairment to the level of service provided to others.

Part of the problem arises as migrant labour and other impacts of border opening create an increase in demand for health services which is not envisioned in any planning.

Since 2010, Mae Sot has boomed as a highway crossing into Myanmar and a site for factories using migrant labour. The population is projected to grow from 130,000 to 220,000 in two years, plus some 150,000 to 200,000 migrant workers.

Unable to cope with a surge in demand, several hospitals refused to accept non-Thai patients. Many turned to the Mae Tao Clinic run by Dr.Cynthia Maung, which in 2012 was swamped by an average of 500 patients a day (a mixture of people who could not access health services in Myanmar and migrant workers on Thai soil), beyond its capacity to handle. The Myanmar government agreed to allow the clinic to forward patients to a hospital in Myawaddy.[117] But the Myawaddy hospital also does not have capacity for a complicated caseload.

While the pressure on schools created by increased demand from migrants has in part been eased by NGOs, this is much more difficult in the case of healthcare.

4. How to ensure healthcare does not become a source of uneasiness for the society.

As the repeated use of the term "burden" in the press reports suggests, the pressure that migrants exert on health services is a sensitive issue. In border areas, this pressure is increased by people who are not migrant labourers but who cross the border solely to seek better quality health care.

Thai observers may feel that their taxes are subsidising healthcare for others and that their own access to healthcare is deteriorating because of overloading. They may not be able to distinguish between a documented migrant labourer who has purchased health insurance and others using the service for free. The Thai medical profession has generally upheld the humanitarian priority of providing care for those in need immediately, while solving the administrative and financial problems later. However laudable, this approach makes it difficult to plan ahead to provide care for all who need it.

Migrant labour in Thai planning

Although migrant labour constitutes 5 to 10 percent of the labour force and is a significant factor in the demand for health, education and other social services, little account is taken of migrant labour in national planning. This is a by-product of perceiving migrant labour as a temporary and transitional phenomenon.

Thailand's 10th Plan (2007-2011) scarcely mentioned migrant labour. The 11th Plan (2012-2016) delicately recognizes that migrant labour has become a significant factor in the Thai economy, that it has strategic importance in the context of the transition to an ageing society, and that it poses many questions that require policy answers:

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[115] *Krungthep Thurakit*, January 21, 2013, at http://www.healthfocus.in.th/content/2013/01/2211

[116] A Bangkok Metropolitan Administration official quoted in Khao Sot, February 27, 2012, at http://www.healthfocus.in.th/content/2012/09/1331

[117] Ministry of Public Health, *The Second Border Health Development Master Plan (2012-2016)*.

The increasing inflow of foreign workers will affect not only employment of domestic workers, but also security of life and property. It will have ramifications for health, especially as regards emerging and re-emergent diseases, all of which can potentially increase future public expenditures. Many issues pertaining to illegal migrant labour could also arise. For example, stateless children create a status certification problem, and a problem about the right of access to public services. These problems affect human rights and international conflict issues.[118]

Policies proposed under the 10th Plan to confront these issues include:

Improve management of foreign workers in a systematic manner that includes registering unskilled workers, providing incentives to attract professional and high skilled workers, improvement of the data base system, and provision of social services in an appropriate and equitable manner.

Create a national labour database covering both supply and demand and classified by economic sectors, educational attainments and vocational qualifications. Include data on foreign labour.

An integrated plan with neighbouring countries should be drafted on the development of human resources, education, and labour skills to enable economic restructuring of the country and the sub-region and to prepare the workforce to cope with the transition toward an ageing society in Thailand.[119]

There has been some progress on the first objective, but the primary goals of registering all workers and providing full access to social services are far from being met. Little has happened on the second and third objectives.

In November 2012, the manpower subcommittee of the National Health Security Office announced that migrant workers and their special needs put additional strain on manpower resources because they need interpreters, because they do not understand procedures in the healthcare system, and because they often do not approach a hospital until they are very sick. In some areas, for example, Samut Sakhon, Phuket, Tak and Chon Buri, migrants occupy a high proportion of in-patient beds, and Thai patients have been forced to seek treatment at private hospitals. The subcommittee suggested three measures:

• Get special dispensation to import and employ alien health workers (doctors and nurses) as well as interpreters.

• Provide special bonuses to retain staff in these high-strain areas.

• Base future planning for health manpower in the short and long terms on estimates of not only the Thai population but also estimates of the burden from migrant labour and those without Thai nationality in the area.[120]

On January 15, 2013, the Cabinet endorsed the Ministry of Public Health's long-term strategy to extend healthcare security to documented and undocumented migrant workers and their families and children, and to provide health insurance to documented and undocumented migrant children.

For documented migrant workers, the package, estimated to cost US$73 a year, includes disease prevention and health promotion, out-patient and in-patient healthcare, accident and emergency medical services, ARV for people living with HIV, ARV to prevent mother to fetus infection, plus work-related disability.

Healthcare security for migrant children, estimated to cost US$12 a year, includes disease prevention and health promotion, out-patient and in-patient healthcare, accident and emergency medical services.

Cross-border cooperation to align systems

In the long run, healthcare problems concerning migrants will best be solved by aligning insurance systems and hospital practices across countries. This should be a priority within the ASEAN Community.

Cross-border cooperation on medical issues has developed rapidly through the management of events and crises – such as the cooperation between Thailand and Myanmar to manage a cholera epidemic on the border at Mae Sot in 2007. Thailand's Ministry of Public Health has taken a pro-active role in assisting neighbouring countries to improve healthcare practices in order to lessen the risk of problems crossing borders. For instance, the ministry is helping developed an ASEAN-wide malaria combat system.

Following a meeting of health ministers in July 2012, the ten ASEAN countries and China signed a wide-ranging agreement on health cooperation covering: prevention and control of infectious diseases; systems to manage crises and natural disasters; prevention and control of non-infectious diseases; monitoring food safety; developing capabilities of health personnel; and establishing standards for medicine. This meeting also considered the long-term benefits of aligning systems of health insurance within the region.

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[118] NESDB, *The Eleventh National Economic and Social Development Plan (2012-2016),* p. 48.
[119] *Ibid,* pp. 53, 86, 106.
[120] *https://suchons.wordpress.com/2012/11/14/*บอร์ดกำลังคนต้านสุขภาพ/

Learnings and recommendations

The large numbers of people involved in labour migration year after year prove that migrants themselves believe they can enhance their own human development by seeking work in Thailand, even though they face many risks.

Thailand has continually updated policy to manage this migration flow, and many Thai agencies have worked with great commitment and compassion. Yet Thailand could mitigate the problems of managing this labour flow and increase the national benefit received from this migration in ways which would enhance the human development of both the migrants and the host community.

From the beginning, the Thai authorities have treated the migrants as short-term visitors who are easing short-term problems in the transition of the Thai labour market. This concept still stamps the administration of migration as work permits are issued for 2 years plus a 2-year extension and are supposed to be non-renewable within the 3 years following. Yet, this migration flow has continued over two decades.

> A survey of 3,387 migrant workers conducted in 2008 by the Institute for Population and Social Research, Mahidol University, found that the migrants surveyed had stayed an average of 5.3 years; migrants in Chiang Mai and Tak provinces had stayed even longer – 9 years. Among married female migrants from Myanmar, 75.5 percent had a child while in Thailand.[121]

Some believe the inflow will slacken as the economies of the neighbouring countries develop. However, the large income gap which is the basic driver of the migration seems unlikely to diminish significantly soon. Insofar as the neighbouring countries develop by exploiting natural resources, their income inequality is likely to remain high. The Thai economy is expected to perform well in the medium term in part because of AEC. Thais are entering the workforce older and better educated as a result of recent changes in education policy. Most important of all, Thai society is already ageing, while the neighbours will not face the same effect for one or two decades – and even then at diminished intensity.

In sum, for some time to come, the Thai economy will generate demand for labour and the neighbouring countries will be in a position to supply it.

Thailand will benefit from taking a longer-term view of labour in-migration which will enable the country to gain more from the migrants' presence and the migrants to enjoy fewer risks and more benefits.

While the host population has generally welcomed these migrants because of their contribution to the economy, and services such as health and education have often worked with great compassion, the migrants are highly vulnerable to exploitation and abuse.

In the short term, the presence of migrant labour may have little effect on Thai labour because of high demand, but in the medium term the minimum wage and other aspects of Thai labour law should be applied to all to ensure that Thai national policy on labour is properly implemented.

Key recommendations are:

- Continue to fine-tune the systems for regularizing and documenting migrants, through negotiation with the neighbouring countries, so that migrants are no longer at risk of exploitation and human rights abuse.

- Integrate documented migrants fully into the systems of health and social protection, and the ambit of the minimum wage and other labour laws.

- Include migrants in projections for planning infrastructure and social services.

- Incorporate migrants in schemes for training and upgrading skills so that they may contribute to the economy through increased productivity.

- Provide routes for better cultural integration, especially through language training.

- Accelerate efforts to minimise the exploitation and abuse of migrant labour and ensure that the law is effective applied.

- Educate the public on the benefits of migrants to the Thai economy.

- Make the ASEAN Forum on Migrant Labour more effective.

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[121] Jerry Huguet, Aphichat Chamratrithirong and Claudia Natali, "Thailand at a Crossroads: Challenges and Opportunities in Leveraging Migration for Development", IOM and Migration Policy Institute, *Issue In Brief,* No.6, October 2012, p. 6.

ENVIRONMENT: MORE EXPLOITATION OR BETTER MANAGEMENT?

6

The environment is the seed-bed of human development. The exceptional fecundity of natural resources in Southeast Asia forms the foundations of livelihood and remains a large factor in the region's economic dynamism.

The ASEAN economies are largely resource-based; a large share of national income is from direct or indirect exploitation of natural resources. A large number of the people also make their living from cultivating the land, fishing in waterways, and collecting forest items for food and medicine.

But in the era of globalization, these natural resources have been opened up to forces of global demand. Throughout the region, land, water, forest, sea, and air are under pressure from exploitation and pollution. Climate change has begun to add to these problems.

Will the advent of the ASEAN Community exacerbate the problems of exploitation or provide better mechanisms for more sustainable cross-country management of crucial resources?

This short chapter does not attempt to answer that question, but to flag its importance, and to indicate the difficulties through examining attempts at transnational management and collaboration in the cases of haze, water resource, disaster management and climate change.

Environment in the ASCC Blueprint

The environment chapter of the ASCC Blueprint starts with an ambitious promise.

> D. Ensuring Environmental Sustainability
>
> 30. ASEAN shall work towards achieving sustainable development as well as promoting clean and green environment by protecting the natural resource base for economic and social development including the sustainable management and conservation of soil, water, mineral, energy, biodiversity, forest, coastal and marine resources as well as the improvement in water and air quality for the ASEAN region. ASEAN will actively participate in global efforts towards addressing global environmental challenges, including climate change and the ozone layer protection, as well as developing and adapting environmentally-sound technology for development needs and environmental sustainability.

The Blueprint continues by laying out an agenda to address global environmental issues, tackle transboundary pollution, promote environmental education and public participation, promote environmentally sound technology, promote quality living standards in urban areas, harmonise environmental policies and databases, promote sustainable use of coastal and marine environment, promote sustainable management of natural resources and biodiversity, promote sustainability of freshwater resources, respond to climate change and its impact, and promote sustainable forest management.

Expectations of civil society

From the viewpoint of some environmental groups in Thai civil society, the advent of the ASEAN Community is another phase of globalization. Their stance is shaped by the experience of the rapid industrialization beginning in the 1980s, the financial crisis of 1997, and especially the era of free trade agreements in the early 2000s.[122]

Through this time they have mounted campaigns to block hydro-electric dams that would damage forests and rivers, to protest against factories dumping waste in rivers and wastelands with severe health consequences, to limit industrial estates spewing lethal levels of air pollution, to prevent the location of coal-fired power plants on stretches of pristine coast, and to support the rights of communities displaced from their homes, often with little or no compensation.

From this experience they have a strong distrust of big capital, and limited faith in the will or the capability of the state to protect the environment.

For them, the ASEAN Community looks like a new version of a familiar alliance of state, capital, and foreign interests, in which ordinary people have limited voice in policy making. They believe the AEC is clearly the lead pillar of the project, and that economic interests will override the good intentions found in the other blueprints.

Many are aware that the environment was proposed as a fourth pillar of the Community and they believe that its demotion to a section of the ASCC indicates that environment will have low priority.

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[122] This summary is based on views expressed at the session on "Social Protection and ASEAN: Concerns, Opportunities and Recommendations from the People" held for this project at Thammasat University on January 14, 2013, on debates on ASEAN held at Naresuan University, Phitsanulok on January 19, 2013 and at Walailak University, Nakhon Si Thammarat on February 19, 2013.

The first chapter of the environment section of the ASCC Blueprint promises "to address global environmental issues" but then adds a qualifying phrase "without impinging on competitiveness".

Impacts and the management mechanisms

The civil society's concern is not unreasonable. The NESDB also expects a multitude of impacts from the ASEAN Community including excessive use of natural resources and energy, increased community and industrial waste, illegal logging and wildlife trade, loss of biodiversity and wildlife's natural habitat due to expanded tourism and mono-crop culture, illegal movement of hazardous chemicals and hazardous waste across borders, GMO contamination, and pollution.[123]

The level of concern may be high because existing regional mechanisms for addressing environmental issues have not been very effective. The Greater Mekong Subregion (GMS) has not yet shown sufficient commitment in this matter and most of the environmental budget comes from donor countries and international organizations. The Indonesia - Malaysia - Thailand Growth Triangle does not have any mechanism for addressing environmental issues although it is bringing environmental impact into the scope of collaboration on agricultural processing. Without the participation of all the riparian countries, the Mekong River Commission cannot effectively regulate the use of the Mekong River.

The question is how the ASEAN Community can fill the gaps in environmental management given the "ASEAN way" principle of non-interference and consensus-building.

Prospects for pollution

In looking forward to the ASEAN Community, some researchers look back to earlier experiences with globalization and liberalization for learnings. One example concerns the likely impact on pollution.

Under AEC Thailand is expected to further develop its position as a producer of both manufactured goods and agricultural products for export, as well as a site of tourism. Increased demand for agricultural goods implies more intense use of resources of land, water, and other natural inputs with consequences for the natural resource base and biodiversity.

More development of industry and urban areas is expected, especially in the key border zones, but also along the development corridors (see next chapter).

A study of the impact of the ASEAN-China free trade agreement on the Mekong Basin,[124] showed that the agreement resulted in increased exports to China, especially from Thailand, and especially in machinery, machinery parts, electrical goods, rubber, chemicals, fuel, vegetables and wood products. The study classified the goods into three categories according to their pollution intensity, and found that the most polluting group, which included chemicals, accounted for a quarter of the total and the fastest rate of increase. Among other fast-growing items, wood products were classified in the least polluting group but posed a risk of deforestation, while China's demand for rubber had resulted in deforestation and the spread of monoculture.

The conclusion from this and similar studies is that the single market of the AEC will attract industries that are either high in pollution or heavy in their exploitation of natural resources. It is important that either national governments or ASEAN mechanisms have the capacity to monitor and manage the impact of industry.

The commitment on environment in the ASCC (quoted at the start of this chapter) promises sustainable development. Yet there are reasons to fear that the freer flow of trade and investment, without appropriate safeguards, regulations, and codes of conduct, will result in more environmental degradation and exacerbate the impact on local environmental security.

What then is ASEAN's record on environmental issues?

Handling the haze

ASEAN has already been involved in attempting to manage one major cross-boundary environmental issue, namely atmospheric pollution. What is the organization's track record on this issue?

The source of haze

Over the past two decades, fires and haze in the ASEAN region have been influenced by rapid demographic changes, increased human activity, and climatological factors. "Haze" has become the common term for atmospheric pollution which affects parts of Southeast Asia on a seasonal basis as a result of forest fires and other forms of burning. As the haze floats across the region several thousand feet above national borders, it has become transboundary pollution that can only be mitigated by transboundary cooperation.

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[123] Wijarn Simachaya, Deputy Permanent Secretary, Ministry of Natural Resources and the Environment, "Kan borihan jatkan sapyakon thammachat lae sing waetlom phuea rongrap kan khao suprachakhom asiyan" [Administration of Natural Resources and the Environment in Preparation for the ASEAN Community], powerpoint presentation, NESDB annual conference 2013 on the theme "Route to the ASEAN Community", pp. 183-192.

[124] Hing Vutha and Hossein Jalilian, *Environmental Impacts of the ASEAN – China Free Trade Agreement on the Greater Mekong Sub-Region,* Manitoba, International Institute for Sustainable Development, 2008.

Haze consists of two dangerous elements, microparticles and gases. Besides causing a wide range of respiratory diseases, they are also a threat to the heart and brain, a cause of concern for pregnant mothers, and a hazard for air and land transport.

Transboundary haze pollution became a high priority after 1997-8 when thick haze was blown north from Sumatra, blanketing Singapore, Malaysia, and large parts of Thailand, affecting 20 million people, and causing damage estimated between 4.5 billion and 9 billion US dollars.

The 1997-98 haze had two main causes, economic and environmental. Sumatra has extensive tracts of natural forest and peatland which are susceptible to forest fires. In addition, large areas were being cleared by both smallholders and large corporations to plant oil-palm, rubber, and other plantation crops. A boom in clearing for oil palm probably made a major contribution to the 1997-8 event. Over 10 million hectares of forest were cleared.

Second, the El Nino effect,[125] meaning hot and dry winds, both fanned the fires and blew them north towards mainland Southeast Asia. The incidence of the El Nino effect seems to be increasing. Most probably that is linked to climate change, though the mechanism is not yet understood.

ASEAN and haze

As a partnership for sharing experiences, information, responsibilities and benefits, ASEAN is in a strong position to address the problem at the regional level. Beginning in the early 1980s, ASEAN member states launched several national and regional initiatives to control fire and haze problem. These included the Bandung Conference (Indonesia) in 1992, a number of regional workshops and meetings on transboundary haze pollution held in Indonesia and Malaysia during the period of 1992-1995, and the establishment of the Haze Technical Task Force in September 1995.

After the 1997-8 regional haze episode, ASEAN member countries have been undertaking joint efforts in monitoring, preventing and mitigating transboundary haze pollution resulting from land and forest fires, guided by the Regional Haze Action Plan that was endorsed by the ASEAN Ministerial Meeting on Haze in 1997. In addition, the ASEAN Agreement on Transboundary Haze Pollution that was adopted in June 2002, entered into force in November 2003. The Agreement is the first regional arrangement in the world that binds a group of contiguous states to tackle transboundary haze pollution resulting from forest fires. It has also been considered as a global role model for the tackling of transboundary issues. Under this Agreement, the member states undertook to:

i. cooperate in developing and implementing measures to prevent, monitor, and mitigate transboundary haze pollution by controlling sources of land and/ or forest fires, development of monitoring, assessment and early warning systems, exchange of information and technology, and the provision of mutual assistance;

ii. respond promptly to a request for relevant information sought by a State or States that are or may be affected by such transboundary haze pollution, with a view to minimising the consequence of the transboundary haze pollution; and

iii. take legal, administrative and/ or other measures to implement their obligations under the Agreement.

The agreement recognizes that transboundary haze pollution which result from land and forest fires should be mitigated through national efforts and international cooperation. An ASEAN Transboundary Haze Pollution Control Fund has been established to implement the Agreement. Five countries, namely Brunei, Singapore, Malaysia, Vietnam and Thailand have deposited USD 50,000 each for the fund for controlling transboundary haze. An ASEAN Co-ordinating Centre for Transboundary Haze and Pollution Control will also be established under the Agreement to undertake the many operational activities that arise from the Agreement.

Substantial progress has been made in implementing this Agreement, including the conduct of simulation exercises, implementation of the ASEAN Peatland Management Strategy, use of zero burning and controlled-burning practices; and more recently the deployment of the Panel of ASEAN Experts on Fire and Haze Assessment and Coordination.

At the begining, the ASEAN mechanisms to combat haze was not effective since the countries that were at the sources of the haze, initially refused to accede to the 2002 agreement. The failure of ASEAN to make any impact on this transboundary problem evoked doubts about ASEAN's ability to tackle such problems.

There was another bad haze event in 2006 linked to an El Nino year, and lesser events each year from 2009 onwards. In June 2013, the level of haze pollution reached a record level, worse than during the 1997-8 event.[126]

In order to increase the effective of the implementation of the Agreement and the mitigation of transboundary haze resulting from peatland fire in southern ASEAN particularly

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[125] El Nino is shorthand for fluctuation in sea temperatures in the southern Pacific Ocean which results in occasional extremes of dry (El Nino) and wet (La Nina) years in parts of Asia.

[126] "Singapore haze hits record high from Indonesia fires", BBC, June 21, 2013, http://www.bbc.co.uk/news/world-asia-22998592

fires in Indonesia, five countries namely Brunei Daruusalam, Indonesia, Malaysia, Singapore and Thailand agreed to establish a sub-regional mechanism to combat haze. Under this mechanism, activities included an Indonesian plan of action in dealing with transboundary haze pollution, refinement of the fire danger rating system, a project on the rehabilitation and sustainable use of peatland forests in Southeast Asia, a regional haze training network, and bilateral collaboration between Singapore-Indonesia and Malaysia-Indonesia.

Under these bilateral collaborations, funds and resources have been provided to educate farmers on zero-burning techniques, install air-monitoring devices, and train officials on management of peatlands in some high-risk areas. Outside countries have also discussed incentivising Indonesia through green mechanisms to pay more attention to conserving forests.

More recently, the prospects for transboundary cooperation have significantly improved. In 2012, Indonesia signed an agreement with four other ASEAN countries (Brunei, Singapore, Malaysia, and Thailand) to tackle the haze from Sumatra. The five countries agreed to make a summary of fire and haze problems in 2011, report the contents to other ASEAN countries, evaluate past progress on mitigation measures, and make plans for future actions.[127]

In July 2013, after the haze pollution in Singapore reached a level considered "life-threatening" if sustained over several weeks, the president of Indonesia formally apologised to Singapore, promised to put out all the fires in Sumatra, and agreed to start the procedure for ratifying the ASEAN Agreement on Transboundary Haze Pollution.[128]

Ultimately this may be a case where ASEAN's process of building consensus may prove effective.

Haze in the north

More recently, transboundary haze pollution has also become a serious problem in Cambodia, Laos, Myanmar Viet Nam and Thailand. During the dry season of the region from December to April, particulate matter concentrations from the ambient air recorded at quality monitoring stations in Thailand have been relatively higher than at other period of the year. The increasing concentration is believed to result from forest fires, and from farmers preparing land by burning to eliminate waste such as rice straw and sugar cane leaves. These burning activities result in haze pollution which can be seen clearly in the satellite images. Research

at Chiang Mai University has shown that the haze has many sources including natural forest fires, stubble clearing, and burning of household waste.[129]

Since 2010, the haze in northern Thailand has been especially intense. Several government agencies cooperated to develop and implement a strategy for mitigating the haze, principally by limiting burning of stubble, improving the monitoring of forest fires, and implementing other methods for disposal of community wastes. However, satellite monitoring shows that the haze experienced in northern Thailand originates both within and beyond the Thai borders.

Following the success of southern sub-regional mechanisms, Cambodia, Laos, Myanmar, Viet Nam and Thailand agreed to establish a ministerial steering committee and technical working group on transboundary pollution in the Mekong Sub-region. Projects include targets in fire and haze control, provision of mobile air monitoring equipment from Thailand to Myanmar and Lao PDR upon request, a bilateral project on air quality monitoring between Lao PDR and Thailand in which Thailand will support one fully-equipped air quality monitoring station in Vientiane and a capacity building program (training, workshop and site visit).

Managing the Mekong

Environmental problems not only flow across borders but also involve diverging interests between the local, national and regional or global levels. For example, building a coal-fired power plant may meet a national demand for power but at the same time displace or disrupt local communities and contribute to global warming. In the field of environmental management, regional institutions and mechanisms are important for negotiating between these conflicting interests.

In mainland Southeast Asia, perhaps the single most important natural feature is the Mekong River which flows through four of the mainland ASEAN states. The river has 850 fish species, the third highest freshwater biodiversity of any river in the world. Sixty million people live in the lower Mekong basin, and 80 percent of them rely to some extent on the river for food and livelihood.

Precisely because development on any part of the river could affect the river as a whole, the riparian states in 1957 created the Mekong Committee which evolved in 1995 into the Mekong River Commission (MRC) as a mechanism to facilitate collaboration and negotiate the different levels of

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[127] http://www.krobkruakao.com/ข่าว/44954/5-ประเทศอาเซียนลงนามแก้ปัญหาหมอกควัน.html

[128] Singapore 'has learnt 5 key lessons from haze crisis': Ng Hen Eng", *Straits Times*, July 7, 2013, at http://www.straitstimes.com/the-big-story/the-haze-singapore/story/singapore-has-learnt-5-key-lessons-haze-crisis-ng-eng-hen-201

[129] Mongkhonchai Raynakha, "Mok khwan lae monlaphit tyhan akat jangwat chiang mai" [Haze and Air Pollution in Chiang Mai], documents to support public policy on haze, Chiang Mai University, 2010; Bank of Thailand, northern branch, "Sathanakan mok khwan nai phak nuea ton bon" [Haze Situation in the Upper North], March 2007.

interest among the Member States, namely Cambodia, Lao PDR, Vietnam and Thailand.

The major challenge in managing the river arises from its potential for hydropower. Because of the delicate issues involved, the states in the lower basin initially built dams on several tributaries but proposed no dam for the main stream. In 1992, however, China completed its first dam in the upper basin. Now there are four dams in operation and four more planned in China.[130]

In the lower basin, this programme of dam-building in China provoked concerns over changes to the river flow but also overcame the reluctance about building dams on the main stream. To date, 12 projects have been mooted in the lower basin. In 2007, Lao PDR announced its intention to build a dam at Xayabouri.

Local interests are concerned since the Xayabouri dam would displace 2,130 people and directly affect the livelihood of another 200,000.

Thailand and Lao PDR have large **national interests** at stake.

Thailand's power demand is estimated to triple between 2010 and 2030. The country wants to reduce its dependence on natural gas for power generation but has had to ditch plans for more use of nuclear, coal or dams inside the country. It already imports 1,260 MW a year from three dams in Lao PDR and plans to add another 3,069 MW in the next few years.

On its part, Lao PDR aims to exploit its total hydropower potential of approximately 26,500 to become the "battery of Southeast Asia" in order to generate funds for national development.[131] As of March 2010, Laos had eight hydropower dams in operation, seven officially under construction, 18 at a planning stage, and 51 at a feasibility stage.

The **regional interest** is more complex. Cambodia and Vietnam raised concerns about the downstream effects of the Xayabouri dam, particularly on the delicate seasonal flow in the Tonle Sap and on potential salination in the river's delta.

Environmental groups feared that the Xayabouri project would trigger a wave of dam building in the lower basin. The MRC rapidly launched an Initiative on Sustainable Hydropower and commissioned a strategic environment assessment of the dam's costs and benefits. The study, published in October 2010, found that the dam would change the river flow, block fish migrations, put 41 species at risk of extinction, increase erosion, and affect soil fertility.[132] The report recommended that decision-making on all the Mekong mainstream dams be deferred for ten years and that more than 50 additional studies be conducted. Several independent studies raised similar concerns. One undertaken by the World Wildlife Fund and the Australian National University modelled the impact of building several of the planned dams, finding that the fish catch would fall by 16 percent and that replacing this source of protein would strain resources of land and water in Lao PDR.[133]

Managing diverging interests

Under the 1995 agreement forming the MRC, depending on the time (wet/dry season) and location of the project activity (tributary/main stream) countries have to notify other members of any project that affects the river or engage others in a prior consultation process before any final decision to go ahead.

The system works to a certain extent. But several issues such as definitions and procedures have not been clearly established, leaving room for each party to make independent decisions and actions. In matters of complex and diverging interests, regional mechanisms face the limit of their effectiveness. In the end, the issues often come down to bilateral negotiations between the nations involved.

ASEAN has not been involved in the Xayabouri dam case, largely because the Mekong River Commission is purpose-built for exactly this issue. But the Commission is modelled on roughly the same principles as ASEAN, and the case eloquently illustrates the special difficulties posed by major environmental issues that cross borders.

[130] S. Orr, J. Pittock, A. Chapagain, and D. Dumaresq, "Dams on the Mekong River: Lost Fish Protein and the Implications for Land and Water Resources", *Global Environmental Change: Part A - Human and Policy Dimensions,* Vol. 22, No. 4, 2012, pp. 925-932; P. Hirsch and K. M. Jensen, *National interests and Transboundary Water Governance in the Mekong,* Sydney: Australian Mekong Resource Centre, 2006.haze-singapore/story/singapore-has-learnt-5-key-lessons-haze-crisis-ng-eng-hen-201

[131] Naruemon Thabchumpon and Carl Middleton, "Thai Foreign Direct Investment and Human Security Implications: A Case Study of the Xayaburi Dam in Lao PDR," *Asian Review,* Vol. 25, 2012, pp. 91–117.

[132] "The SEA outlines the extent to which hydropower development may have an irreversible impact on natural processes, fisheries, aquatic and terrestrial biodiversity and livelihoods and indicates the extent to which these can be avoided, mitigated or minimized by adequate planning. The report also describes the potential benefits associated with about 13,500 MW of renewable hydropower development that would contribute to national economic growth, finance socio-economic and poverty reduction programs and offset carbon emissions from fossil fuel projects. Mekong River Commission, *State of the Basin Report 2010*, pp. 48-9. http://www.mrcmekong.org/assets/Publications/governance/Annual-Report-2010.pdf

[133] Stuart Orr, Jamie Pittock, Ashok Chapagain, David Dumaresq, "Dams on the Mekong River: Lost Fish Protein and the Implications for Land and Water Resources, *Global Environmental Change 22,* 4, October 2012, pp. 925-32, at https://www.sciencedirect.com/science/article/pii/S0959378012000647

Figure 6.1 Existing and planned hydropower projects

Source: Mekong River Commission, *Planning Atlas of the Lower Mekong River Basin*, 2011, p. 78

Disaster relief

The key driver in ASEAN disaster management is the ASEAN Committee on Disaster Management (ACDM) that evolved from a humble beginning in 1971. Since 2002 the ACDM has met annually and was instrumental in the finalization of the ASEAN Agreement on Disaster Management and Emergency Response in the wake of the tsunami that affected Indonesia, Thailand and Myanmar in 2004. The Agreement outlines a collaboration framework and related mechanisms to cover the full cycle of disaster management from prevention to response and rehabilitation. The ASEAN Coordination Centre for Humanitarian Assistance was established as coordinating center in Jakarta, Indonesia.

When the devastating Nargis cyclone hit Myanmar in May 2008, the Myanmar government was reluctant to accept any outside assistance. ASEAN's initial offers of help were rejected along with all others. However, by stressing ASEAN's fundamental commitment to consensus and non-interference in the internal affairs of its members, ASEAN was able to maintain a dialogue with the government and eventually create a "comfort zone" in which the government would allow outside assistance.[134] Through ASEAN mediation, aid supplies originating in France eventually reached Yangon a month after the cyclone struck. In the process, ASEAN had invented an ASEAN-led coordinating mechanism to facilitate the aid effort.

On May 7-11, 2013, Thailand co-hosted with the Republic of Korea an ARF Disaster Relief Exercise 2013 in Cha-am, Phetchaburi. There were over 1,600 military-civilian participants involved in the exercise covering scenarios such as tsunami, earthquake, chemical leakage, sea and air search and rescue, building collapse as well as coordination of centres of commands and operations. In June 2014, Thailand will host the 6th Asian Ministerial Conference on Disaster Risk Reduction in Bangkok.

Confronting climate change

The single most important and urgent environmental issue confronting Thailand and ASEAN is climate change. Since 2008, global models began to identify Southeast Asia as an area highly vulnerable to the impact of climate change because of rising sea levels, more erratic rainfall patterns, and higher temperatures affecting the production of food.

The ASCC included a section on Responding to Climate Change and addressing its impacts, with this strategic objective:

Enhance regional and international cooperation to address the issue of climate change and its impacts on socio-economic development, health and the environment, in ASEAN Member States through implementation of mitigation and adaptation measures, based on the principles of equity, flexibility, effectiveness, common but differentiated responsibilities, respective capabilities, as well as reflecting on different social and economic conditions.

In 2009, ASEAN created a working group on climate change and issued a statement at the ASEAN Summit in 2010 which recognized the severity of the threat and led the way to an ASEAN Action Plan on Joint Response to Climate Change approved at a meeting of ASEAN environment ministers in September 2012.

The plan covers research collaboration, contributions to global activities, leveraging "opportunities for regional cooperation on adaptation and mitigation", tapping sources of international funding, technology transfer, and capacity building.[135] Thailand was assigned responsibility for two items under adaptation:

(i) Sharing information on ongoing and planned efforts on research and development (R&D) in hydrological and agricultural management and practices that aim to enhance food security, agricultural productivity and water resource sustainability;

(ii) Enhancing existing ASEAN climate/meteorological/oceanographical centers and networks to possibly look into: assessing climate change impacts on socio-economic development, health, environment protection by establishing a network of academics to undertake a regional vulnerability study on climate change; downscaling global climate models to produce climate change impact scenarios at the regional, national and local levels.

The challenge from within

With or without the ASEAN Community, Thailand faces an uphill battle concerning the environment. "Green Growth" is one of the four key national strategies, but the challenge lies in implementation, which has become more complicated with impending developments related to the ASEAN Community. Now there are more risks and more opportunities.

Leveraging opportunities for regional cooperation and making regional mechanisms work to prevent and mitigate

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[134] Donald K. Emmerson, "Critical Terms: Security, Democracy, and Regionalism in Southeast Asia" in Emmerson, ed., *Hard Choices: Security, Democracy, and Regionalism in Southeast Asia,* Singapore, ISEAS, 2009, esp. pp. 42-5.
[135] ASEAN Action Plan on Joint Response to Climate Change, 2012.

environmental problems requires an effective national system and mechanisms as well as modernization of existing laws. At present there are over 60 pieces of legislation concerning environmental conservation and at least 11 ministries have some kind of mandate over environmental issues. Management mechanisms are largely command and control, not conducive for community participation and management by local authorities.[136]

Learnings and recommendations

Environmental issues pose special problems because environmental resources and impacts take no notice of borders. They cannot be contained within national boundaries and managed by national mechanisms and institutions. This gives special importance to supranational mechanisms for collaboration.

The ASCC's environment agenda is quite massive and ambitious. The mission statement of the environment chapter in the ASCC Blueprint talks of "protecting the natural resource base for economic and social development including the sustainable management and conservation of soil, water, mineral, energy, biodiversity, forest, coastal and marine resources as well as the improvement in water and air quality for the ASEAN region". The chapter lists 98 "actions", each representing large and complex agenda that requires continued collaboration over a long period of time to yield concrete results.[137]

ASEAN has already created cooperative mechanisms on peatlands, environmentally suitable cities, water resources management, water quality management, environmental education, energy efficiency and conservation, renewable energy, and sustainable forestry.

As the cases of the haze and the Mekong, these issues place ASEAN and other regional mechanisms under great strain, for example, in terms of decision-making through consensus and commitment to non-interference.

ASEAN's justification is that consensus works, though it sometimes takes time. The story of attempts to control haze seems to support that optimism. In the case of responding to climate change, time seems to be shrinking. ASEAN has responded relatively quickly to the growing urgency of this issue.

Perhaps one way to modify ASEAN's working systems without abandoning their time-tested principles is to allow more weight for civil society in discussions and implementing mechanisms. The environment is an area where civil society organizations are strong, well networked both regionally and internationally, and plugged into academic sources of information and research.

In parallel to developing regional environmental mechanisms, Thailand and other ASEAN member states should aim for the "ASEAN" stand on global environmental dialogues to increase bargaining power.

Key recommendations for Thailand are:

- Ensure that land zoning is on the top ten priority list to prepare Thailand for the ASEAN Community as pledged by the government.

- Launch an environmental legislative reform to address the gaps, streamline the system and make more use of environmental economic instruments.

- Support a greater role for civil society in mechanisms related to environmental issues.

- Continue to support ASEAN efforts to manage the problem of haze as a model of ASEAN collaboration.

- Give priority to its contribution to ASEAN's action plan on climate change and its implementation.

- Advocate for the "ASEAN" common position on selected global environmental dialogues.

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[136] NESDB, *Senthang prathet thai su prachakhom asiyan [Thailand's Route to the ASEAN Community]*, documents for the NESDB annual conference 2013, pp. 192-3.

[137] Raman Letchumanan, "Is There an ASEAN Policy on Climate Change?", retrieved June 6, 2013 from http://ec.europa.eu/clima/events/0052/presentation_raman_letchumanan_en.p

DEVELOPMENT OF THE OUTER PROVINCES | 7

Among the four objectives of the AEC Blueprint is "a region of equitable economic development", which means both reducing the "development gap" among the member countries, and reducing inequality within individual countries.

Besides Human Development Index (HDI), UNDP calculates an inequality-adjusted version in which the major readings on human development are adjusted to take account of inequality. This adjustment reflects the fact that a simple average can be misleading for measures where the readings are highly dispersed. The difference between the regular HDI and the inequality-adjusted HDI represents the loss in potential human development due to inequality. In the latest figures, Thailand's loss on the overall HDI is 22.4 percent, (on the life-expectancy index is 10.1 percent, on the education index is 18.0 percent, and on the income index is 34.0 percent).[138]

Inequality not only diminishes human development but restricts a country's potential for improving human development in the future.[139] This may be because inequality obstructs the consensus required for effective policy making, or because it underlies conflicts that divert national resources.

One factor in Thailand's high level of inequality is spatial. The variation between regions and provinces is rather high. One part of the vision of an ASEAN Community is a region where lower barriers and better communications erode the spatial factors behind high inequality.

As noted below, not everyone accepts the argument that freer flows of goods, people and money will erode inequality. Parts of Thai civil society are highly sceptical.

The process of knitting ASEAN together by better communications is still at a very early stage. This chapter looks at some aspects of the early impact, and questions what policies are needed to realize the vision.

Thailand's inequality and its spatial dimension

Inequality in Thailand grew rapidly during the spurt of industrialization in the 1980s and early 1990s. It has diminished somewhat in the past decade, in part due to improved social protection and a tight labour market. But the income skew is still high and noticeably worse than in neighbouring ASEAN countries, though some are catching up (Figure 7.1).

While there are many factors contributing to Thailand's inequality, one is spatial. Both profit and power have been

Figure 7.1 Inequality in ASEAN countries (Gini coefficients), 1960-2012
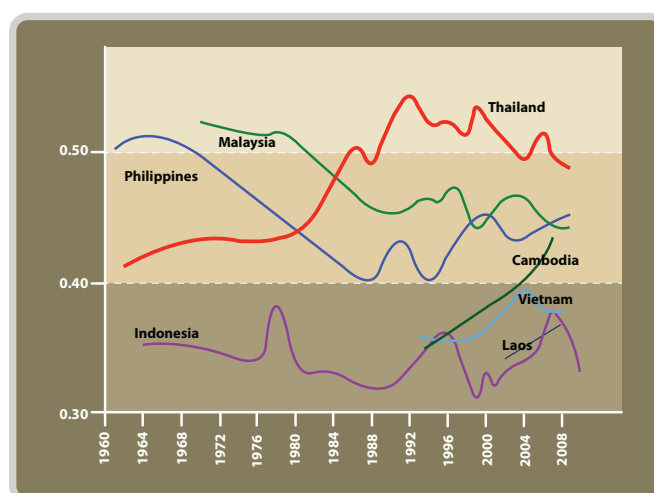
Source: Pasuk Phongpaichit and Pornthep Benyaapikul, "Social and Political Aspects of a Middle Income Trap: Challenges and Opportunities for Policy Reform, Thailand Case", Asia Foundation, 2013

[138] See UNDP, *Human Development Report 2013: The Rise of the South: Human Progress in a Diverse World,* Table 3. For this adjustment, UNDP uses the World Bank's estimates of inequality which show a much lower degree of inequality than the original data used by most Thai analysts.
[139] This conclusion is based on cross-country research on HDI data; see UNDP, *Human Development Report 2013*, p. 31.

heavily concentrated in the capital. Until recently, government was highly centralized. Bangkok is the country's major port, financial centre, and the focus of most of the country's multinational business. The export-oriented industries that have powered growth over the last three decades are mostly located around the fringes of the city and the adjacent Eastern Seaboard. Plans to disperse industrial growth were never very effective and have mostly been abandoned. At the other end of the income scale, the Northeast region remains the poorest due largely to poor resource endowment. Countering these spatial inequalities

has never been a priority of government policy. Indeed, studies show that government spending patterns have tended to exacerbate spatial inequality rather than mitigating it.[140]

The economic gap, as measured by gross provincial product per capita, is 7 times between Bangkok and the poorest region (Figure 7.2), the Northeast, and is 29 times between the top and bottom ranked provinces. Average household income varies by a factor of five between the richest and poorest provinces (Figure 7.3).

Figure 7.2 Thailand, gross provincial product per capita by region, 2011 ('000 baht)
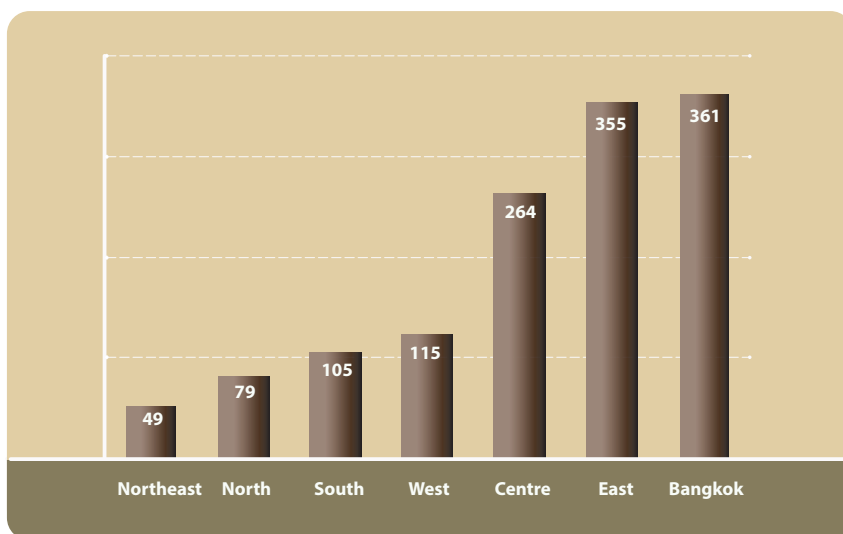
Figure 7.3 Average Household Income by Province, 2011 (baht/month)

Source : NSO

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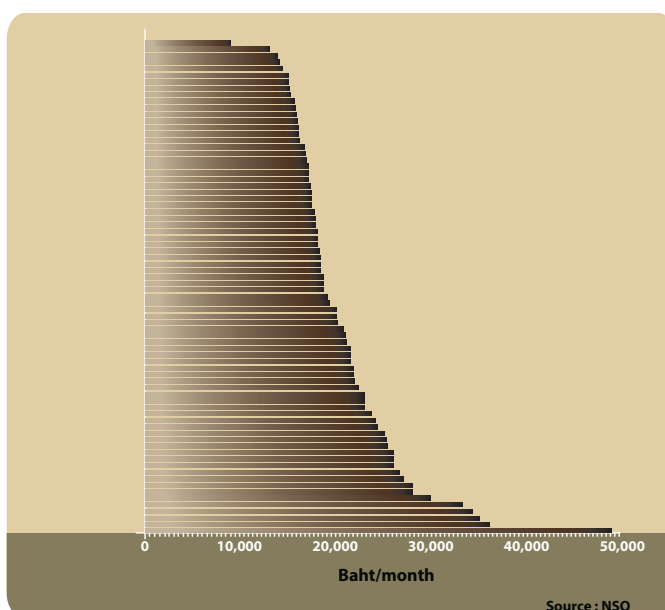
[140] World Bank, *Improving Service Delivery. Thailand: Public Finance Management Report,* 2012; Peter G. Warr, "Thailand's Development Strategy and Growth Performance", working paper, World Institute for Development Economic Research, 2011.

Over the past 15 years, administrative decentralization has begun to counter this spatial inequality, but not by much. Planners now hope that AEC can help to stimulate growth in the regions. Fundamental to this hope is the development of infrastructure that will provide Thailand's outer provinces with better communications to neighbouring states, and shorter routes to the sea. Thirty-eight provinces in Thailand share borders with other ASEAN countries. These outer provinces represent not only Thailand's window to the ASEAN countries, but also development areas where decentralized and equitable growth could benefit people in the four regions.

ASEAN connectivity

Underlying the vision of the ASEAN Community is an ambitious and wide-ranging plan to knot the region more closely together by networks of roads, railways, shipping, ICT, energy grids, and pipelines.[141] The first stage of this plan focuses on roads and railways. ASEAN aims to complete an ASEAN highway network of 38,400 kilometres by 2020.

In the mainland part of Southeast Asia, this plan resembles the lattice of "economic corridors" based on roads, first proposed under the ADB-initiated Greater Mekong Subregion scheme in 1992 and since fine-tuned. In this plan, there are three "corridors" based on roads. The north-south corridor runs down from China through northern Thailand to Bangkok. The east-west corridor cuts across the centre of mainland Southeast Asia from Mawlmayne in Myanmar to Da Nang in Vietnam. The southern corridor runs from Bangkok into Cambodia and the Mekong Delta in Vietnam with a projected westward spur to Dawei in Myanmar.

Initially progress on implementing this plan was slow, but recently has accelerated because of the approach of the ASEAN Community, political changes in the region, ADB's efforts to reinvigorate the project by setting up a cross-country minister-level forum to oversee the corridors project in 2008, and China's interest in strengthening links with Southeast Asia.

Figure 7.4 GMS Economic Corridors

Source: ADB, Corridor Chonicles, 2009. http://wwwadb.org/documents/book/corridor-chronicles/Corridor-Chronicles-MS.pdf

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[141] ASEAN, *Master Plan on ASEAN Connectivity,* 2010. The plan mentions that 227 kms of this network still has to be added in Myanmar, and 5,300 kms are below even Class III standard. ASEAN also has a priority to complete the Singapore Kunming Rail Link by 2015, but in 2011, 4,069 kms of track were still missing or in need of rehabilitation. This rail plan is likely to be overtaken by plans to upgrade Thailand's rail system.

North-south route. Progress on the north-south corridor quickened largely because of China's strategy to develop its western interior by forging routes southward to Southeast Asia and the sea.

The first route opened up was not by road but along the Mekong River, improved for transport by dredging and blasting. Cargo carried down the river from Yunnan to northern Thailand increased from 40,000 tons/year in 2004 to around 300,000 tons/year by 2010 with a projected rate of increase of 8-11 percent.[142] Chiang Saen in Thailand's north developed as a key port on this route (see below in this chapter).

Two roads have since been completed. Route R3B through Myanmar to Mae Sai was completed in 2004, and Route R3A through Lao PDR to Chiang Saen was completed in 2008. Traffic on these roads was initially low. In one estimate, the daily value of goods passing the Mae Sai checkpoint on R3B was only half the daily take of one of the three casinos on the Tachilek side.[143] The completion of a bridge spanning the Mekong at Chiang Khong, due in late 2013, is expected to significantly increase traffic on this route.

Since 2004, Chiang Rai province, the entry point for all these routes, has grown faster than the northern region as a whole (Figure 7.5).

East-west route. Progress on the east-west route has also quickened as a result of the completion of a road through Lao PDR in 2004 and another through Vietnam in 2006, the opening of the bridge across the Mekong River at Mukda-

han-Savannakhet in 2007, and the changes in Myanmar since 2010. Both Mae Sot and Mukdahan have enjoyed spurts of growth as key border towns, and both Khon Kaen and Phitsanulok hope to benefit as axis points along this route.

Another bridge spanning the Mekong from Nakhon Phanom to Khammouane, funded by Thailand under the Ayeyawady-Chao Phraya-Mekong Economic Cooperation Strategy (ACMECS) cooperation framework, opened in 2011. At an ACMECS summit in March 2013, Thailand and Laos agreed to launch a feasibility study for another bridge across the Mekong between Bung Kan and Borikhamxay.

Since 2007, the economy of the northeast has grown faster than the country as a whole, and the economy of Mukdahan and Nakhon Phanom, sites of the two new Mekong bridges, have grown faster than the region (Figure 7.6).

Southern route. On the southern east-west route, Thailand has helped to improve roads in Cambodia, and is considering extending the route westwards to Myanmar's Dawei, targeted for development as a major port.

When completed, the three corridors would run through 26 provinces of Thailand, 7 on the east-west corridor, 13 on the north-south corridors, and 8 on the southern route.

Assessing progress

In theory, these routes will stimulate the cross-border economies by increasing trade as well as by creating shorter routes from Thailand's interior to the sea.

Figure 7.5 Provincial GDP (CVM method), selected provinces, 2004-2011

Source: NESDB Gross Provincial Product tables, 2011

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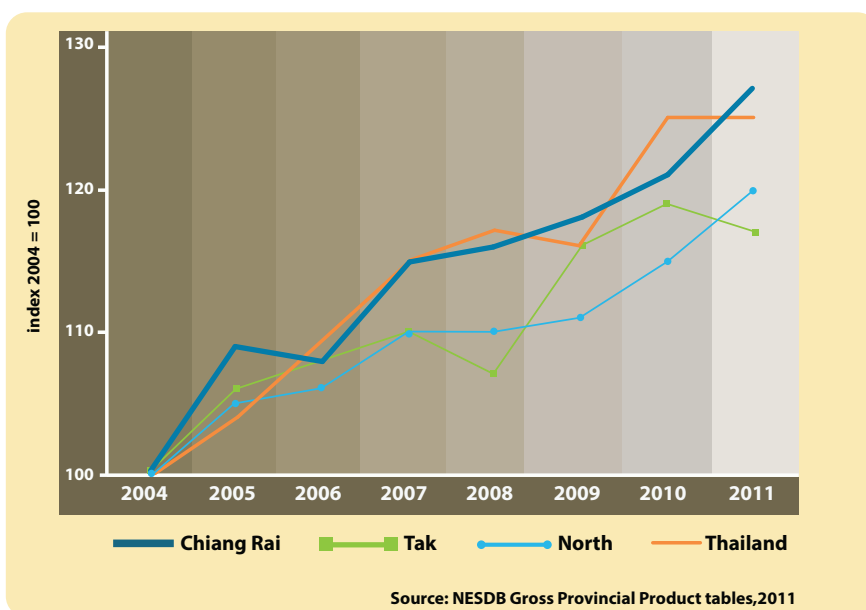
[142] Mekong River Commission, *State of the Basin Report 2010,* pp. 192-3.

[143] Thein Swe and Paul Chambers, *Cashing in Across the Golden Triangle: Thailand's Northern Border Trade with China, Laos, and Myanmar,* Chiang Mai, Mekong Press, 2011.

Figure 7.6 Provincial GDP (CVM method), selected provinces, 2004-2011

Source: NESDB Gross Provincial Product tables,2011
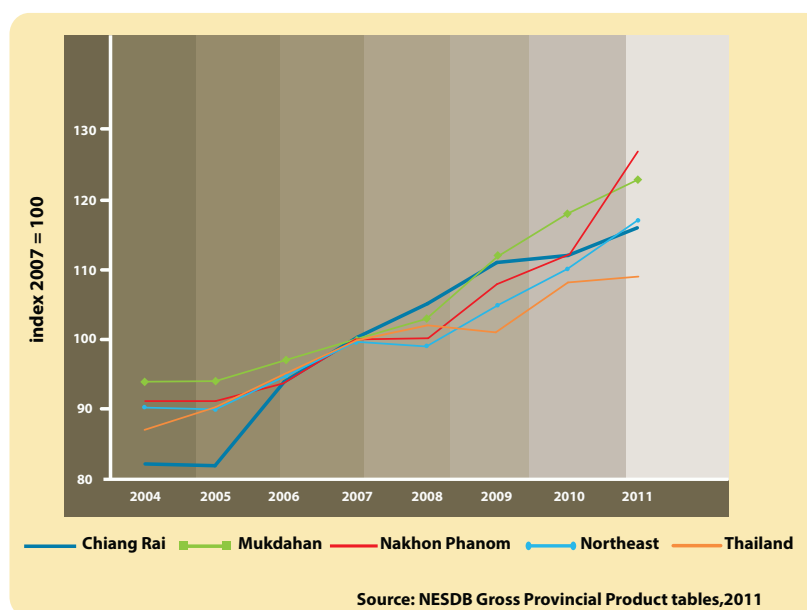
In 2009, ADB commissioned a study to investigate why the potential of these routes had not yet been fully realized.[144]

The study found many reasons. On the east-west route, the ports at either end – Mawlmayne in Myanmar and Da Nang in Vietnam – are not well developed. Provisions in the master plan to provide financial support to businesses along the corridor were not implemented. Investment projects were abandoned because of lack of transparency. Until recently, there was no way for business groups to participate in the project (since rectified with the GMS Business Forum). Information for planning has been lacking. There was no system for benchmarking progress.

In addition there are some simple physical problems. Border posts are badly designed for accommodating a larger volume of traffic (e.g., not enough space for parking trucks). Procedures for crossing borders are still often clumsy and time-consuming.[145] The GMS Cross-Border Transport Agreement (CBTA) to remove these barriers and facilitate cross-border traffic has not been ratified pending amendment to some national laws of some member states. At present, these problems are temporarily addressed at the Vice Foreign Ministers' Meeting on East-West Economic Corridor Development and the consultation forum to be established by the GMS Ministries of Transport.

A civil society view

A section of civil society views AEC as another stage of liberalization and predicts its impact on the basis of experience with free trade agreements in the 2000s. In their analysis, these agreements boosted imports of food, raw materials, and consumer goods, and boosted exports of manufactures. Consumers benefited from imports of cheap consumer goods and businesses benefited from import of cheap inputs and increased exports of manufactures. Small farmers, however, were disadvantaged by imports of rice, fish, maize, garlic, milk, beef, vegetables and fruit, and many underwent a painful process of adjustment.[146]

In general these critics theorize that the open market created by AEC liberalization will attract big capital, both Thai and foreign. These firms will attempt to monopolise both market opportunities and inputs such as seed and also land. Small farmers will be squeezed out, forced either to enter into contract farming systems under the control of big capital, or to borrow heavily and take risks without adequate support or information.

There are several reports (but no well-researched survey) of land concentration, occurring in several forms. Some big Thai corporations have acquired large plantations for

[144] Montague Lord, *East–West Economic Corridor (EWEC) Strategy and Action Plan,* presented to ADB, 2009.

[145] Konkran Chiwatrakunphong and Jittichai Rujanoknat, "Khrongkan: phon krathop khong kan prap prung sing amnuai khwam saduak thang kan kha tam kho toklong prachakhom asiyan thi mi to kan khonsong sinkha kham daen lae kan kha phan daen" [Project: Impact of Improvements of Trade Facilities under ASEAN Agreements on Cross-border Transport of Goods and Border Trade], Thailand Research Fund, 2011.

[146] Bunchon Kaeosong, "Kan khumkhrong thang sangkhom kap asiyan: kho kangwon okat lae kho sanoe nae jak phak prachachon" [Social Protection and ASEAN: Concerns, Opportunities and Recommendations from the People's Sector], presented at ASEAN Watch, Thammasat University Political Science Faculty, January 14, 2012; Krisada Bunchai and Julalak Choetrun, "Nayobai kan poet kan kha seri kap khwam mankhong thang ahan: raingam chabap sombon nam senoe to khana kammakan ahan lae ya" [Policy of Free Trade Opening and Food Security: Final Version presented to the committee on food and drug], Thailand Research Fund, 2011.

energy crops (sugar, cassava, oil-palm). Small farmers are lapsing into tenancy after being forced to sell their land to defray debt, or being tempted by inflated prices. Foreign interests are reported to be acquiring Thailand to secure supplies of food. Such acquisition is illegal, but can be arranged through intermediaries. These reports cannot be verified but have increased in recent years.[147]

According to this view, government is relying on the AEC and market forces to stimulate Thai agriculture in the hope of reducing other forms of support to farmers. This strategy creates risks for both competitiveness and food security. Farmers have no support or incentives for increasing efficiency. Neighbouring countries (particularly Vietnam) are becoming more efficient and competitive. Thai agriculture is increasingly moving towards monocultures with reduced biodiversity.

Border trade and cultural capital

Border trade plays a key role in intra-ASEAN trade. The volume of trade between Thailand and its neighbouring countries namely Malaysia, Myanmar, Lao PDR and Cambodia increased steadily from 633,804 million Baht in 2009 to 910,500 million Baht in 2012. This accounted for about 76.1 percent and 71.2 percent of the total trade volume between Thai and these countries respectively.[148] The 11th Plan aims to accelerate the annual increase in border trade from 13 percent to 15 percent by 2016.

Thailand has attempted to develop the potential of the cross-border routes within ACMECS, a grouping of the mainland states of ASEAN (Myanmar, Thailand, Cambodia, Lao PDR, and Vietnam), established in 2003. At its meeting in March 2013, the grouping declared that its objective is "a single market and production base", the same wording as AEC. Its strategy is defined as

> Transform the border areas of the five countries into zones of economic growth, social progress and prosperity, and to blend local, national and regional interests for common benefits, shared prosperity, enhanced solidarity, peace, stability and good neighborliness.[149]

In practice, the grouping has concentrated on improving roads, bridges, railroads, airports at the locations that are deemed to be the "missing links", easing the problems at border posts, and creating Special Border Economic Zones

with industrial estates at key crossing points such as Mukdahan- Savannakhet, Mae Sot, and Chiang Khong.

To promote new opportunities in border trade, ACMECS launched a "sister cities" project. The project provided a framework for pairs of towns across borders to jointly investigate opportunities for trade, investment and tourism.

These pairings have been most successful in areas where the sister towns already had long histories of association and close links of kinship, language, and culture. These links makes it possible for parties from the two sides to make deals and agreements even though there is no common legal framework for enforcing such arrangements.[150] At the 5th ACMECS Summit Meeting in March 2013, the sister cities scheme received a favourable review and is set to be expanded in high-potential economic area such as Mae Sot -Myawaddy.

Ubon-Champasak sister cities

The pairing of Ubon Ratchathani and Champasak was chosen as a pioneer of the sister-cities scheme. The cooperation covers trade, tourism, and investment. Tourism has increased with Ubon serving as gateway to the tourist attractions in Champasak, and cross-border trade has increased with Ubon acting as a centre to export inputs such as fuel and capital goods such as tractors through Champasak into Lao PDR. However, the main success of this pioneer scheme has been in agricultural agreements.

These agreements are designed to leverage the respective comparative advantages of the two areas. Champasak has a good natural resource base and plentiful labour. Ubon has a developed urban economy and good links to other markets in Thailand. Beginning in 2005, Ubon traders entered into agreements for a regular supply of certain crops from Champasak, especially beans, cabbages, and bananas. For Lao farmers, the benefits are a larger and more reliable market, and hence a reduction of risk. For the Thai traders, the benefit is a guaranteed supply at a favourable price.

The value of the produce traded under the scheme increased from USD 4.3 million in 2005 to USD 10.4 million in 2008, while the number of crops involved expanded to 45 and the number of Ubon businesses involved to 26.[151]

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[147] Damrongphun Jaihowe, The Loss of Farmland in Thailand and the Challenge to National Security in the Era of Neo-Colonialism, paper presented at the Second Walailak University International Conference on Asian Studies, February 18-19, 2013, Nakhon Si Thammarat.

[148] Department of Foreign Trade, retrieved August 20, 2013 from http://bts.dft.go.th/btsc/index.php/overview,

[149] Retrieved June 6, 2013 from ww.acmecs.org.

[150] Kanokwan Manoram, "Mueang khu mit ubon ratchathani lae jampasak: botbat lae patipatkan khong kaset baep mi pantasanya kham chat" [Sister Cities of Ubon Ratchathani and Champasak: Role and Activities of Transnational Contract Farming] in Manoram, *Chaidaen isan kap phuenban kho khonphop thang wichakan lae naya choeng nayobai [Isan Border and Neighbours: Academic Study and Policy Directions]*, Ubon Ratchathani Arts Faculty Centre for Research on Mekong Subregion, 2011.

[151] Kanchana Chokthawon and Thanet Siwichailamphan, "Kan sueksa khwam samphan khong mueang khu mit thai-lao (ubon ratchathani-khwaeng jampasak) to kan phatthana setthakit" [Study of Thai Lao Sister Cities (Ubon Ratchathani and Champasak Provinces) and Economic Development], Project on Cross-border Production, Thailand Research Fund, 2011.

These agreements were made without any legal framework. Usually they were oral not written, and not enforceable under any law in Thailand or Lao PDR. Problems and disagreements had to be managed through negotiation. The system reportedly worked because old ties of kinship, historical relations, language, and culture predispose the two sides to find mutual benefit. Critical to the success were efforts to ensure that both sides feel the arrangements are fair and free of exploitation. Champasak farmers had an alternative option of selling their produce to traders from Vietnam.[152]

Similar arrangements were made for growing maize in Champasak, Salavan, and Bokeo, sugar in Salavan and Luang Namtha, and elsewhere.[153]

In Phayao, small farmers formed themselves into a group which made similar contract arrangements to provide capital and inputs to farmers across the border in Xaiyabouri province of Lao PDR.[154] The group was so successful that it amassed a capital fund of 69 million baht which was loaned to members to continue the business.

At present, the governments have established a framework to oversee and regulate cross-border contract farming. An MOU between Lao PDR and Thailand was signed in March 2013 and one between Cambodia and Thailand was signed in June 2013. These agreements cover custom arrangements and establish a bilateral working group comprising of public and private sectors on each side. In addition, ACMECS member states agreed to prepare an annual investment plan for contract farming specifying the border areas where the private sector has expressed an interest to enter into contract farming agreements and details of their planned investment.

Across the southern border

A similar situation of a vigorous cross-border economy underpinned by links of kinship, language and culture is found on Thailand's southern border with Malaysia.

In 2010, the official figure of Thai migration into Malaysia was 948 persons but unofficial estimates range up to 100,000-150,000. Most are ethnic Malays. Some are migrant labour working mostly in agriculture and services. Others have small businesses, particularly running restaurants selling Thai cuisine. There is no estimate of the funds remitted back to Thailand, but a qualitative study showed that these funds were used for consumption, productive enterprises and education. Families of migrants reckoned their economic status had improved and tended to be better than that of their neighbours.[155]

In addition there is a long-standing trade in rice across this border. Malaysia needs to import a million tons of rice a year. Because production costs in Malaysia are high and government imposes high import duties, the price of rice in Malaysia can rise as high as three times the level in Thailand.

There is a complex and entirely informal system for supplying rice from Thailand's southern border provinces into Malaysia. The system has been in operation since the aftermath of the Second World War, and has continued more or less unchanged through eras of very different rice policies at the national level, and through eras when the border was officially closed.

The trade depends on a complex network, all community-based, with specialization of functions (growing, transport, information sharing, distribution). As in other cases of cross-border economies, there is no legal framework, no written contracts, and problem-solving by negotiation, but the system has continued for many decades.[156]

Border boom towns

The most dramatic impact of the new road-based routes is being felt in the border towns where there are new bridges, ports, and crossings. These include Mae Sot and Mae Sai on the Myanmar border; Chiang Saen on the Mekong River; and Mukdahan and Nakhon Phanom at the bridges across the Mekong into Lao PDR. The towns of Aranyaprathet and Trat on the borders of Cambodia, Chiang Khong at the new bridge on the road from China, and a handful of other towns are next in line.

Until very recently, these towns were remote and rather sleepy. Now they are being transformed. Who is benefiting from these transformations?

[152] Kanokwan Manoram et al., "Kan sueksa nayobai kan phatthana mueang khu mit dan sethakit: korani sueksa khwam ruam muea dan kan kaset baep mi phantasanya yuen rawang jangwat ubon ratchathani lae khwaeng jampasak prathet lao pho so 2551-2552" [Study of Sister Cities Economic Policy: Case of Cooperation in Contract Farming between Provinces of Ubon Ratchathani and Champasak 2008-9], Thailand Research Fund, 2010.

[153] Ari Wibunphong et al., "Khrongkan samruat phuen thi lae phatthana jot wijai 'kan phlit kham daen: kortani thai-lao" [Study of Transboundary Production, Thai-Lao case], second Thai-Lao research seminar, Ubon Ratchathani University, December 20, 2011.

[154] Busra Limnirankun et al., "Kan jatkan thrakit kaset chaidaen thai-lao doi ongkon chumchon thongthin: korani sueksa chumchon ban huat jangwat phayao" [Thai-Lao Business by Local Communities: Case of Ban Huat, Phayao], Thailand Research Fund, 2009.

[155] Suthiphon Bunmak, "Kan borihan jatkan ngoen song klap ban khong khrop khrua nai jangwat chadaen phak tai thi mi samachik khrop khrua pai tam ngan nai prathet malesia" [Management of Remittance by Families in Southern Border Provinces with Members Working in Malaysia], Thailand Research Fund, 2011.

[156] Phorphan Khemkhunasai, "Khwam samphan khong khon chaidaen phan khruea khai kan kha khao kham rat: chumchon nuro amphoe waeng jangwat naratiwat" [Relations of Border People through Rice Trading Networks: Nuro Community, Waeng District, Narathiwat], Thailand Research Fund, 2011.

Table 7.1 Value of Thai-China trade at Chiang Saen, 2002-5 (million baht)

	2002	2003	2004	2005
Imports	576	592	1,272	1,223
Exports	2,407	3,312	3,295	3,856
Total	2,983	3,904	4,567	5,079

Source: Niphawan et al, "Khrongkan kan sueksa phap ruam thurakit thongtin khong amphoe chiang saen", 2006

Chiang Saen: who benefits?

Chiang Saen is an ancient town where until recently the major industry had been tourism to visit its monuments, bird sanctuary, surrounding hills, and the Mekong River. From the late 1990s, the town became a key port for trade with China along the river, and from 2003, the activity of this port increased rapidly as a result of the Thailand-China free trade agreement.[157]

The town changed rapidly as a new commercial port was built, infrastructure upgraded, and people flooded in. Local traders initially benefited by acting as intermediaries in the town's increased commerce, but this phase did not last. By 2004, Chinese merchants could handle the border formalities themselves, and had established direct relations with buyers and sellers in Thailand.

Although exports increased, none of the major export products were grown or made in Chiang Saen and its vicinity.

The new commercial centre was quickly dominated by newcomers, including Thai traders and firms, and many Chinese. The river shipping, including the crews, was dominated by Chinese and to a lesser extent by Lao nationals. Many Myanmar and Chinese arrived to take up wage labour.

As the town became more commercialized, the tourist industry declined. Revenue from boat trips on the river, rickshaw driving, and sale of souvenirs slumped.

Many local traders who profited in the first phase were left with heavy debts to banks. Several reverted to agriculture, construction labour, or vending.

Two sectors did well. Rental business boomed from the influx of people. Traditional massage boomed with customers including Chinese traders and Myanmar and Shan labourers seeking relief from the muscle strain of heavy manual work.

In the hinterland of Chiang Saen, there has been a large influx of people from China. They include traders, shopkeepers, wholesalers, medium-sized entrepreneurs, dealers in real estate and agricultural land, and professionals such as language teachers.

Particularly in the rubber industry, there has been an inflow of Chinese capital to buy and process rubber for export to China's growing automotive industry, often working with Thai partners. For example, a Chinese-Thai joint venture has acquired a plot of 300 rai to build a rubber processing factory in Phaya Mengrai, Chiang Rai province. The location is strategically placed for access to rubber-growing areas on one hand, and to the R3A road route to China on the other.[158]

Local people felt disadvantaged and excluded. All their local respondents claimed that they had no knowledge about the Thai-Chinese free trade agreement. They felt excluded from policy which was all made elsewhere. They had no information to prepare themselves for the changes, and felt they had badly lost out.

Mukdahan: similar story

A similar effect has been found in Mukdahan following the opening of the bridge crossing the Mekong River in 2007. Outside capital has entered the locality to build hotels and shopping centres. The road leading to the bridge on both the Thai and Lao sides is lined with new businesses, mostly owned by newcomers. At a seminar on the impact of the bridge, established local entrepreneurs complained that they had been squeezed out by incoming capital. They did not have the information to anticipate the change, and had received no help from government.[159]

Targeting the border zones

The problems of entrepreneurs in the border towns are the same as small and medium enterprises everywhere. They have no easy access to finance, skills, technology,

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[157] Niphawan Wichai et al., "Khrongkan kan sueksa phap ruam thurakit thongtin khong amphoe chiang saen korani sueksa phuen thi khet thesaban tambon wiang chiang saen amphoe chiang saen jangwat chiang rai" [General Study of Local Business in Chiang Saen, Chiang Rai Province], Thailand Research Fund, 2006.

[158] Oranya Siriphon, "Kan khluen yai khong khon jin ralok mai kap kho sangket to saphawa thang sangkhom chaidaen phak nuea" [Great New Wave of Chinese Migration and Social Concerns at the Northern Border], seminar on Management of Borders in Transition, Sampran, July 18-19, 2011.

[159] Seminar on "Strategies to Reduce Obstacles and Increase Opportunities for Thai-Lao Trade and Investment" at the Hotel and Tourism Training Centre, Ubon Ratchathani University, December 21, 2012.

information and hence are competed out by bigger firms with better access to these factors. Yet there is an estimated 3 million such enterprises in Thailand employing 15 million people and contributing an estimated 37 percent of GDP.[160]

Besides general measures to help these enterprises, Chotchai Suwannaphon proposed that government needed a special plan for the border zones with three main points.[161]

- First, in 16 border provinces, make special efforts to remove obstacles for business and to build close relations across the borders.

- Second, build on the experience with the One Tambon One Product[162] scheme by concentrating on products that have high value added from a combination of Thai cultural capital, good design, and technology, and by developing marketing channels.

- Third, provide entrepreneurs with useful information that enables them to be competitive in the changing market situation.

Leveraging social capital to achieve the "Global Reach-Local Link" [163]

The opening of a check point between Thailand and Lao PDR made Ban Muang Jed Ton, a key gateway between Uttaradit and Xaiyabouri. Social services and economic activities expanded rapidly. Local farmers became engaged in mass agriculture to provide inputs to the factories that relocated to border areas to take advantage of the availability of raw materials and proximity to the Laotian market. Local people benefited from increased volume of trade and tourism. But they were too small to take advantage of investment opportunities along the border and inside Lao PDR. The influx of medium and large businesses eventually jeopardized local traders. Other problems were undocumented workers, smuggled cigarettes, increased and unsafe traffic and pollution especially in tourism and cargo depot areas.

In the case of Ban Muang Jed Ton, the social capital, especially collaboration among local administrators, formal and informal leaders from village to provincial level was resilient enough to deal with the pressure. The village is a model of "Global Reach – Local Link" envisioned by the Office of the Public Sector Development Commission for border area communities in the regional integration context. This model is based on the integration of area

management from the community to the provincial level and a community management plan that focuses on community learning, community-based social protection, relations between private sector and people-to-people across the border, community enterprises, community-based cultural, agro-and-eco tourism, and the development of community self-rules needed for a multicultural society.

Planning and steering development of the outer provinces

The Thai government views ASEAN Connectivity as an opportunity to accelerate development in the outer provinces and has outlined four area-based development strategies.[164]

Major cities in each region such as Chiang Mai, Phitsanulok, Nakhon Sawan, Khon Kaen, Nakhon Ratchasima, Chacheongsao, Chon Buri, Rayong, Kanchanaburi, Songkhla, and Surat Thani are designated "regional service centres".

1) Cities along the "economic corridors" should take advantage of expanded transport to strengthen linkages between urban and rural areas.

2) Urban planning, development of infrastructure and manpower as well as community development will be the focus of "border city" development. Important gateways are Tak, Chiang Rai, Nong Khai, Mukdahan, Sa Kaew, Kanchanaburi, Songkhla and Narathiwat.

3) Special Economic Zones featuring physical and institutional structure including the ASEAN Single Window will be established to foster trade and investment in selected border areas. Initial targets are Chiang Rai (Mae Sai, Chiang Saen and Chiang Khong), Tak (Mae Sot), border areas of Mukdahan, Nakhon Phanom, Nong Khai, Sa Kaew, Kanchanaburi, Songkhla (Sadao), and border area of Narathiwat.

4) Other cities and provinces are regarded as "network cities/provinces". They should develop linkages with the above-mentioned targeted areas in accordance with their economic or cultural ties.

These area-based development strategies entail land zoning and city planning, logistics and infrastructure development, human resource development, development of social services, and outlining or amending rules and regulations within and between neighbouring countries. The government will be the main driver of these initiatives, but provincial and local authorities are expected to play a

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[160] Wichai Phayakkaso, "SMEs thai nai prachakhom sethakit asiyan jar oat jing ruea?" [Will Thai SMEs Survive in AEC?], retrieved January 25, 2013 from http://www.thai-aec.com/574.

[161] Chotchai Suwannaphon, "Pramoen sathankan SMEs thai phai tai kan khao su AEC" [Assessing the State of Thai SMEs on Entering AEC], retrieved January 25, 2013 from http://www.thai-aec.com/568.

[162] A government scheme, based on a Japanese model, to promote production of products by local communities.

[163] Suthiphon Bunmak, "Kan borihan jatkan ngoen song klap ban khong khrop khrua nai jangwat chadaen phak tai thi mi samachik khrop khrua pai tam ngan nai prathet malesia" [Management of Remittance by Families in Southern Border Provinces with Members Working in Malaysia], Thailand Research Fund, 2011.

[164] NESDB, *Senthang prathet thai su prachakhom asiyan* [Thailand's route to the ASEAN Community], NESDB annual conference 2013, pp. 153-72.

larger role in implementation with the support of the system of provincial clustering that groups neighbouring provinces into 18 clusters and identifies linkages and complementarities within the group. The Royal Decree on Provincial and Provincial Cluster Administration B.E. 2551 (2008) gives more authority for development planning, coordination, and funding to the provinces and provincial clusters.

Again, concerns are largely about implementation. The key question is whether the provincial and local authorities have the capacity to underwrite this vision. It is important to ensure that these key actors are empowered, work together, and involve private sector and the civil society in their decision-making.

Learnings and recommendations

Although the maps showing mainland Southeast Asia criss-crossed by economic corridors have been around for two decades and appear regularly in studies and presentations on ASEAN, in truth the development of these routes has been very slow and only now are these corridors beginning to have an impact. There are not yet long-run data sets or many in-depth studies to gauge the ultimate impact. But there are a few clues.

Thailand's borders are notoriously porous. As the study of the rice trade into Malaysia shows, cross-border movements continue despite obstructions and policy shifts. Andrew Walker cautioned that "liberalization" or "opening" of borders sometimes merely changes illegal movements into legal movements.[165]

Yet there are signs that the new ports, bridges, and roads are sparking growth at the key border crossings, and that simple policies to facilitate cooperation (such as the sister-cities scheme) can stimulate local economies by creating new combinations of entrepreneurship and resources, and new contact points between supply and demand.

But at present it seems that the potential impact of the new corridors is unrealized. Strikingly, in both Chiang Saen and Mukdahan, the local commercial communities complain that they have not benefited from rising local prosperity. The ADB's review notes that ancillary schemes designed to maximise the benefit from the corridor routes have often not been followed through. In Mae Sot, the surge of population has overwhelmed the local provision of infrastructure.

There is need for a more focused and targeted approach to planning for the future of these routes, both in order to maximise the benefit in the border towns, and to spread the benefits wider into their hinterlands.

- Accelerate completion of the roads in the corridor network, especially the east-west routes, including the westward extension to Dawei.

- Prioritise negotiation with neighbours to improve infrastructure, facilities, and procedures at border crossing, especially on the main corridor routes.

- Expand the sister-cities scheme and disseminate best practices and lessons learned.

- Properly enforce all zoning, environmental, and health regulations at border towns experiencing rapid growth and increase local participation in the planning and management through closer cooperation with local chambers of commerce and other stakeholders.

- Invest in empowering provincial and local administrators in outer provinces to ensure that they fully understand the situation and options and can make sound and participatory area-based development decisions.

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[165] Andrew Walker, *The Legend of the Golden Boat: Regulation, Trade and Traders in the Borderlands of Laos, Thailand, China, and Burma,* Honolulu, University of Hawaii Press, 1999.

SECURITY AND HUMAN RIGHTS | 8

Peace and security are prerequisites of human development. Violence and crime are threats to the quality of life as well as to life itself.

Security is the original purpose of ASEAN. The Blueprint of the ASEAN Political-Security Community (APSC) codifies ASEAN's traditional role as a security organization, bringing the paperwork up-to-date with the many changes in practice since the organization's beginnings. But the Blueprint also covers three other aspects which have large implications for human development: non-traditional security; dispute resolution; and political development including democracy, good governance, the rule of law, and human rights.

These three areas greatly extend the scope of ASEAN. What are the implications for human development in Thailand? What are the implications for the shape of ASEAN as an institution?

Security situation in Thailand

According to the Global Human Security Index, Thailand was ranked 103rd among 232 countries in 2011.[166] The country did well on economic fabric and environment fabric index, but less so on the social fabric index especially with regard to peacefulness, governance, education and information empowerment, and food security. Most of these issues are regarded as non-traditional security under the APSC.

Thailand Health Report 2013, an annual report that summarizes significant developments in health and health-related fields, recently published its 10th anniversary issue that lists the five most significant situations that affected the Thai people in the past decade. Three out of five are security-related situations, namely political confrontation, situation of violence in the southern provinces, and major disasters including the tsunami in 2004 and the 2011 flood that inundated Bangkok and major cities in the Central Region for months.[167] The first two cases are situations that

have persisted for over ten years, resulting in casualties, injuries, social rifts, and lost opportunities for human development. They remain an important challenge for Thailand to overcome in a drive to fulfil the aspirations of the APSC. Major disasters are as devastating but easier to deal with if managed professionally.

Extending security in the APSC Blueprint

The APSC Blueprint extends the scope of ASEAN in three areas of significance for human development.

First, especially over the past two decades, ASEAN has become involved in many areas of non-traditional security, especially matters that cross borders. The Blueprint also codifies this part of ASEAN's scope, under the following heading:

B.4. Non-Traditional Security Issues

25. A key purpose of ASEAN is to respond effectively and in a timely manner, in accordance with the principles of comprehensive security, to all forms of threats, transnational crimes and transboundary challenges.

The action list that follows covers transnational crime, trafficking in persons, drugs, illegal fishing, piracy, illicit arms trading, cyber crimes, counter-terrorism, and disaster management

Second, the Blueprint promises greater involvement in preventing and resolving internal disputes. It restates the conflict-resolution mechanisms of the Treaty of Amity and Cooperation, the accord signed by the original ASEAN member states in 1976 and signed by others as they joined, that codifies the principles of consensus and non-interference. However, it adds that "Under the ASEAN Charter, ASEAN may also establish appropriate dispute settlement mechanisms."

Third, the Blueprint extends the security role into a new political dimension. The vision is set out as follows:

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166 Global Human Security Index, Version 2 released in March 2011, http://www.humansecurityindex.org

167 IPSR, Mahidol University, *Raingan sukhphap khon thai 2556: patirup prathet thai patirup khrongsang amnat phoem phalang phonlamueang [Thailand Health Report 2013: Reform Thailand: Reform the Power Structure, Increase Citizen power]*, Nakhon Pathom, 2013

A. A Rules-Based Community of Shared Values and Norms

12. ASEAN's cooperation in political development aims to strengthen democracy, enhance good governance and the rule of law, and to promote and protect human rights and fundamental freedoms, with due regard to the rights and responsibilities of the Member States of ASEAN, so as to ultimately create a Rules-based Community of shared values and norms.

Non-traditional security: growing concerns

ASEAN has already created many mechanisms for confronting non-traditional security threats that cross borders, particularly transnational crime, drug trafficking, human trafficking, disaster management, and disease control. The APSC Blueprint promises to extend this range to marine piracy, cyber crimes, and illegal fishing.

For Thailand, international money-laundering, trafficking of women and children are matters of concern, while energy security and food security are growing risks. International piracy and maritime security are also well within the scope of the Thai security outlook. Piracy in the Straits of Malacca and as far as away as Somalia's coast has adversely affected the Thai fishing and frozen seafood industry in the recent past.

Learning-by-doing on non-traditional security

ASEAN has expanded its involvement in areas of non-traditional security by processes which can best be described as learning-by-doing and sometimes as baptism-by-fire.

Epidemics. Prior to the SARS outbreak in 2003, ASEAN member states had had very little cooperation on health issues. The SARS threat promoted health to a security issue. The potential for a devastating epidemic demanded a quick response and full cooperation. The need for effective monitoring raised issues about intrusion into the internal affairs of member countries. As one assessment of the incident summed up, the SARS threat "taught Southeast Asian leaders to talk straight with the public and with each other".[168]

The experience from SARS framed the response to the threat of avian flu in 2004. A regional group was quickly formed to oversee monitoring of avian flu cases, and the specialist tasks were parcelled out to the five ASEAN countries with more developed health systems. Again, the experience brought up sensitive issues of internal interference. Some countries lacked the capacity for effective monitoring, or were reluctant to cull birds on the scale required. The experience resulted in new readiness to transfer expertise between countries, a special fund and

3-year plan for this purpose, and a new mechanism for closer cooperation between ASEAN and the World Health Organization. As a result of implementing this plan, ASEAN became more aware of the need for helping its poorer members upgrade their primary health care capability.

Food security. Food security is a long standing agenda for the ASEAN member countries, some of which are world producers of key commodities. One of the ASCC list of actions is "Ensure that food is available at all times for all ASEAN citizens". Collaboration for long-term food security is outlined in the ASEAN Integrated Food Security Framework. Major initiatives are:

• the ASEAN Food Reserve Board, to discuss global, regional and national demand and supply of the region's key commodities namely rice, maize, soybean and sugar;

• the ASEAN Plus Three emergency Rice Reserve (pending ratification by 6 ASEAN member states and 1 dialogue partner), to ensure food security in times of emergency, for humanitarian purpose;

• the ASEAN Food Security Information System, to monitor risks and forecast commodity situation for rice, maize, soybean, sugar, and tapioca.

From the NGO's perspective, the ASEAN food security initiatives focus largely on trade-related issues and not adequately on the livelihood of small farmers, threats associated with mono-crop production, food-fuel balance, food safety, and coping with climate change.[169]

Trafficking. At the ASEAN Senior Officials Meeting on Transnational Crimes in September 2012, the ASEAN countries agreed to develop a Regional Plan of Action to Combat Trafficking in Persons as proposed by Thailand and Singapore. This initiative is in line with the ASEAN Convention to Combat Trafficking in Persons.

Terrorism. Following the 9/11 attacks in the US in 2001 and the Bali bombings in October 2002, ASEAN set up new mechanisms to counter the threat of terrorism in the region. A first meeting of military intelligence directors was held in late 2001, and terrorism was inserted on the agenda of the annual meetings of ASEAN police chiefs. These moves resulted in no new regional initiative, but provided channels for sharing information. A proposal to set up an ASEAN Security Council to respond to various transnational threats was agreed in 2003. Original plans for the Council included several transnational mechanisms including an

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[168] Mely Caballero-Anthony, "Non-traditional Security and Infectious Diseases in ASEAN: Going Beyond the Rhetoric of Securitization to Deeper Institutionalization", *Pacific Review,* Vol. 21, No. 4, December 2008, pp. 507-25.

[169] Seksan Chanthawon, "Prachakhom asiyan khui rueangkhwam mankhong thang ahan yangrai" [How Does ASEAN Talk about Food Security?}, retrieved September 20, 2013 from http://www.greenforall.net/index.php?lay=show&ac=article&Id=539545167&Ntype=1.

anti-terrorism centre and an ASEAN peacekeeping force, but these were rejected by several ASEAN members.[170] Six years after the ASEAN leaders signed off, the ASEAN Convention on Counter Terrorism became effective in May 2011, and was ratified by all ten member states in January 2013. The Convention serves as framework for regional cooperation to counter, prevent and suppress terrorism and deepen counter-terrorism cooperation. With all ten members on board, ASEAN has taken another step in fulfilling the APSC Blueprint, and in developing a safer and more secure ASEAN.

In all these initiatives, ASEAN relies primarily on governments managing security issues internally, but in cases where problems overflow borders, the organization has edged forward, learning from experience, and gradually creating new mechanisms.

New mechanism for peace and reconciliation

The APSC Blueprint mooted the establishment of an ASEAN Institute for Peace and Reconciliation. The proposal was taken up, and the Institute formally launched in November 2012 as a research body to be located in Jakarta. The Indonesia foreign minister described expectations for the Institute as follows:

> The Institute will carry out activities related to conflict prevention, management and resolution whenever requested to do so by the ASEAN member states. These activities include research, capacity building, network building and information dissemination. The AIPR will be a pool of expertise to conduct research and gather database that can be used to prevent disputes from arising and limit tensions when disputes do occur. And when conflict does arise between ASEAN member states or between ASEAN member states and non-member states, I hope that the Institute will be able to provide effective recommendations to settle the conflict and rebuild the peace.[171]

Although this new body is clearly defined as a research institute rather than a mechanism for resolving disputes, some observers have interpreted its foundation as a further signal that ASEAN is overcoming its reluctance to discuss disputes within member states or between them.

ASEAN and political development: human rights as pioneer

ASEAN's expansion into political development, as set out in the APSC Blueprint, is largely a statement of vision and principles, with actions to promote these principles around the region, but few new mechanisms. The one major exception concerns human rights. This area thus becomes the pioneer of ASEAN's extension into political development.

The ASEAN Charter in 2007 made a commitment to set up a human rights body. The ASEAN Intergovernmental Commission on Human Rights was therefore established in 2009. The APSC repeated this commitment, which by now has been fulfilled.

The rationale for a regional human rights mechanism

Human rights are codified in the Thai constitution and the National Human Rights Commission of Thailand is tasked to promote and protect them. How then can an ASEAN body contribute to human development in Thailand?

In several ways. First, cross-border activities raise many human rights issues which will be better covered by a transnational institution. Second, as Thai companies and individuals move more freely within ASEAN, they will benefit from a common standard of protection for human rights.

A UN High Commissioner for Human Rights explained the role of a regional human rights body as follows

> The importance of a regional mechanism lies in the fact that it is designed to articulate a common approach to a complex problem, an approach that will assist states, from a position of shared regional values, to address shortcomings in their national frameworks so as to allow individuals the means to enjoy their rights in full, and to obtain effective redress when those rights are denied.[172]

By the 1980s, regional human rights bodies had been established in Europe, the Americas, Africa, and the Arab world. Asia was the only major region without one, and was under pressure to rectify this omission. A regional body for ASEAN was first discussed in 1993.

National human rights institutions were founded in the Philippines in 1987, Indonesia in 1993, Malaysia in 1999, and Thailand in 2001. These four bodies cooperated to press for an ASEAN-level body. Myanmar became the fifth ASEAN state with a national human rights institution in 2011. Civil society organizations across the region came together in 1999 to form the Asian Forum for Human Rights and Development (Forum Asia) which became another strong advocate.

Creating a regional human rights mechanism

Debate and controversy surrounding the founding of an ASEAN body focused on two areas.

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[170] Ralf Emmers, "Comprehensive Security and Resilience in Southeast Asia: ASEAN's Approach to Terrorism and Sea Piracy", working paper, S. Rajaratnam School of International Studies, Singapore, July 10, 2007, http://hdl.handle.net/10220/4389.

[171] Opening address by Marty M. Natalegawa at the 2nd ASEAN-UN Workshop on Conflict Prevention and Preventive Diplomacy, Jakarta, April 5, 2013.

[172] Louise Arbour, UN High Commissioner for Human Rights, 13th UN Workshop on Regional Cooperation for the Promotion and Protection of Human Rights in the Asia-Pacific Region, August 29 - September 2 2005, Beijing, at http://www.hurights.or.jp/asia-pacific/041/03.htm

First, would it uphold the universal standard of human rights, or would it craft an alternative "Asian" version? This question was raised following the "Asian values" debate in the 1990s when some Asian figures had argued that universal values had to be modified by cultural factors.

Second, would the body's role be promotion of human rights or promotion and protection? "Promotion" means advocacy. In the vocabulary of the human rights world, "protection" means the ability to investigate cases of alleged wrongdoing, publicize the results, and perhaps initiate or even conduct a judicial process. Many human rights advocates feared that an ASEAN body would be limited to promotion.

The 10 states of ASEAN have very different political regimes ranging from electoral democracies to one-party states and a monarchy. Only 5 of the 10 have national human rights institutions. Some civil society organizations campaigned for a regional body in the hope that it would provide better support for human rights than provided by governments, judicial systems, and human rights organizations at the national level.

Others, however, recognized that ASEAN's principles of consensus and non-interference would limit the scope of any regional organization. Some argued that it would be better not to have a regional institution if it was bound to be powerless, and that advocacy and investigation should be left to regional civil society groups and networks.

The ASEAN Charter in 2007 announced the formation of a regional human rights body, eventually named the ASEAN Inter-Governmental Commission on Human Rights, and included among its principles "the promotion and protection of human rights" (clause 2n).

Civil society organizations complained that they were excluded from the discussions which drafted the terms of reference for the new body, formed in 2009, and which drafted the ASEAN Human Rights Declaration, adopted in November 2012 along with the signing of the Phnom Penh Statement on the Adoption of the Declaration.[173]

Both the terms of reference and the Declaration explicitly uphold universal principles of human rights and use the formula of "promotion and protection".

Yet while the Declaration upholds universality and sets out a full list of civil, political, economic, social, and cultural rights, it qualifies them with three statements:

> The enjoyment of human rights and fundamental freedoms must be balanced with the performance of corresponding duties... (6)

> ... the realization of human rights must be considered in the regional context bearing in mind different political, economic, legal, social, cultural, historical and religious backgrounds. (7)

> The exercise of human rights and fundamental freedoms shall be subject only to such limitations as are determined by law ... to meet the just requirements of national security, public order, public health, public safety, public morality, as well as the general welfare of the peoples in a democratic society. (8)

Similarly the terms of reference talk of "promotion and protection" but give the Commission no investigative or other powers to fulfil the task of protection. The Commission's first work plan, covering 2010-15, was entirely about promotion, not protection.

The mechanism in operation

On ending her term as Thailand's first representative on the Commission, Sriprapha Petcharamesree said:

> the consensus principle and the principle of non-interference have slowed down the commission's ability to improve the human rights situation in ASEAN countries... Several other representatives on the commission are frustrated with the process too.... ASEAN foreign ministers do not assign the AICHR enough importance.[174]

Box 8.1 The ASEAN Commission on the Promotion of the Rights of Women and Children

The ASEAN Commission on the Promotion and Protection of the Rights of Women and Children (ACWC) inaugurated at the ASEAN Summit Meeting in 2010 is another important human rights mechanism. Each ASEAN member state is to appoint two representatives to the ACWC, one representative on women's rights and one representative on children's rights.

On the international front, all ASEAN member states have ratified and are parties to the Convention on the Elimination of All Forms of Discrimination Against Women and the Convention on the Rights of the Child. Under the ACWC Work Plan 2012-2016, Thailand is the lead country in the public campaign to stop violence against women through activities commemorating the International Day for the Elimination of Violence Against Women (25 November). In addition, Thailand is also the lead country for the development of guidelines for a non-violent approach to child rearing and child caring in various settings, for example, school and community.

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[173] James Gomez and Robin Ramcharan, "The Protection of Human Rights in Southeast Asia: Improving the Effectiveness of Civil Society," *Asia-Pacific Journal on Human Rights and Law, Vol. 2, 2012,* pp. 27-43

[174] Thanida Tansubhapol, "Core Asean Principles Block Gains," *Bangkok Post,* March 7, 2013

One of the first acts of the new representatives on the Commission in 2013 was to slate a review of the terms of reference. As activists pointed out, the formation of the Commission was a symbol of the ASEAN Community's aspiration to move beyond its defence and economic roles, and yet the Commission had had no impact on high-profile cases of human rights abuse.

Learnings and recommendations

The approach of the ASEAN Community has raised great expectations for regional collaboration on economic and social issues. A reality check took place at an ASEAN ministerial meeting in Phnom Penh in July 2012 when discussion of a South China Sea territorial issue became so divided that progress on ratifying a code of conduct to address disputes and provide settlement mechanisms was stalled and no communiqué was issued, an almost unprecedented event. The deadlock continued at the ASEAN summit in November 2012, though steps to restore an ASEAN consensus gained traction in mid 2013.

This dispute signals the return of great power rivalry to the region. Some have speculated that Southeast Asia will again become a site for proxy conflicts between great powers. If so, ASEAN's major contribution to human development will lie in its traditional role as peacekeeper.[175]

Over the past decades, the extension of ASEAN into non-traditional areas of security has repeatedly raised questions whether the "ASEAN way", especially the principle of non-interference, renders the organization cumbersome at best and ineffectual at worst when it moves beyond its traditional scope.

The establishment of a regional human rights mechanism has been beset by controversy. The early years of the body have raised questions whether the ASEAN principle of non-interference makes it impossible for ASEAN to fulfil a promise to protect the human rights of the region's peoples.

But there is a more optimistic interpretation. By venturing into the field of human rights, ASEAN has invited criticism, pressure, and demands from civil society. Since the regional human rights body is a flagship of the APSC, the organization cannot easily walk away from the project but will have to respond. Ultimately this can lead to greater civil society involvement in ASEAN, and a better human rights mechanism.

Moreover, the issue of human rights is the pioneer of many themes announced in the APSC Blueprint such as the rule of law, judicial reform, good governance, and combating corruption. These are all areas where the Blueprint's ambition "to ultimately create a Rules-based Community of shared values and norms" can contribute to human development.

Similarly, on non-traditional security issues, ASEAN has shown a capacity for learning-by-doing that gradually changes the organization's working methods and culture.

- Treat the APSC as a long-term project whose great potential to advance human development may depend on some changes in the fundamental working principles of ASEAN.

- Support development of the ASEAN Inter-Governmental Commission on Human Rights to become an effective mechanism for the promotion and protection of human rights.

- Contribute to the development of mechanisms for new areas of non-traditional security such as marine piracy, cybercrimes, illegal fishing, child begging, narcotics and money laundering.

- Support the development of the ASEAN Institute for Peace and Reconciliation.

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[175] Thitinan Pongsudhirak, "ASEAN's Politics and Security: A Neglected Pillar", background paper for Thailand Human Development Report 2014.

9 COMMUNITY, HISTORY, PEOPLE

But a community cannot be legislated; it cannot be created overnight simply by adopting declarations, by ratifying agreements…. It must actually be implemented; there must be *a sense of ownership, a sense of participation*…. The Asean community is not an event that will simply conclude in 2015, it is a process that we must continue to consolidate, enhance and develop over the many years ahead.

Marty Natalegawa, foreign minister of Indonesia, speaking in Bangkok, July 2013; (emphasis added)[176]

The ASEAN Community is a long-term project. Implementing AFTA took two decades. The AEC plans for service liberalization face barriers which will take many years to overcome. The aspirations for social and environmental policies in the ASCC Blueprint and for political development in the APSC Blueprint are far from realization. The project will require stamina and support.

ASEAN sometimes describes itself as "an organization of governments", in contrast to an organization of people. But adding the term "Community" signifies a change.

Of course, the term "community" has many meanings including "a group linked by a common policy". But the first definition in the Webster Dictionary is "a unified body of individuals".[177] Most people will probably think that a community is a grouping of people. In the Thai translation of the word used for the ASEAN Community, prachakhom, the first syllable is a word for "people" that also begins the words for public, population, and democracy.

The plans for the ASEAN "Community" were developed within ASEAN which has cultivated a limited and controlled interface with the outside world. The capitalization of its name signals that it is an institution not an organic thing. The plan is delivered top-down. Its vocabulary of blueprints and road maps and mechanisms has the flavour of engineering. The mass of the people have had little say in this creation.

In order to gain the internal dynamic which will allow the big aspirations to be fulfilled, the "community" needs to put down roots. How might that happen? And what can Thailand do to help? This chapter is about how the (ASEAN) "Community" and the "community" can contribute and compliment to the dynamics and well-being of each other.

Competition or cooperation?

Does entering the ASEAN Community mean that Thailand and its citizens will be more exposed to competition from other members or more equipped to deal with the world and the future through cooperation with the other members? Of course, ASEAN advocates espouse the latter interpretation. But the answers to many surveys of students and public opinion (and indeed even the framing of those surveys) show that the former interpretation is the more common in Thailand.

The approach to 2015 has made more people in Thailand pay more attention to their immediate neighbours than ever before. This is unquestionably a good thing. But the presentation of ASEAN seems designed to emphasise the differences of the ten countries rather than the commonalities. Ten flags. Ten dolls in different costumes.

There is an alternative approach.

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[176] "Asean's Bold New Agenda", *Bangkok Post*, July 15, 2013, Asia Focus p. 3.

[177] The full definition from the Merriam-Webster online dictionary (with some added punctuation):

community

1: a unified body of individuals: as a : state, commonwealth; b : the people with common interests living in a particular area; *broadly* : the area itself <the problems of a large *community*>; c : an interacting population of various kinds of individuals (as species) in a common location; d : a group of people with a common characteristic or interest living together within a larger society <a *community* of retired persons>; e : a group linked by a common policy; *f* : a body of persons or nations having a common history or common social, economic, and political interests <the international *community*>; g : a body of persons of common and especially professional interests scattered through a larger society <the academic *community*>;

2 : society at large

3 *a* : joint ownership or participation <*community* of goods>; *b* : common character : likeness <community of interests>; *c* : social activity : fellowship; *d* : a social state or condition.

A fluid and open region

On first glance, the 10 countries of ASEAN seem almost unbelievably diverse. Their national languages are drawn from five distinct language families with very different scripts and structures. The dominant religions of the various states include all of the world's major faiths. The per capita income of the richest state is 38 times that of the poorest.[178] Ethnic composition, political systems, and much else are very varied.

But beneath this variety ASEAN has a lot in common. Most importantly, the countries share three important things.

First, they share a common geography, a position in the world – in Asia, straddling the equator, affected by monsoons, exceptionally rich in biodiversity.

Second, they share a common history in the long run. Look at the map of ASEAN with today's national boundaries removed. It shows a region of islands, littorals, and river valleys linked by water—the medium for the cheapest and easiest travel and transport until very modern times. Waterborne routes have criss-crossed this region for around two millennia.

Until colonial times, there were no firm, fixed, and forbidding borders. Natural features were not barriers because seas and rivers were seen as "gold and silver paths of trade and friendship," and none of the hill ranges are high and impenetrable. Politically the region was fragmented into many small states which were occasionally gathered into a larger agglomeration by an ambitious dynast but never for an extended period of time. The dominant capitals of the region shifted around as such dynasties rose and fell.

This fluid and open geography is at the root of the region's diversity because it allowed peoples, ethnicities, languages, and religions to flow into the region from different directions and take root in different parts. But this fluid and open geography also ensured a dense pattern of interchange among cultures.

The old capitals of the region were very cosmopolitan places. Many people spoke two or more languages. As a result, these languages have borrowed words and structures from each other. Today a Thai can hardly speak a sentence without using words that originated from Khmer and Mon and possibly also from Malay, Chinese, and Indian languages too. Although the national cultures in the region are each highly distinctive, there is not one that has not been affected by the culture of its neighbours. The Thai classical musical ensemble has a zither from China, a horn from India, gongs and drums from the Malay world, and a stringed instrument that is probably Lao.

Although these cultures have grown apart in the era of nation-building, each can recognize some of their own culture in those of their neighbours, and some of their neighbours' in their own.

Only in the last century or so have the modern nations come into being, the borders been drawn across the map, the national capitals acquired their dominance, the selected languages been defined and refined as national languages, and the concept of a "national culture" emerged.

And against a perspective of two millennia of openness and exchange, a century is not a very long time.

Figure 9.1. ASEAN without borders

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[178] IMF 2012 data by PPP method from IMF, World Economic Outlook Database, October 2013.

Box 9.1 The borderless past

"In pre-colonial Southeast Asia, there were no boundaries, no idea of the nation state or even of sovereignty. What we had at that time was 'cultural communities' and 'cultural boundaries', sacred sites where ancestors from the same vicinity went to worship together without bothering about what part of the riverbank or whose territory that sacred site was in, because besides the seas, rivers, streams, and hills, there was no territory or boundary. If we are to move beyond the problems over which several countries in ASEAN are struggling, we must appreciate this context."

Source: Surin Phitsuwan, [Nation State and Boundary: Overcoming Conflict along the ASEAN Way of Peace] (in Thai), Sirinthorn Anthropology Center, 27 November 2009, printed in Charnvit Kasetsiri and Kanjani La-ongsi, eds., "*Ratchat-phromdaen: khwam khatyaeng la kho yuti bon senthang santiphap asiyan*" *[Nation-state and Border: Conflicts and Resolution by the ASEAN Way of Peace]*, Toyota Thailand Foundation, 2010.

A common transition to modernity

A third experience shared by the countries of ASEAN is a common transition to modernity.

The region is rich in natural resources because of the tropical and subtropical monsoon climate, great extent of water, and rich deposits underground. Colonial powers were attracted to the area to develop these resources. Although different countries were dominated by five different colonial powers and under different forms of informal and formal colonialism, all underwent a similar economic and political transformation in the era of colonial rule.

Although the forms of government vary greatly, since the mid twentieth century, all have undergone similar processes of national building.

And although the pace has varied greatly from country to country, all have undergone economic development, and all have had to adjust to globalization.

Imagining ASEAN

The idea of a nation has been the most powerful political idea of the modern era. Yet the idea and its realization as nation-states reach back only 200-250 years. In perhaps the most popular social-science book of the past generation,

Box 9.2 One Vision, One Identity, One Community.

At a seminar on ASEAN in a Thai university in early 2013, several speakers objected to the sentiment behind this ASEAN motto.

Some interpreted the proposition of "One Identity" as a threat to the Thai identity. One complained that the ASEAN project is already eroding Thai identity, for instance by the reduction in the study of Thai history and culture at school to accommodate more teaching on ASEAN. Another complained that the uniqueness of Thai identity had already been diluted by globalization and feared that an influx of non-Thais under the ASEAN Community would intensify the process.

Another objected to the ASEAN Charter's clause that "The working language of ASEAN shall be English." One noted that language is the basis of Thai identity and that some consider protection of the language is a matter of national security. The language is already being infiltrated by words and expressions from English, but now faced an even stronger challenge.

For other participants in the seminar, this motto alerted them to ASEAN as a threat to sovereignty. If the grouping were really to become "One Community", would Thailand have to surrender some sovereignty? Although current plans project no transfers of sovereignty to central institutions, as in the European Union, would such changes come at a later stage?

Other participants played down these fears. One pointed out that identity is a construct that is constantly under revision. Today's concept of a Thai identity has been created from nothing over a century in a process that is now well studied. Identity is not monolithic but layered with room for local, national, and other dimensions. Not everyone has the same concept of a Thai identity.

Similarly, sovereignty is never as absolute as the word seems to imply, and is constantly under revision. As a middle-sized, middle-income country, Thailand is always subject to some form of domination by the great economic and political powers. One contributor pointed out that ASEAN had the potential to recover some sovereignty by increasing bargaining weight against the great powers.

But this controversy is understandable. The ASEAN motto is perplexing. "One Vision" is unsurprising. All kinds of companies and organizations use such rhetoric. But "One Community" is unsettling because it seems to challenge all the other communities that palpably exist. And "One Identity" is confusing because the content and nature of this identity is not explained. An animated film made by the ASEAN Secretariat in 2007 to encourage children's interest in the ASEAN Community ends by calling on its young viewers to "be proud of your identity as an ASEAN citizen".

But how?[179]

Source: Conference on "Conversations with ASEAN Difference: Security, Prosperity and Diversity", Naresuan University, Phitsanulok, January 19-20, 2013.

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[179] "The ASEAN Community 2015", made by the Public Affairs Office of the ASEAN Secretariat, 2007, at www.youtube.com/watch?v=YrnK5UQDdO0

Benedict Anderson wondered how the idea came into being and came to have so much force. After all, the groupings of peoples and regions that became nations are no more natural than the grouping of countries in ASEAN. With only a few exceptions, today's nations had (especially in their early years) mixes of language, ethnicity and religion which can be as varied as those found in ASEAN.

Anderson's famous answer is that a nation is an "imagined political community". He goes on to explain:

> It is imagined because the members of even the smallest nation will never know most of their fellow-members, meet them, or even hear of them, yet in the minds of each lives the image of their communion.[180]

In Anderson's telling, the early imagining of a nation was bound up with books and journeys. The early printers of books chose to use the languages of big urban centres where there was a large, sophisticated, and wealthy market. The readers of books could begin to imagine a community of other people having the same experience of reading the same books.

Many of these same people journeyed away from their homes to attend schools and universities, and to find jobs which repaid the skill of literacy. Along these journeys they met others or criss-crossed with others on similar journeys and their sense of community was increased. They began to imagine that they belonged to a new type of community which they termed a nation.

As bilingual or multilingual speakers, they served as intermediaries to a much wider audience. This new type of community became a powerful tool to overthrow old forms of oppression by absolutism and imperialism. Once this had happened in one or two parts of the world, there was a model that could be copied by others, or hijacked by states and transformed into a top-down "official nationalism" to prevent such revolts happening.

ASEAN is not setting out to supplant the nation. Today's world, blanketed with broadcast media and cyberspace, is very different from the world when printed books first appeared. Still, Anderson's proposition that all communities are acts of imagination remains relevant today and useful for thinking about ASEAN's ambition to become a community. And there are parts of his story that are useful for reflecting on the task ahead for ASEAN, especially the key roles of language, of a pioneer group who can imagine themselves as part of a nascent community, of journeys, and of schools and universities as points of meeting and transmission.

Language, journeys, centres

A community is composed of people who imagine they share something that is important. Members of a village share a place. Members of a nation imagine they share a history. Perhaps members of ASEAN must imagine they share a certain position in the world, defined both by geography and by their common experience of modernity (colonialism, nationalism, globalization).

Language is fundamental to this ability to imagine something in common, but the function of language is complex. Some members of any community have to share a common language. ASEAN has decreed theirs will be English. Competence in English is thus the key qualification for being at the core. For Thailand and other member states, developing that competence is critical. But only the simplest communities are monolingual. More complex communities are held together by polyglots who act as transmitters and interpreters. Developing linguistic competence across the ASEAN languages will also be important.

Journeys and crossroads which bring people together, however fleetingly, strengthen the sense of sharing a common experience. ASEAN has no single centre to act as the great crossroads. In practice, the major capitals share the task of being the organization's centre. Learning and work are what pull people to these centres, especially learning. Universities, military academies, and research institutes which draw from all around ASEAN will play a major role in creating an ASEAN community.

The foundation is already there as academic cooperation in many disciplines is already well advanced. The task now is to create centres of excellence which act as magnets. Thailand should develop such centres on the basis of its existing comparative advantage. The country's growing reputation for healthcare makes it a natural as a centre for medicine. Other possible areas are food science, environmental studies, hotel and tourism management, and perhaps the social science of ASEAN itself. To develop such centres of excellence, government needs to identify the institutions and provide the funding to raise standards of research and teaching.

History for community

The very first chapter section of the APSC Blueprint is entitled "A.1.1. Promote understanding and appreciation of political systems, culture and history of ASEAN Member States." Under the heading, the actions include academic conference, workshops and "periodic publications on the dynamics of ASEAN Member States' political systems, culture, and history for dissemination to the public."

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[180] Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, revised edition, London: Verso, 1983. In 2009, Thai became the 31st language in which the book has been published.

Box 9.3 Reaching across borders and rising above them

Archaeologists and historians who work on the region's borderless past have to overcome many problems created by the drawing of boundaries and the fragmentation into nation-states. Not surprisingly, these are disciplines where researchers have long cooperated across borders to overcome these problems. And some have used technology to rise above those borders.

From the 10th century, roads were built radiating from the Khmer capital of Angkor to parts of its empire, including one to Phimai, now in northeastern Thailand. These roads and buildings along them are described in old inscriptions, and parts are easily visible today. But studying these roads in detail has been difficult because they cross national boundaries and because many parts are lost in remote areas.
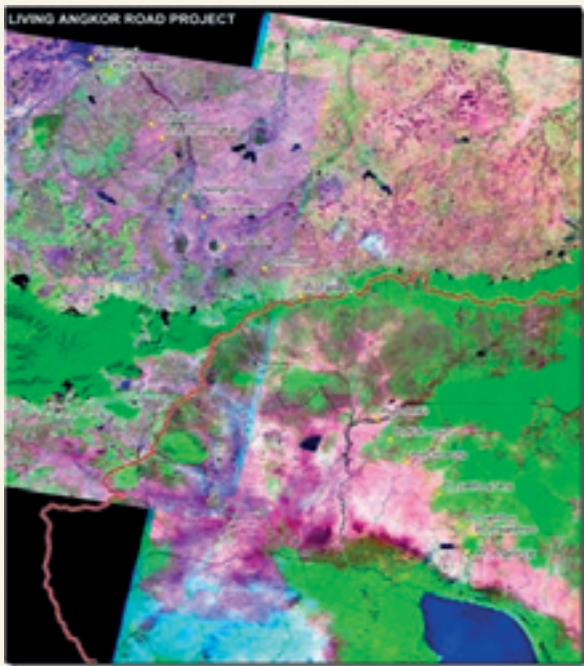
Surat Lertlum studied computer science and remote sensing to doctoral level, taught at the Chulachomklao Military Academy, and became fascinated by the potential of using satellite technology to study the Angkor-Phimai road. On a site visit to Angkor in 2004, he gave a presentation on his road project, and met Im Sokrithy, an archaeologist and department director at APSARA, the authority overseeing the Angkor monuments. Realising the potential of studying the road both from the sky and on the ground, they decided to pool their respective expertise in archaeology and geo-information technologies, and their respective access to materials and resources in the two countries. Surat made a proposal to the Thailand Research Fund to sponsor their "Living Angkor Road Project".

At the first stage, they collected existing maps, aerial photographs, and archaeological research on the ancient road, and matched them onto satellite imagery. Then they went to look.

For two of the buildings ("fire-houses" or resthouses) listed along the road in inscriptions but never found, they used geo-information technologies to predict the likely locations then found the remains by foot.

For the unknown section over the pass between the two countries, they used elevation data derived from radar images to predict the likely route based on the slopes, interviewed local villagers about old pathways, and found the road paved with laterite. The local people still call it "the royal road".

At a large community along the route, they used remote sensing combined with archaeology to identify an iron-smelting centre using laterite as the source of ore.

The result is not only a complete map of the road and the rediscovery of landmarks such as ancient resthouses, bridges, and temples, but a fuller picture of the communities along the route. The learnings are now being applied to study the extension of the same road beyond Phimai and four other roads leading away from Angkor.

Source: Surat Lertlum and Im Sokrithy, "Exploring East-West Cultural Corridor through Ancient Communication Routes: New Paradigm in GIS-Based Cultural Studies", paper presented at the First International Conference of Asian Network for GIS-based Historical Studies (ANGIS), University of Tokyo, 1-2 December 2012.

Initially it may be surprising to find the promotion of history in a plan about security and political development. Yet, at all the open sessions held to gain public input on this project, history cropped up in the discussion as a crucial topic in the context of regionalism.

In every state of ASEAN, national histories have been constructed over the last century or so. These histories take today's national state, its boundaries, its dominant national ethnicity, and its national languages, and tunnel them back into the past. Everything found there in the past becomes preparation for the emergence of the national

community and the nation-state. Wars with neighbours figure prominently in these histories as such conflicts can be portrayed as making the nation united and strong.

In this respect, the ASEAN countries are no different from the rest of the world. Everywhere such national histories were constructed as part of "nation-building" in the twentieth century. Now in many regions, especially Europe, such histories are being questioned, revised, and replaced because mass migrations have changed the ethnic and demographic patterns of the world and globalization has changed the role of the state. The conventional histories of

Thailand's relations with its ASEAN neighbours are ripe for a similar revision.

Plots of a new history

At present, histories are full of wars and subordination. There is no place for the exchanges of peoples and cultures which have created the region. Such histories are borders in the mind.

Academic research and debate in Thai universities has move far beyond such histories.[181] Indeed, the circle of Southeast Asian historians has long been a site of cooperation and exchange. But the text books and repetitions in popular culture are far behind.

Revision is needed. The process has in fact begun, but it will take a long time, and need sustained attention. Otherwise physical barriers may fall, but the barriers in the mind will remain.

What can take the place of these conventional histories from the nation-building era?

Many things. The early history of the region, once the borders imposed later are removed, is about flows and minglings of peoples, languages, religions, cultures, and goods. Local histories build a sense of place and belonging. The history of the emergence of ASEAN itself is of prime importance.

A head of one of the new centres for ASEAN Studies has suggested that most useful in building a sense of the region as a community will be a history of the transition to modernity, as the experience of the various states has been so similar. This history would cover the construction of the economic and political systems of the nation states, freedom from colonial domination, both political and economic, the rise of authoritarian regimes in the postcolonial era, the growth of capitalism with a large foreign participation, imperfect or token forms of democracy, the struggles against dictatorship, and the resulting wounds and scars of conflict.[182]

By studying such history, students will learn that the different constituents of the region have shared much the same experience, and will be able to study how to use this experience to advantage.

The ASEAN "Community" and the "community"

Through history, the peoples and communities in the 10 member states have made a journey from the era of fluid and open geography through the era of the nation-states and colonialism in which the wealth and power was concentrated in the control of the state, to the present in which the state-centric paradigm is giving way to the people-centred approach. It is therefore important that the ASEAN Community is both the Community of the member states and the community of the peoples.

The role of the community and civil society in the ASEAN Community

The vision of the ASEAN is a "Caring and Sharing Community". This is most evident in the prescription of over 300 social and cultural "actions" under the ASCC of which key components were discussed in preceding chapters. The ASCC is meant to influence the policy direction of member states toward this vision through human development, the development of social welfare and protection, social justice and rights, environmental sustainability, ASEAN identity, and narrowing the development gap.

What is the role of the community and the civil society in the ASEAN Community?

First, the ASCC pledges support to community-based actions, examples include:

- Support ASEAN Member States' community-driven initiatives for poverty reduction;

- Promote sustainable livelihood options through socio-economic development activities to minimise disaster risks and enhance community-coping capacities;

- Strengthen community-based disaster preparedness and participation through promotion of indigenous knowledge and practices, implementation of public awareness and education and sharing of best practices and lessons learnt to build a disaster resilient community, community-based disaster preparedness and participation;

- involvement of local community to maintain biodiversity conservation and forest health;

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[181] For more details, see Nidhi Eoseewong, *Prawatisat chat panyachon [History, Nation, Intellectuals]*, Bangkok: Matichon, 2005; Charnvit Kasetsiri, "Bad History, Bad Education, and Bad ASEAN Neighbor Relations", paper presented at the 10th International Thai Studies Conference, Bangkok, January 9-11, 2008, at http://www.charnvitkasetsiri.com/PPT/BadHistThaiS10Jan08.pdf; Charnvit Kasetsiri, "Thailand-Cambodia: A Love-Hate Relationship," *Kyoto Review of Southeast Asia,* March 2003, at http://kyotoreview.cseas.kyoto-u.ac.jp/issue/issue2/article_242.html; Thanet Aphornsuwan's untitled presentation at the seminar on "Living Together amid the Diverse Societies and Cultures in ASEAN," Sukosol Hotel Bangkok, February 6 2013; and also Prani Wongthet, *Sangkhom lae watthanatm nai usakane [Society and Culture in Southeast Asia]*, Bangkok: Sinlapa Watthanatham, 1996; see also Surat Lertlam et al., "Kan sueksa khwam choemyong khong watthanatham thongthin samai adit thueng patjuban phuea phatthana than khomun watthanatham ariyatham boran nai phuen thi boriwen lum maenam khong lae khap samut malaya" [The Study of the Integration of Local Cultures from Past to Present to Develop A Database on Ancient Civilization in the Mekong Basin and Malay Peninsula], Thailand Research Fund, 2010; Phinyaphan Phojanalawan, "Phongsawadan asiyan nai baep rian prawatisat mathiyom thai" [The chronicles of ASEAN in Thai Secondary Textbooks], Prachatai, 2012, retrieved 10 February 2013 from http://prachatai.com/journal/2012/08/42247; Siamintelligence, "Wathakam sang chat: kao hai kham kon asiyan 2015" [Nationalist discourse: Revise before ASEAN 2015], April 2012, retrieved January 2013 from http://www.siamintelligence.com/nation-building-discourse-before-asean-2015/

[182] Thanet Aphornsuwan, see note 180 above.

- Promote forest management involving the community living within and surrounding the forest for the sustainability of the forest and prosperity of the people;

- Encourage community participation in preserving cultural heritage through mass media.

A much larger role is envisioned for another kind of community. The ASCC endorses the formation and strengthening of a number of exchange programmes and activities that would result in expanded networking among professional, volunteer, disadvantaged, youth groups, etc. In addition to achieving specific objectives of each network, these "communities" would also breathe life into the ASEAN Community and play an important role in advancing its vision. Here are some examples from the ASCC list of actions:

- Continue the ASEAN Youth Leadership Development Programmme and similar programmes with the same objectives and encourage networking among ASEAN Youth Programme alumni to promote solidarity and mutual understanding;

- Exchange of cultural performers and scholars among Member States through education system to give greater access and understanding of the different cultures of ASEAN Member States;

- Facilitate the exchange and mobility of scientists and researchers from both public S&T institutions and private sector according to the respective laws, rules, regulation, and national policies;

- Establish a women entrepreneurship network;

- Build an ASEAN network of experts on entrepreneurship to, among others, conduct skills training for out-of-school youths, the elderly and persons with disabilities;

- Facilitate the rural volunteers movement and the exchange of young professional in rural development in ASEAN;

- Promote the ASEAN Youth Professionals Volunteer Corps (AYPVC), with a focus on supporting rural development and assisting communities to help themselves, for example, through education, first aid training and training in disaster preparedness.

- Encourage exchange of experts in the field of public health, medicine, physical and health education, to promote sharing of knowledge and experience;

- Promote the sharing of best practices in improving the access to primary health care by people at risk/vulnerable groups, with special attention to HIV and AIDS, malaria, dengue fever, tuberculosis, and emerging infectious diseases through regional workshops, seminars, and exchange visits among the ASEAN Member States;

- Establish an ASEAN network of social workers;

- Establish an ASEAN Consortium of Social Welfare Practitioners, Educators and Schools of Social Work;

- Develop an ASEAN-wide 'Youth for Sustainable Environment' Network;

- Establish an ASEAN sustainable/green/eco-school network;

- Encourage active participation of ASEAN Media Editors through regular Meetings to promote ASEAN awareness;

- Encourage youth exchanges such as the conduct of youth camps and similar activities to promote ASEAN arts and culture performances, ASEAN awareness and a sense of community among the public;

- Promote cultural tourism and the development of related industries by establishing working relations between and among the ASEAN culture and tourism officials and the private sector;

- Nurture talents and promote interactions among ASEAN scholars, artists, and, media practitioners to help preserve and promote ASEAN cultural diversity and heritage, while fostering a regional identity as well as cultivating people-to-people relations and ASEAN awareness.

The ASCC also acknowledges the role of non-governmental and civil society organizations and urges the Member States to:

- Engage ASEAN-affiliated non-governmental organisations in the ASEAN community building process;

- Convene the ASEAN Social Forum and the ASEAN Civil Society Conference on an annual basis to explore the best means for effective dialogue, consultations and cooperation between ASEAN and ASEAN civil society,

In addition to the collaboration frameworks and networking, the "People-to-People Connectivity" – one of the three modalities outlined by the Master Plan for ASEAN Connectivity should also aim to promote deeper intra-ASEAN social and cultural interaction and understanding.

One of the three main areas of connectivity is education and human resource development. Four areas of cooperation have been prioritized:

- promoting ASEAN awareness among its citizens, particularly the youth;

- strengthening the ASEAN identity through education;

- building ASEAN human resources in the field of education;

- strengthening the ASEAN University Network (AUN).

Of these four, the AUN provides the most visible evidence of collaboration. Established in 1995 to promote collaborative studies and research programs among ASEAN scholars and scientists, the AUN currently consists of 26 leading universities in ASEAN and is actively supporting the mobility of both staff and student in the region through two key programs including the AUN Actual Quality Assessment and the ASEAN Credit Transfer System. On the Thai side, one of the major barriers – the incompatible academic cycle – will be removed as all universities participating in the AUN and others with international programmes would complete their migration from the traditional to the international academic cycle by 2014.

In addition, after the ASEAN Committee for Culture and Information was established in 1978, several activities have been undertaken each year to nurture talent and promote greater interactions between scholars, writers, artists and media practitioners.

Lastly, the enhancement of people-to-people connectivity is expected to take place through tourism. Several ASEAN initiatives in the tourism sector have been undertaken over the years under the Roadmap for Integration of Tourism Sector 2004-2010, and the ASEAN Tourism Strategic Plan 2011-2015. This resulted in the greater inflow of tourists from both ASEAN and third countries into the region, which led to, among others, greater interactions between local peoples and the tourists.

More space for the community?

At one of this project's sessions to canvass civil society opinion, a senior academic noted that the space for ordinary people and civil society organizations to influence policy making in Southeast Asian countries is already limited, and that the ASEAN Community may shrink that space even further.

ASEAN has developed channels to interface with the outside world in its two established areas of defence and economy. In the social area, this interface is scarcely developed at all.

In the area of defence and security, the ASEAN Regional Forum was brought into existence in 1993, principally as an annual conference with invited participants from the military, diplomatic, and academic worlds. The ASEAN Institute of Strategic and International Studies, in fact a network of academic institutes on defence and security issues in the member countries, was founded in 1988 and now has eight members. Apart from various forms of exchange and cooperation, the heads of the participating institutes have an annual meeting with ASEAN officials on security affairs.

In the area of economics and business, the ASEAN Chamber of Commerce and Industry was founded in 1974 and the ASEAN Business Advisory Council in 2001. Both serve as forums for business interests to lobby for policies within ASEAN, and channels for ASEAN to seek business cooperation on various projects. The ASEAN Business Forum was first held in 2009 as an annual conference bringing together ASEAN officials, business leaders, and public officials. All these bodies, and several offshoots, provide opportunities for business leaders to network among themselves, and to lobby for policies within ASEAN.

ASEAN has also helped to foster networks among parallel organizations in the various member countries such as women's organizations, youth groups, cooperative umbrella organizations, and environmental groups. ASEAN allows regional organizations to register as "ASEAN-affiliated NGOs". The list of 56 now includes many networks of professional associations (e.g., valuers, accountants), business groups (mining groups, fisheries), medical specialists (psychiatrists, neurosurgeons), and sports (football, chess).[183]

"We must get our own people to have a sense of ownership of ASEAN."

Ong Keng Yong, secretary-general of ASEAN 2003-7, Bangkok, April 21, 2011

"I think regional community is not about facts and data alone, it is about the sense of community."

Marty Natalegawa, foreign minister of Indonesia, Bangkok, July 2013

Box 9.4 People-to-people connectivity in everyday life

In every part of Thailand, there are fertile grounds for cross-cultural understanding and appreciation. With appropriate guidance, face-to-face interactions with migrant labour, border traders, ASEAN students and ASEAN's business communities in Thailand offer opportunities to learn about cultural and social diversities. These day-to-day contacts can strengthen people-to-people connectivity and pave a way for a "Caring and Sharing" society only when they are perceived as opportunities. This reiterates the need for a new, broader and longer perspective about the "community" and "history" of Thailand, Southeast Asia, and the ASEAN.

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[183] J. F. Aviel, "The Growing role of NGOs in ASEAN", *Asia-Pacific Review* Vol. 6, No. 2, 1999, pp. 78-92; ASEAN University Network, *Civil Society in ASEAN*, material for Advanced Workshop on ASEAN Studies Teaching for Lecturers, April 24-27, 2012, Kuala Lumpur, Malaysia; A. Collins, "A People-oriented ASEAN: A Door Ajar or Closed for Civil Society Organization?", *Contemporary Southeast Asia,* Vol. 30, No. 2, 2008, pp. 313--31.

People-centred?

The ASCC Blueprint states that "The primary goal of the ASCC is to contribute to realising an ASEAN Community that is people-centred and socially responsible…" The interfaces between ASEAN and the business and defence communities in the region are now long established and well developed. Despite launching the ASCC with its "people-centred" tag, there seems to have been little attempt to develop a similar interface with the relevant civil society organizations.

"People-to-people connectivity" is one of three parts of the Master Plan on ASEAN Connectivity but is by far the shortest part, and has nothing about participation.

In Thailand, certain civil society organizations have taken special interest in ASEAN and the approach of the ASEAN Community. ASEAN Watch is primarily an information monitor, running a website providing news on ASEAN in Thai, and issuing reports and newsletters. People's Empowerment focuses on networking between grassroots NGOs in Thailand and other ASEAN countries.

The NGO community argues that it can contribute to the creation of an ASEAN Socio-Cultural Community in many ways.[184]

- First, it can help to monitor the impact of AEC and help alert authorities to any problems that arise with local economies and local communities.

- Second, it has resources of people, information, and expertise of working with local communities.

- Third, it can monitor the impact of the freer flow of labour and any problems that arise.

- Fourth, there are already linkages and networks among NGOs across the region that can be used for gathering information, sharing expertise, and building capacity

Learnings and recommendations

Communities come into being when their members can imagine that they share something in common.

- The current presentation of ASEAN emphasizes the diversity of countries, peoples, and cultures. Perhaps unwittingly, this presentation makes it difficult to imagine that ASEAN has something in common. An alternative is to look at the region with the internal borders erased, to take inspiration from the borderless part, and to emphasise what is shared – a place in the world, a history, a common passage to modernity.

- Nationalist history is one of the biggest obstacles to this vision. The process of revising and replacing this history has begun, but it will take a long time for the results to filter through to popular culture.

- A community must have meeting places, especially "park benches", places where information and expertise can be shared. Developing centres of excellence which attract seekers from around the region will play an important part in binding the region together.

- A community has to be responsive to its members. ASEAN has adopted the phrase, "ASEAN citizen." The term "citizen" has a long past meaning someone with rights, especially the right to participate in the political life of the community. Thailand should press for ASEAN to be more open to popular participation, perhaps initially through civil society organizations engaged with ASEAN's new social and political agendas.

Box 9.4 Developing the soft side of ASEAN

"In the long run, it [ASEAN] ought to address some basic but crucial objectives, such as inculcating the feeling of familiarity and commonality to replace former apprehensions and misunderstandings between neighbouring nations. Through history books, teaching and exchange programmes, a communicative infrastructure that will allow ASEAN citizens to travel freely in and across the region, and such like, ASEAN states can build the sense of trust and homeliness among ASEAN communities so that no ASEAN citizen should feel alien or foreign in another ASEAN country.

It is this dimension of soft diplomacy that may, in the very long run, provide ASEAN with the social capital and symbolic "glue" that brings the region together, so that the various nations of ASEAN come to realise that the fate of their neighbours will invariably impact on them as well. If building an ASEAN Community on a people-to-people basis creates more solidarity, empathy and respect among ASEAN nations, then so many other realpolitik concerns such as security and defence will be addressed as well."

Souece: Farish Noor, "Ready for ASEAN Community by 2015?", August 18, 2012, at https://dinmerican.wordpress.com/2012/08/18/ready-for-asean-community-by-2015/

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[184] ASEAN University Network, *Civil Society in ASEAN*.

CONCLUSION: KEY RECOMMENDATIONS 10

What is the ASEAN Community? The answer is not straightforward and crucially affects this report's conclusions.

ASEAN is a grouping of countries built around a set of rules for talking with one another without imperilling the grouping. The list of subjects for talking about initially included traditional security but gradually expanded to multiple security issues and the reduction of internal trade barriers. The ASEAN Community is an expansion of this list to include social, environmental, and political issues including all the main priorities of human development.

The Community that comes into being at the end of 2015 will be work-in-progress and, as one astute observer of ASEAN noted, it will always be so.[185] As has been seen in the case of non-traditional security issues in recent years, the process by which the organization takes on new issues would best be described as learning-by-doing. It does not always succeed. It does not always get it right first time. But every now and then, it makes a step forward.[186]

How this work-in-progress on the expanded agenda will turn out, nobody really knows. That's partly because the result depends on hundreds of discussions and agreements. That's partly too because the trend to regionalism involves not only the ASEAN Community but several other institutions and informal processes.

The task of advancing human development in Thailand through the ASEAN Community is thus not only about preparing Thailand to grasp the opportunities and counter the threats of becoming part of the Community, but also about contributing to the work-in-progress in ways which will advance human development.

As noted at the beginning of this report, raising Thailand's prosperity by maximising benefits from the economic aspects of the ASEAN Community will promote human development, but there are many studies of this task and this report has focused elsewhere, taking a broader view of all three pillars of the ASEAN Community. Given the broad character of this survey, the recommendations presented here are mainly intended to flag areas that deserve attention and planning.

Advancing human development through the ASEAN Community

The ultimate goal of the ASEAN Community is peace, stability and prosperity, all of which will provide a fertile environment for human development. The ASEAN Community should provide new opportunities for the people to further their development in a creative manner.

First and foremost, Thai agencies and ASEAN should focus on explaining to the public what the ASEAN Community is and what it is not so that people may understand the real potential and prospect of the ASEAN Community and be able to make informed decisions in this new context.

Enhancing the capacity of people is the focus of human development. Capacity development should go beyond preparing Thai people for new opportunities and threats that come with this new context. It should also foster an outward-looking perspective and encourage Thai people to participate in shaping this very context.

This report focuses on seven areas that are closely related to human development. In each area, there are potential threats and opportunities. The difference between success and failure will lie in effective and efficient management at local, national and regional levels.

Finally, the ASEAN Community is a long-term project. The flurry of "preparing for 2015" gives an impression that the task ends there. In truth, reaping the human development gains from the ASEAN Community will need stamina.

Immediate issues

Prioritizing English and putting equity into the education agenda

The emphasis on education in the preparation for the ASEAN Community has resulted in new analyses of the weaknesses of the Thai education system, a new phase of planning, and a renewed commitment of resources. This is all good.

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[185] Professor Donald K. Emmerson of Stanford University at www.youtube.com/watch?v=ji70GLS8hMc

[186] The pragmatic, experimental, and evolving character of the ASEAN Community is succinctly explained by Ong Keng Yong, former secretary-general of ASEAN and a key architect of the ASEAN Community, at www.youtube.com/watch?v=mTiako866ac

In the broader horizons of the ASEAN Community, English language skills will be critically important. Thailand has put great emphasis on upgrading education in English language through several measures including improving the quality of both teachers and the curriculum. Accelerating improvement of the vocational stream is another step in the right direction. Aspiring to become an ASEAN education hub should complement this agenda and not take the focus away from the first two priorities. But the task will need stamina, especially when the gains from the ASEAN Community take longer than expected to materialise.

The problem of inequality in access to education is still present in Thailand. Children born to families in the lower income levels face different quality of education and have much poorer chances of ascending the educational ladder. This problem needs to be urgently solved as it is significant and contributes to Thailand's low average performance in international comparison. Through this inequity, Thailand is denying a large proportion of youth a chance to realize their own potential and in so doing is denying the country the benefits of much potential talent. Confronting this issue will require commitment and research.

Confronting multiple challenges for healthcare

The staffing of the public health system faces multiple pressures from the expansion of universal health care, health issues surrounding migrant labour, the pressures of an ageing society, competition from private hospitals, competition from medical and retirement tourism, and the possible changes under the AEC. These challenges are difficult to meet because they are many, varied, and often difficult to project. Confronting this issue in a timely fashion will be critical to sustaining the delivery of healthcare for the mass of the population.

Migrant labour: status, education, health

The presence of a large cohort of migrant labourers from neighbouring countries may not be part of the plans for the ASEAN Community but is very much part of regionalism and poses multiple issues related to human development. This represents a challenge to Thailand to develop a long-term policy and an effective management system through national, bilateral and regional mechanisms. Three tasks are crucial.

First, removing the reasons behind human trafficking and human rights abuses of migrants by intensifying efforts to regularize the status of all migrants and by ensuring abuses are punished.

Second, removing the barriers to the education of migrant children so that they have the opportunities to develop their own potential and the choices to make their own living. Otherwise they are likely to be trapped in poverty and become inviting targets for exploitation.

Third, ensuring good healthcare for migrants without prejudicing the delivery to the host population. An ASEAN healthcare and welfare fund is worth exploring in the long run.

Targeted planning for the development of outer provinces

The gradual completion of the "corridor" routes across Southeast Asia has begun to stimulate economies in the border zones. However, it is necessary to have targeted regional planning to maximize the benefits from these routes in developing economies in border cities and adjacent areas. Most importantly, local people should be informed about opportunities and threats and be invited to participate in policy making on major projects in their areas.

Longer-term issues

The expanded agenda of ASEAN in the ASCC and APSC Blueprints will require time to build consensus on individual projects and to adjust mechanisms for new contexts. These Blueprints are important for human development because they contain a comprehensive agenda of human development concerns. As one of the heavyweights of ASEAN, Thailand's contribution will be important for translating this agenda into action.

Environment: make haze an example of ASEAN environmental collaboration

Environmental issues are of special importance in this context since they often cross borders and need transnational cooperation. The project to combat the seasonal haze is a test case for managing such issues within the ASEAN Community framework, and probably a forerunner for future issues related to climate change.

As in other pioneer ventures, the ASEAN way is learning-by-doing which often requires time and patience. Thailand should persist in pursuing a cooperative solution within and without the ASEAN framework in order to help build the experience and mechanisms for dealing with many similar issues on ASEAN's expanded agenda.

Human rights: too important to surrender

The case of human rights is similar. This issue pioneers ASEAN's expanded involvement in political issues of importance to human development (anti-corruption, rule of law, governance, participation). Thailand's government, human rights body, and human rights advocacy community should persist with efforts to develop a consensus for strengthening and expanding the mandate of the existing mechanism to both promoting and protecting human rights in the region.

Nurturing a community: connecting people

The ASEAN goals of security, prosperity, and human development will become much easier to achieve when a sense of fellow-feeling replaces the sense of difference in the past. Travel and personal contact will be crucial to promote the understanding of the social and cultural context of other ASEAN countries, leading to the acknowledgement of shared values and acceptance of diversities.

In the presentation of ASEAN in schools, more can be done to nurture a sense of a shared history and a shared place in the world. Barriers in the mind can be lowered by sweeping away the nationalist histories composed in the last century. New curriculum and textbooks on the ASEAN and the region are needed for all education levels. Key elements of the "new history" should also be delivered through public media.

Part of tying ASEAN closer together as a community will be the development of centres of excellence which serve the whole region by fostering research and academic exchange especially on topics that have special relevance to the region such as architecture or medicine for tropical and subtropical regions, climate change in the monsoon belt, forestry, food science, and many others. Thailand has an opportunity to promote its position within ASEAN by developing such centres of excellence.

The governments of the ASEAN member states have been the engine of regional collaboration for 46 years and have achieved much more than anyone expected at the time of the grouping's foundation. The challenge of realising the vision of the ASEAN Community from 2015 onwards lies not only in collaboration and partnership among the governments, but also everyday people-to-people exchanges.

BACKGROUND PAPERS:

Karndee Leopairote, "New Generation of Thais as ASEAN Citizen", 2013.

Karndee Leopairote, "New Challenges in Human Development: Leveraging the ASEAN Human Resources to Address the National Gaps", 2013.

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Phakpoom Tippakoon and Suthikorn Kingkaew, "Understanding and Living in the Multi-cultural ASEAN Community", 2013. (in Thai)

Thitinan Pongsudhirak, "Asean's Politics and Security: A Neglected Pillar", 2013.

HUMAN ACHIEVEMENT INDEX

1. Human Development and Human Achievement Index

The Human Achievement Index (HAI) is a composite index to compare human development at the provincial level. It was introduced by UNDP Thailand in 2003, and compiled again in 2007 and 2009. This report presents the fourth generation of HAI.

HAI Structure and Data

HAI is composed of 8 indices, based on 40 indicators.

It follows a human's lifecycle, starting with the first essential thing that everyone must have on the first day of life – health – followed by the next important step for every child – education. After schooling, one gets a job to secure enough income, to have a decent housing and living environment, to enjoy a family and community life, to establish contacts and communication with others, and, last but not least, to participate as a member of society.

HAI Methodology

HAI applies the methodology used in the calculation of the Human Development Index (HDI). For each indicator, the following calculation is used for each province:

$$\frac{Actual\ value - Minimum\ value}{Maximum\ value - Minimum\ value}$$

The minimum and maximum values for each indicator are set slightly wider than the observed values to serve as "goal posts" for that indicator in the next ten years. The goal posts set for each indicator are shown in Table 1.1.

For some indicators such as unemployment or occupational injuries, the data reflect "negation in human development." Hence, HAI uses the inverse value (1 – calculated value) to show the degree of progress.

HAI does not divide the provinces into predetermined groups. It allows the 76 provinces to fall into different positions, hence there can be as many as 76 positions on each indicator. The variation at the high and low ends are captured and treated in the same manner. As a consequence, a very good performance on one indicator can offset a very poor performance on another.

Weighting is not applied at any level of the calculation. The Health Index is an average of all 7 indicators. Likewise, all 8 indices carry equal weight in calculating the composite HAI. It should however be noted that if an index consists of several indicators, each indicator would carry less weight than that of another index that has fewer indicators. For example, each of the 7 indicators of the Health Index carries less weight in the HAI calculation than each of the 4 indicators of the Education Index.

HAI 2014 compares human development among 76 provinces. Bungkan, a new province, is excluded as the 2011 data used for the calculation are not available.

Table 1.1 HAI Structure, minimum and maximum values, and data

HAI Indices	Components	Indicators	Min. value	Max. value	Data/Year
1. Health	1. Quality of life	1. Underweight births (%)	6	18	Bureau of Health Policy and Strategy, 2011
		2. Population with physical illness (%)	6	47	Health and Welfare Survey, NSO, 2011
		3. Population with disability (%)	1	5	Office for Empowerment of Persons with Disability, MSDHS, 2012
		4. Mental health score (%)	45	100	Department of Mental Health and NSO, 2012
	2. Health promotion	5. Population with unhealthy behaviour (%)	14	49	Smoking and Alcohol Consumption Survey, NSO, 2011
		6. Population that exercise regularly (%)	8	52	Survey of Exercise Behaviour, NSO, 2011
	3. Health Infrastructure	7. Population per physician (persons)	683	12,242	Bureau of Health Policy and Strategy, 2010
2. Education	4. Stock of education	8. Mean years of schooling for population aged 15 and over (years)	5	14	Office of the Education Council, Ministry of Education, 2011
	5. Flow of education	9. Upper secondary and vocational enrolment (%)	33	100	ICT Center, Ministry of Education, 2011
	6. Quality of education	10. Average IQ of students aged 6-15	66	136	Department of Mental Health, Ministry of Public Health, 2011
		11. Average score of upper secondary students (%)	21	51	O-Net test score, National Institute of Educational Testing Service (Public Organization), 2011
3. Employment	8. Employment	12. Unemployment (%)	0	3	Labour Force Survey, NSO, 2011
		13. Underemployment (%)	0	12	Labour Force Survey, NSO, 2011
	9. Labour protection	14. Employees covered by social security (%)	3	100	Social Security Office, 2011
		15. Occupational injuries (per 1,000 members of the Workmen's Compensation Fund)	2	44	Social Security Office, 2011
4. Income	10. Income level	16. Household income (Baht/month)	6,768	61,203	Household Socio-economic Survey, NSO, 2011
	11. Poverty	17. Poverty incidence (%)	1	75	NESDB, 2011
	12. Debt	18. Households with consumption debts (%)	7	100	Household Socio-economic Survey, NSO, 2011
	13. Disparity	19. GINI	20	72	Poverty Map, NSO, 2009
5. Housing and living environment	14. Housing security	20. Households living in own house and on own land (%)	19	100	Household Socio-economic Survey, NSO, 2011
	15. Basic appliances	21. Households with a refrigerator (%)	47	100	Household Socio-economic Survey, NSO, 2011
	16. Living environment	22. Carbon footprint (ton /CO2/person)	0	19	Healthy Public Policy Foundation, 2011
		23. Population affected by drought (%)	0	100	Department of Disaster Prevention and Mitigation, 2011
		24. Population affected by flood (%)	0	100	Department of Disaster Prevention and Mitigation, 2011

HAI Indices	Components	Indicators	Min. value	Max. value	Data/Year
6. Family and community life	17. Family life	25. Children in distress (per 100,000 population)	0	300	NRC 2C, Community Development Department, 2011
		26. Working children aged 15-17 years old (%)	1	51	Labour Force Survey, NSO, 2011
		27. Single-headed households (%)	10	41	Household Socio-economic survey, NSO, 2011
		28. Elderly living alone (%)	3	17	Survey of Elderly Population, NSO, 2011
	18. Community safety	29. Reported crimes against life, body, property and sexual crimes (per 100,000 population)	29	335	Royal Thai Police, 2012
		30. Drug-related arrests (per 100,000 population)	48	2,182	Royal Thai Police, 2012
7. Transport and communication	19. Transport	31. Villages with all-season main road (%)	27	100	NRC 2C, Community Development Department, 2011
		32. Registered vehicles (per 1,000 population)	60	1,622	Department of Land Transport, 2012
		33. Land traffic accidents (per 100,000 population)	11	760	Department of Disaster Prevention and Management, referring to the Royal Thai Police, 2011
	19. Communication	34. Households with access to TV (%)	59	100	Household Socio-economic Survey, NSO, 2011
		35. Population with mobile phone (%)	28	100	Household ICT Survey, NSO, 2011
		36. Population with internet access (%)	12	55	Household ICT Survey, NSO, 2011
8. Participation	20. Political participation	37. Voter turnout (%)	51	100	National Election Commission, 2011
	21. Civil society participation	38. Community groups (per 100,000 population)	39	871	Community Organizations Development Institute, 2012
		39. Households participating in local groups (%)	64	100	Basic Minimum Needs, Community Development Department, 2011
		40. Households participating in community activities	71	100	Basic Minimum Needs, Community Development Department, 2011

Box 1.1 HAI 2014

The HAI was computed by UNDP Thailand in 2003, 2007, and 2009. HAI 2014 is the fourth in the series. Each HAI incorporates minor changes due to unavailability of some data or availability of new and better data.   But all HAIs share the same concept, structure, and methodology.

Comparing HAI 2014 with HAI 2009

Health Index   For people with disability, HAI 2014 cannot use data from the Survey of People with Disability 2012 which was still in production at the time of the report. The report uses data from the disability registration of the Office for Empowerment of Persons with Disability, MSDHS. The registration now has a good coverage of people with disability but does not include population with impairment.

In addition, mental health scores based on survey data on status of mental health of the Thai people replace the number of mental patients seeking treatment. The NSO and the Department of Mental Health have collaborated to conduct this survey every year since

	2008. The survey covers the entire population, and samples are systematically distributed. This survey data should serve the purpose of provincial comparison better than the patient registration data that biases against provinces with better mental facilities that also service out-of-province patients.
Education Index	Data from the Department of Mental Health's survey on the intellectual quotient (IQ) of Thai students aged 6-15 years old in fiscal year 2011 are included for the first time. The number of upper secondary students per classroom is dropped. This change is meant to underscore the importance of education quality which has become a national problem.
Employment Index	No changes.
Income Index	Households with debt are replaced by households with consumption debt as other kinds of debt such as land and house mortgage or business debt could be considered as savings or investment, while consumption debt is a sign of inadequate income.
Housing and Living Environment Index	Carbon footprint (tons of CO_2/per capita) which has direct implication on climate change replaces the use of gas or electric stove that represents household appliances. This change also recognizes that electric or gas stoves may not be appropriate for some communities that have convenient and sustainable access to wood and charcoal with minimal risk of indoor pollution.
Family and Community Index	HAI 2014 switches from violent crimes (classified by the Royal Thai Police to include murder, burglary, robbery, kidnapping, arson) to crimes against life, body and property and sexual crimes (including murder, manslaughter, involuntary manslaughter, attempted murder, assault, and rape) and crimes against property (including theft, snatching, blackmail, extortion, robbery, gang robbery, receiving stolen property, vandalism) which have far greater impact on people's livelihood.
Transport and Communication Index	No changes.
Participation Index	No changes.

The minimum and maximum goalposts are set to provide a 25% margin based on the minimum and maximum actual values of the current data set. An exception is the secondary enrolment rate. Three provinces scored higher than 100% with no clear explanation. In this case, the maximum goal post is set at 100%.

Note: Due to changes of indicators, data sources, and maximum and minimum values of the goalposts, HAI values are not comparable over the years.

2. National and Regional Human Achievement Index

Comparing the eight component indices that make up the composite HAI shows that human development in Thailand is more advanced in some areas than in others (Figure 2.1). Housing and living environment is the most advanced aspect of human development, followed by family and community life, employment, participation, health, income, transport and communication. Education is the least developed aspect.

Figure 2.1 Thailand HAI by component
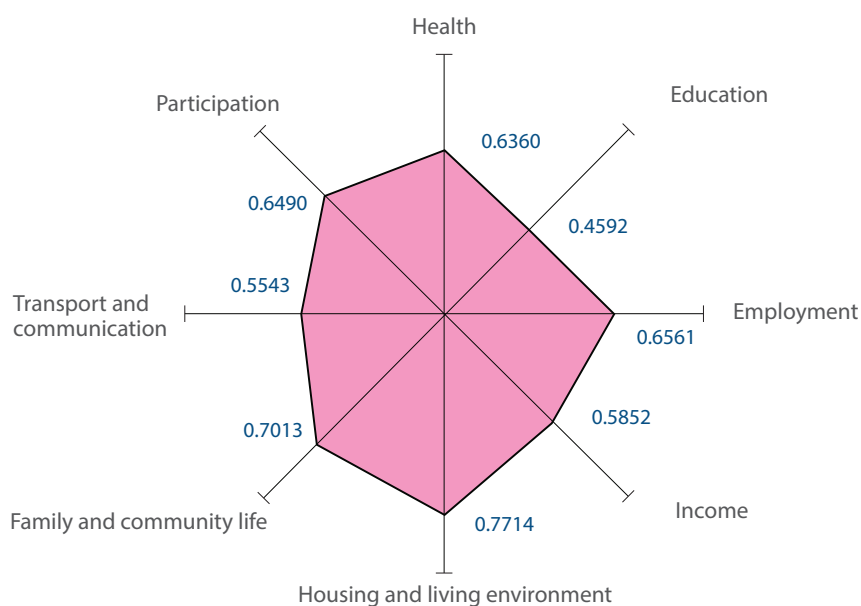
Figure 2.2 Regional HAI by Component

Central Region

Health 0.6446
Education 0.4785
Employment 0.6377
Income 0.6070
Housing and living environment 0.7364
Family and community life 0.6658
Transport and communication 0.5995
Participation 0.6460

Northeastern Region

Health 0.5945
Education 0.4169
Employment 0.6377
Income 0.5005
Housing and living environment 0.7743
Family and community life 0.7580
Transport and communication 0.5055
Participation 0.6545

Northern Region

Health 0.5881
Education 0.4637
Employment 0.6350
Income 0.5539
Housing and living environment 0.8170
Family and community life 0.7110
Transport and communication 0.5462
Participation 0.6810

Southern Region

Health 0.6419
Education 0.2581
Employment 0.5865
Income 0.5930
Housing and living environment 0.8922
Family and community life 0.7035
Transport and communication 0.4851
Participation 0.6368

3. Provincial Human Achievement Index

The objective of HAI is to compare human development at the provincial level to highlight areas that are more advanced and those that lag behind.

Bangkok took over the number one spot from Phuket that held the post in 2007 and 2009. They were followed by Nonthaburi, Trang, Phayao, Nakhon Nayok, Nakhon Pathom, Songkhla, Phra Nakhon Si Ayutthaya, and Samut Songkhram.

Phayao made the most remarkable progress by moving from 48th on HAI 2009 to 5th on HAI 2013 by showing improved ranking on all 8 HAI indices. Change of indicators is partly accountable for such meteoric rise. This is the case of *education* (replacement of students per classroom with students' IQ), *income* (replacement of households with debt with households with consumption debt), and *housing and living environment* (replacement of households cooking with electric or gas stove with carbon footprint).

Real improvement is observed for *employment* (employment, underemployment and workers with social security), *family and community life* (elderly living alone, children in distress, working children), and *participation* (community organizations).

Mae Hong Son remained at the bottom. Of the bottom ten, 3 were in the North (Mae Hong Son, Tak, Phetchabun), 4 in the Northeast (Si Sa Ket, Nakhon Phanom, Surin, Buri Ram), 2 in the Central Region (Sa Kaeo, Kanchanaburi), and 1 in the South (Pattani).

Figure 3.1 HAI by Province
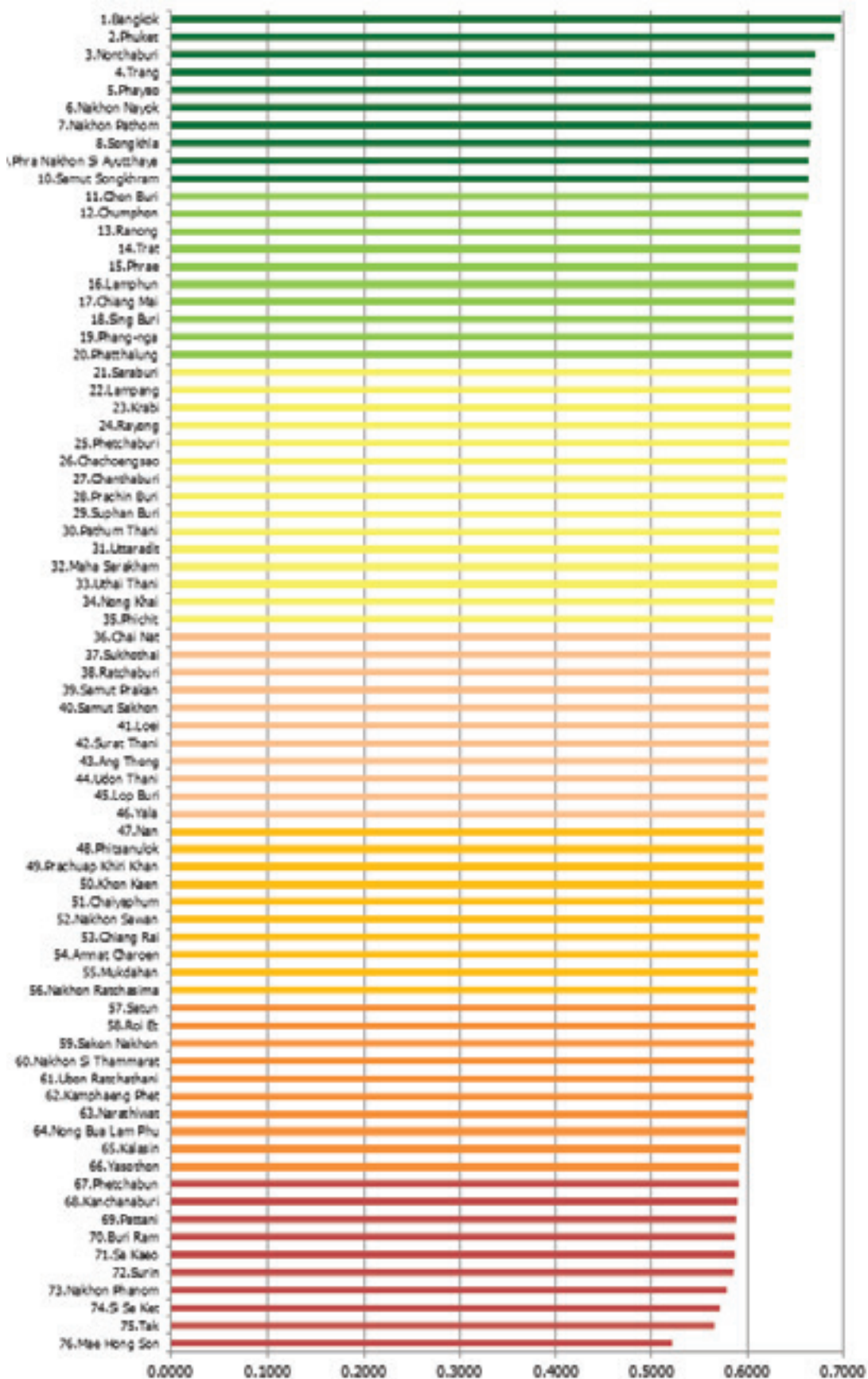
Map 0 HAI Provincial Ranking

Human Achievemant Index (no. of provinces)

- 🟩 0.6516 to 0.6976 (14)
- 🟢 0.6342 to 0.6516 (15)
- 🟨 0.6209 to 0.6342 (14)
- 🟧 0.6070 to 0.6209 (17)
- 🟥 0.5214 to 0.6070 (16)
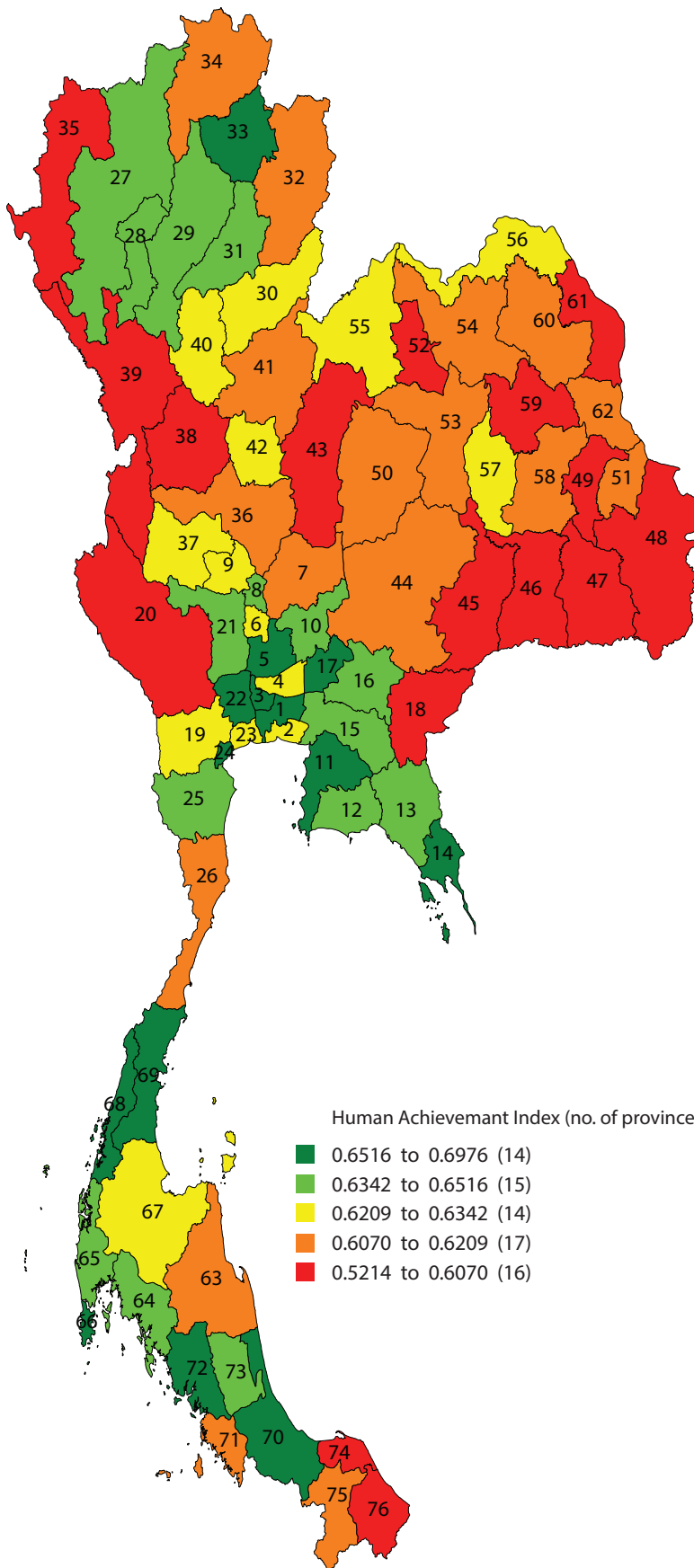
Rank		Code
1	Bangkok	1
2	Phuket	66
3	Nonthaburi	3
4	Trang	72
5	Phayao	33
6	Nakhon Nayok	17
7	Nakhon Pathom	22
8	Songkhla	70
9	Phra Nakhon Si Ayutthaya	5
10	Samut Songkhram	24
11	Chon Buri	11
12	Chumphon	69
13	Ranong	68
14	Trat	14
15	Phrae	31
16	Lamphun	28
17	Chiang Mai	27
18	Sing Buri	8
19	Phang-nga	65
20	Phatthalung	73
21	Saraburi	10
22	Lampang	29
23	Krabi	64
24	Rayong	12
25	Phetchaburi	25
26	Chachoengsao	15
27	Chanthaburi	13
28	Prachin Buri	16
29	Suphan Buri	21
30	Pathum Thani	4
31	Uttaradit	30
32	Maha Sarakham	57
33	Uthai Thani	37
34	Nong Khai	56
35	Phichit	42
36	Chai Nat	9
37	Sukhothai	40
38	Ratchaburi	19
39	Samut Prakan	2
40	Samut Sakhon	23
41	Loei	55
42	Surat Thani	67
43	Ang Thong	6
44	Udon Thani	54
45	Lop Buri	7
46	Yala	75
47	Nan	32
48	Phitsanulok	41
49	Prachuap Khiri Khan	26
50	Khon Kaen	53
51	Chaiyaphum	50
52	Nakhon Sawan	36
53	Chiang Rai	34
54	Amnat Charoen	51
55	Mukdahan	62
56	Nakhon Ratchasima	44
57	Satun	71
58	Roi Et	58
59	Sakon Nakhon	60
60	Nakhon Si Thammarat	63
61	Ubon Ratchathani	48
62	Kamphaeng Phet	38
63	Narathiwat	76
64	Nong Bua Lam Phu	52
65	Kalasin	59
66	Yasothon	49
67	Phetchabun	43
68	Kanchanaburi	20
69	Pattani	74
70	Buri Ram	45
71	Sa Kaeo	18
72	Surin	46
73	Nakhon Phanom	61
74	Si Sa Ket	47
75	Tak	39
76	Mae Hong Son	35

Table 3.1 HAI by Index and Province

Rank	Health	Education	Employment	Income	Housing and Living Environment	Family and Community Life	Transport and Communication	Participation	HAI	HAI value
1	Bangkok	Bangkok	Phuket	Bangkok	Suphan Buri	Maha Sarakham	Phuket	Chai Nat	Bangkok	0.6974
2	Songkhla	Nakhon Nayok	Pathum Thani	Nonthaburi	Chaiyaphum	Buri Ram	Bangkok	Lamphun	Phuket	0.6909
3	Phang-nga	Chon Buri	Rayong	Phuket	Yala	Surin	Pathum Thani	Amnat Charoen	Nonthaburi	0.6709
4	Samut Sakhon	Nonthaburi	Chon Buri	Chachoeng sao	Uttaradit	Udon Thani	Chon Buri	Sing Buri	Trang	0.6659
5	Chumphon	Chiang Mai	Bangkok	Samut Sakhon	Ranong	Nonthaburi	Nonthaburi	Nan	Phayao	0.6659
6	Yala	Nakhon Pathom	Samut Sakhon	Samut Prakan	Trang	Phetchabun	Rayong	Trat	Nakhon Nayok	0.6659
7	Krabi	Lampang	Phra Nakhon Si Ayutthaya	Chumphon	Narathiwat	Loei	Trang	Mukdahan	Nakhon Pathom	0.6658
8	Trang	Ranong	Lamphun	Chon Buri	Nong Bua Lam Phu	Phrae	Sing Buri	Uthai Thani	Songkhla	0.6647
9	Rayong	Phuket	Prachin Buri	Nakhon Pathom	Kamphaeng Phet	Roi Et	Nakhon Pathom	Nakhon Nayok	Phra Nakhon Si Ayutthaya	0.6639
10	Satun	Phrae	Mae Hong Son	Surat Thani	Pattani	Nong Bua Lam Phu	Songkhla	Maha Sarakham	Samut Songkhram	0.6636
11	Chon Buri	Lamphun	Trat	Phang-nga	Phitsanulok	Uttaradit	Phra Nakhon Si Ayutthaya	Phayao	Chon Buri	0.6634
12	Phatthalung	Sing Buri	Phayao	Yala	Krabi	Nan	Ang Thong	Sukhothai	Chumphon	0.6571
13	Saraburi	Lop Buri	Samut Songkhram	Phichit	Phatthalung	Si Sa Ket	Saraburi	Chumphon	Ranong	0.6556
14	Phuket	Phitsanulok	Chaiyaphum	Trat	Chai Nat	Kalasin	Phrae	Phrae	Trat	0.6548
15	Nonthaburi	Phetchaburi	Loei	Ranong	Phayao	Samut Prakan	Samut Sakhon	Samut Songkhram	Phrae	0.6516
16	Nakhon Sawan	Prachin Buri	Sakon Nakhon	Trang	Nakhon Nayok	Phayao	Lampang	Lampang	Lamphun	0.6497
17	Chanthaburi	Phra Nakhon Si Ayutthaya	Prachuap Khiri Khan	Krabi	Phang-nga	Yasothon	Samut Songkhram	Chiang Mai	Chiang Mai	0.6493
18	Prachuap Khiri Khan	Nan	Nakhon Pathom	Phra Nakhon Si Ayutthaya	Songkhla	Prachin Buri	Nakhon Nayok	Phang-nga	Sing Buri	0.6486
19	Nakhon Pathom	Chachoeng-sao	Nonthaburi	Chantha-buri	Sakon Nakhon	Uthai Thani	Phetchaburi	Chantha-buri	Phang-nga	0.6479
20	Trat	Samut Songkhram	Chachoeng-sao	Songkhla	Nakhon Si Thammarat	Sakon Nakhon	Samut Prakan	Sa Kaeo	Phatthalung	0.6471
21	Maha Sarakham	Trang	Krabi	Sing Buri	Ubon Ratchathani	Nong Khai	Phang-nga	Prachin Buri	Saraburi	0.6453
22	Ratchaburi	Ratchaburi	Saraburi	Rayong	Samut Songkhram	Samut Songkhram	Phayao	Nong Khai	Lampang	0.6450
23	Pattani	Khon Kaen	Mukdahan	Chiang Mai	Ratchaburi	Amnat Charoen	Trat	Ang Thong	Krabi	0.6449
24	Phetchaburi	Ang Thong	Kalasin	Phayao	Lampang	Samut Sakhon	Ratchaburi	Ranong	Rayong	0.6448
25	Narathiwat	Phatthalung	Khon Kaen	Saraburi	Uthai Thani	Phichit	Chanthaburi	Phetchaburi	Phetchaburi	0.6434
26	Khon Kaen	Chumphon	Surat Thani	Suphan Buri	Phichit	Nakhon Ratchasima	Phitsanulok	Ratchaburi	Chachoeng-sao	0.6409
27	Ranong	Prachuap Khiri Khan	Chumphon	Phetchaburi	Sukhothai	Sa Kaeo	Chachoeng-sao	Saraburi	Chanthaburi	0.6408
28	Chachoeng-sao	Phayao	Chanthaburi	Pathum Thani	Phetchabun	Satun	Udon Thani	Loei	Prachin Buri	0.6376
29	Lop Buri	Songkhla	Samut Prakan	Nakhon Nayok	Phrae	Narathiwat	Chiang Mai	Phattha-lung	Suphan Buri	0.6349

Rank	Health	Education	Employment	Income	Housing and Living Environment	Family and Community Life	Transport and Communication	Participation	HAI	HAI value
30	Nakhon Si Thammarat	Pathum Thani	Kamphaeng Phet	Phatthalung	Lop Buri	Bangkok	Uttaradit	Chaiyaphum	Pathum Thani	0.6342
31	Suphan Buri	Uttaradit	Yasothon	Samut Songkhram	Chiang Mai	Nakhon Phanom	Lamphun	Nong Bua Lam Phu	Uttaradit	0.6324
32	Phra Nakhon Si Ayutthaya	Saraburi	Suphan Buri	Narathiwat	Ang Thong	Songkhla	Phatthalung	Lop Buri	Maha Sarakham	0.6320
33	Nan	Samut Prakan	Ranong	Kamphaeng Phet	Kanchana-buri	Ubon Ratchathani	Chiang Rai	Pattani	Uthai Thani	0.6308
34	Surat Thani	Maha Sarakham	Buri Ram	Loei	Chumphon	Sukhothai	Satun	Phra Nakhon Si Ayutthaya	Nong Khai	0.6285
35	Samut Prakan	Nakhon Si Thammarat	Phrae	Nakhon Sawan	Chanthaburi	Trang	Prachuap Khiri Khan	Yasothon	Phichit	0.6259
36	Phichit	Chiang Rai	Phattha-lung	Sukho-thai	Chiang Rai	Trat	Krabi	Songkhla	Chai Nat	0.6241
37	Sing Buri	Phang-nga	Uthai Thani	Chai Nat	Nakhon Sawan	Nakhon Sawan	Surat Thani	Kamphaeng Phet	Sukhothai	0.6239
38	Amnat Charoen	Rayong	Chiang Mai	Udon Thani	Lamphun	Khon Kaen	Pattani	Kalasin	Ratchaburi	0.6229
39	Ang Thong	Trat	Tak	Uttaradit	Nong Khai	Mae Hong Son	Lop Buri	Chachoeng-sao	Samut Prakan	0.6227
40	Prachin Buri	Chanthaburi	Nakhon Nayok	Nong Khai	Nakhon Pathom	Kamphaeng Phet	Chai Nat	Chiang Rai	Samut Sakhon	0.6225
41	Ubon Ratchathani	Nong Khai	Nong Khai	Nakhon Si Thammarat	Surin	Tak	Sukhothai	Krabi	Loei	0.6224
42	Mukdahan	Udon Thani	Songkhla	Nakhon Ratchasima	Phetchaburi	Phra Nakhon Si Ayutthaya	Yala	Phichit	Surat Thani	0.6222
43	Chiang Mai	Surat Thani	Amnat Charoen	Chiang Rai	Roi Et	Krabi	Khon Kaen	Si Sa Ket	Ang Thong	0.6215
44	Pathum Thani	Nakhon Ratchasima	Maha Sarakham	Satun	Surat Thani	Chiang Rai	Prachin Buri	Trang	Udon Thani	0.6209
45	Nong Khai	Sukhothai	Phetchaburi	Lamphun	Sa Kaeo	Nakhon Si Thammarat	Suphan Buri	Kanchana-buri	Lop Buri	0.6206
46	Lampang	Si Sa Ket	Lop Buri	Prachin Buri	Nakhon Ratchasima	Sing Buri	Loei	Roi Et	Yala	0.6182
47	Uthai Thani	Yasothon	Kanchana-buri	Ang Thong	Phra Nakhon Si Ayutthaya	Chaiya-phum	Chumphon	Suphan Buri	Nan	0.6173
48	Nakhon Nayok	Nakhon Sawan	Nakhon Ratchasima	Kanchana-burii	Satun	Pattani	Phichit	Buri Ram	Phitsanulok	0.6171
49	Samut Songkhram	Suphan Buri	Lampang	Lampang	Saraburi	Phetchaburi	Nakhon Sawan	Khon Kaen	Prachuap Khiri Khan	0.6170
50	Nakhon Ratchasima	Chai Nat	Phitsanulok	Prachuap Khiri Khan	Buri Ram	Nakhon Nayok	Nan	Udon Thani	Khon Kaen	0.6169
51	Udon Thani	Roi Et	Ubon Ratchathani	Phrae	Sing Buri	Phuket	Nakhon Phanom	Nakhon Pathom	Chaiyaphum	0.6162
52	Chiang Rai	Mukdahan	Roi Et	Mukdahan	Amnat Charoen	Phatthalung	Ranong	Ubon Ratchathani	Nakhon Sawan	0.6160
53	Phayao	Amnat Charoen	Trang	Nan	Prachuap Khiri Khan	Pathum Thani	Nong Khai	Narathiwat	Chiang Rai	0.6130
54	Kalasin	Nakhon Phanom	Udon Thani	Chaiya-phum	Nakhon Phanom	Lampang	Nakhon Ratchasima	Uttaradit	Amnat Charoen	0.6107
55	Roi Et	Surin	Sukhothai	Roi Et	Si Sa Ket	Rayong	Kamphaeng Phet	Phetchabun	Mukdahan	0.6104

Rank	Health	Education	Employment	Income	Housing and Living Environment	Family and Community Life	Transport and Communication	Participation	HAI	HAI value
56	Nong Bua Lam Phu	Sakon Nakhon	Uttaradit	Khon Kaen	Tak	Chiang Mai	Nakhon Si Thammarat	Surin	Nakhon Ratchasima	0.6097
57	Nakhon Phanom	Uthai Thani	Ratchaburi	Phitsanulok	Maha Sarakham	Ratchaburi	Ubon Ratchathani	Prachuap Khiri Khan	Satun	0.6082
58	Chaiyaphum	Kalasin	Sa Kaeo	Uthai Thani	Kalasin	Nakhon Pathom	Roi Et	Sakon Nakhon	Roi Et	0.6077
59	Loei	Buri Ram	Nakhon Sawan	Ubon Ratchathani	Udon Thani	Suphan Buri	Sa Kaeo	Nakhon Phanom	Sakon Nakhon	0.6071
60	Phitsanulok	Phetchabun	Si Sa Ket	Lop Buri	Chon Buri	Saraburi	Mukdahan	Phitsanulok	Nakhon Si Thammarat	0.6070
61	Tak	Loei	Surin	Maha Sarakham	Yasothon	Yala	Uthai Thani	Nakhon Ratchasima	Ubon Ratchathani	0.6067
62	Sa Kaeo	Satun	Chiang Rai	Nong Bua Lam Phu	Khon Kaen	Phitsanulok	Sakon Nakhon	Nakhon Sawan	Kamphaeng Phet	0.6056
63	Kanchana-buri	Ubon Ratchathani	Phichit	Sakon Nakhon	Loei	Mukdahan	Phetchabun	Satun	Narathiwat	0.5996
64	Yasothon	Krabi	Nong Bua Lam Phu	Phetchabun	Trat	Lamphun	Nong Bua Lam Phu	Rayong	Nong Bua Lam Phu	0.5988
65	Chai Nat	Phichit	Chai Nat	Nakhon Phanom	Prachin Buri	Kanchana-buri	Yasothon	Tak	Kalasin	0.5920
66	Uttaradit	Samut Sakhon	Yala	Ratchaburi	Chachoengsao	Lop Buri	Tak	Samut Sakhon	Yasothon	0.5917
67	Lamphun	Kanchana-buri	Narathiwat	Yasothon	Mukdahan	Chachoeng-sao	Maha Sarakham	Surat Thani	Phetchabun	0.5910
68	Sukhothai	Chaiyaphum	Nakhon Si Thammarat	Surin	Nan	Phang-nga	Kanchana-buri	Nakhon Si Thammarat	Kanchana-buri	0.5891
69	Sakon Nakhon	Kamphaeng Phet	Ang Thong	Si Sa Ket	Bangkok	Surat Thani	Chaiyaphum	Phuket	Pattani	0.5884
70	Phetchabun	Pattani	Phetchabun	Tak	Phuket	Chai Nat	Narathiwat	Nonthaburi	Buri Ram	0.5874
71	Phrae	Yala	Satun	Sa Kaeo	Mae Hong Son	Ranong	Kalasin	Samut Prakan	Sa Kaeo	0.5864
72	Mae Hong Son	Sa Kaeo	Nakhon Phanom	Kalasin	Pathum Thani	Chumphon	Buri Ram	Yala	Surin	0.5860
73	Surin	Mae Hong Son	Phang-nga	Amnat Charoen	Nonthaburi	Chanthaburi	Amnat Charoen	Mae Hong Son	Nakhon Phanom	0.5784
74	Buri Ram	Tak	Sing Buri	Buri Ram	Rayong	Prachuap Khiri Khan	Surin	Pathum Thani	Si Sa Ket	0.5714
75	Si Sa Ket	Nong Bua Lam Phu	Nan	Pattani	Samut Prakan	Ang Thong	Si Sa Ket	Chon Buri	Tak	0.5650
76	Kamphaeng Phet	Narathiwat	Pattani	Mae Hong Son	Samut Sakhon	Chon Buri	Mae Hong Son	Bangkok	Mae Hong Son	0.5214

4. The Eight HAI Indices

4.1 Health Index and Indicators

Health is this fundamental basis for well-being. The physical, mental, and emotional health of the population is an important determinant of national competitiveness.

The health index consists of 7 indicators: underweight births, population with physical illness, population with disability, mental health score, population with unhealthy behaviour (smoking and/or alcohol drinking), population that exercise, population per physician.

The five top provinces on the health index are Bangkok, Samut Sakhon, and 3 Southern provinces, namely Songkhla, Phang-nga, and Chumphon. The five bottom provinces are in the North and the Northeast; they are Kamphaeng Phet, Si Sa Ket, Buri Ram, Surin, and Mae Hong Son.

Health Index			
Top five provinces		**Bottom five provinces**	
1	Bangkok	72	Mae Hong Son
2	Songkhla	73	Surin
3	Phang-nga	74	Buri Ram
4	Samut Sakhon	75	Si Sa Ket
5	Chumphon	76	Kamphaeng Phet

Health of newborns

Each year, there are approximately 800,000 newborns, 75,000 of which (9%) are underweight (less than 2,500 gm.). Underweight newborns risk health complications and sluggish or stunted growth. Caring for them is also costly. At 8-10 years old, these children may show lower IQ and be less academically successful than other children. To avoid this problem, mothers should be of appropriate age and have adequate knowledge and preparation especially good nutrition during pregnancy. In recent years, the problem of underage mothers has heightened concerns about newborns' health.

Four provinces in the North were in the bottom five on this measure. Percentages of underweight newborns were lowest in Roi Et and Maha Sarakham in the Northeast.

Underweight births in 2011 (%)			
Top five scores		**Bottom five scores**	
Roi Et	7.9	Chanthaburi	11.0
Maha Sarakham	8.0	Phitsanulok	11.1
Nong Bua Lam Phu, Uthai Thani, Satun	8.1	Chiang Mai	11.3
Kalasin	8.2	Tak	14.4
Sukhothai	8.3	Mae Hong Son	14.7

Physical health

In 2011, 13.9 million people (20.6%) reported having an illness, higher than 17.4% in 2007. 22.9% of women reported having an illness, chronic disease or medical condition, compared with 18.3% of men. But men had a higher rate of accident and assault. Population aged 60 years and over reported the highest illness rate (63.8%).

Phuket, a large metropolis in the South, reported the highest rate of physical illness, followed by Si Sa Ket in the Northeast and three provinces in the North. Narathiwat, the southernmost province, reported the lowest rate of physical illness, followed by southern and eastern provinces along the coastline.

Population with physical illness in 2011 (%)			
Top five scores		**Bottom five scores**	
Narathiwat	7.6	Chiang Mai	31.6
Trat	8.8	Phetchabun	32.0
Samut Sakhon	9.5	Sukhothai	32.9
Phang-nga	10.1	Si Sa Ket	34.0
Chumphon	10.3	Phuket	37.4

Mental health

Crises that have relentlessly unfolded in the past decade have had impact on mental health. In addition to work-related, financial and family issues, political conflicts and violence in the South add to the tension of the Thai people.

In 2012, people in Nakhon Phanom had the best mental health, followed by Phichit, Trang, Chaiyaphum, and Krabi. Among the bottom five provinces were Samut Songkhram that had enjoyed strong tourism and industrial growth in recent years, and Samut Prakan, an industrial backyard of Bangkok. Others were Sa Kaeo on the eastern border, Phuket, the tourism hub in the South, and Nong Khai on the Thai-Lao border in the Northeast.

Mental health score in 2012 (%)[1]			
Top five scores		**Bottom five scores**	
Nakhon Phanom	81.6	Nong Khai	69.6
Phichit	80.9	Phuket	68.3
Trang	80.3	Sa Kaeo	66.9
Chaiyaphum	79.8	Samut Prakan	66.2
Krabi	79.5	Samut Songkhram	59.8

Disability

From November 1, 1984 to January 1, 2013, 1.3 million people or 2% of the population have registered for disability support (Baht 500/month). Men had higher rate of disability (2.2%) compared with women (1.8%). High percentages of disability were observed in provinces of the North, and the lowest percentages in Bangkok, Bangkok vicinity, and the South.

Population with disability in 2012 (%)			
Top five scores		**Bottom five scores**	
Bangkok	0.9	Lampang	3.2
Phuket	1.1	Lamphun	3.4
Chon Buri, Pathum Thani	1.2	Surin, Uttaradit	3.5
Nonthaburi, Samut Prakan, Udon Thani, Krabi, Surat Thani	1.3	Phayao	3.9
Songkhla, Ranong	1.4	Phrae	4.4

Unhealthy behaviour (smoking and/or alcohol consumption)

Unhealthy behaviour especially smoking and/or alcohol consumption leads to illness and injuries. Campaigns for attitudinal and behavioral changes have had limited impact.

During 2001-2009, the percentage of population aged 15 years and over who smoke regularly dropped, but resurged in 2011. The male smoking rate increased from 35.5% in 2009 to 36.1% in 2011, while the female smoking rate remained the same. But the average age of first-time smokers dropped especially among the youth who started smoking at 16.2 years old.

Alcohol consumption rate dropped slightly from 32% in 2009 to 31.5% in 2011. The male drinking rate dropped from 54.5% to 53.4%. Working age population, 25-59 years old had the highest drinking rate. The male rate was five times higher than the female rate. Men started drinking on average at 19.4 years old while women started at 24.6 years old.

Households that have a member with drinking behaviour often experience domestic violence, which affects familial relations and work life. Other problems are injuries, accidents and violence against non-family members.

Two provinces in the South and four in the Central Region had the lowest percentages of unhealthy behaviour, while the people most at risk were in Phrae, Chiang Rai and Lampang in the North, Loei in the Northeast and Sa Kaeo in the Central Region.

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[1] These scores were recalculated based on the full score of 100. Raw data were based on the full score of 45.

Population with unhealthy behaviour (smoking and/or alcohol consumption) in 2011 (%)			
Top five scores		Bottom five scores	
Krabi	18.3	Sa Kaeo	33.8
Samut Songkhram, Yala	18.9	Lampang	33.9
Suphan Buri	20.0	Chiang Rai	34.9
Nonthaburi	20.2	Loei	35.4
Sing Buri	20.9	Phrae	39.3

Physical exercise

In 2011, 15.1 million people (26.1%) aged 11 years and over exercised. Men exercised more (27.4%) than women (25%). Population aged 25–59 exercised most, followed by the youth aged 15-24, children aged 11-14, and the elderly aged 60 and over.

Exercise rates were highest in Trang, Phatthalung and Satun in the South, Payao in the North, and Amnart Charoen in the Northeast. The rates were lowest in Pathum Thani, Samut Sakhon, Kanchanaburi and Suphan Buri in the Central Region, and Narathiwat on the southern border.

Population that exercise in 2011 (%)			
Top five scores		Bottom five scores	
Trang	41.7	Suphan Buri	14.6
Phatthalung	39.0	Narathiwat	13.9
Phayao	38.9	Kanchanaburi	13.5
Amnat Charoen	37.8	Samut Sakhon	12.7
Satun	36.6	Pathum Thani	10.4

Population per physician

There was a high concentration of health personnel especially physicians in large and affluent cities, namely Bangkok, Bangkok vicinity and regional cities. Of the five provinces with the highest ratios of population per physician, four were in the Northeast. The other was Kamphaeng Phet in the North.

Population per physician in 2010 (persons)			
Top five scores		Bottom five scores	
Nakhon Nayok	911	Kamphaeng Phet	7,495
Bangkok	1,052	Roi Et	7,566
Samut Sakhon	1,383	Nakhon Phanom	8,069
Chon Buri	1,400	Si Sa Ket	9,536
Phuket	1,513	Chaiyaphum	9,794

Map 1 Health Index

Heath Index (no of provinces)

- 0.6711 to 0.7218 (14)
- 0.631 to 0.6711 (14)
- 0.6108 to 0.631 (16)
- 0.5691 to 0.6108 (16)
- 0.4829 to 0.5691 (16)
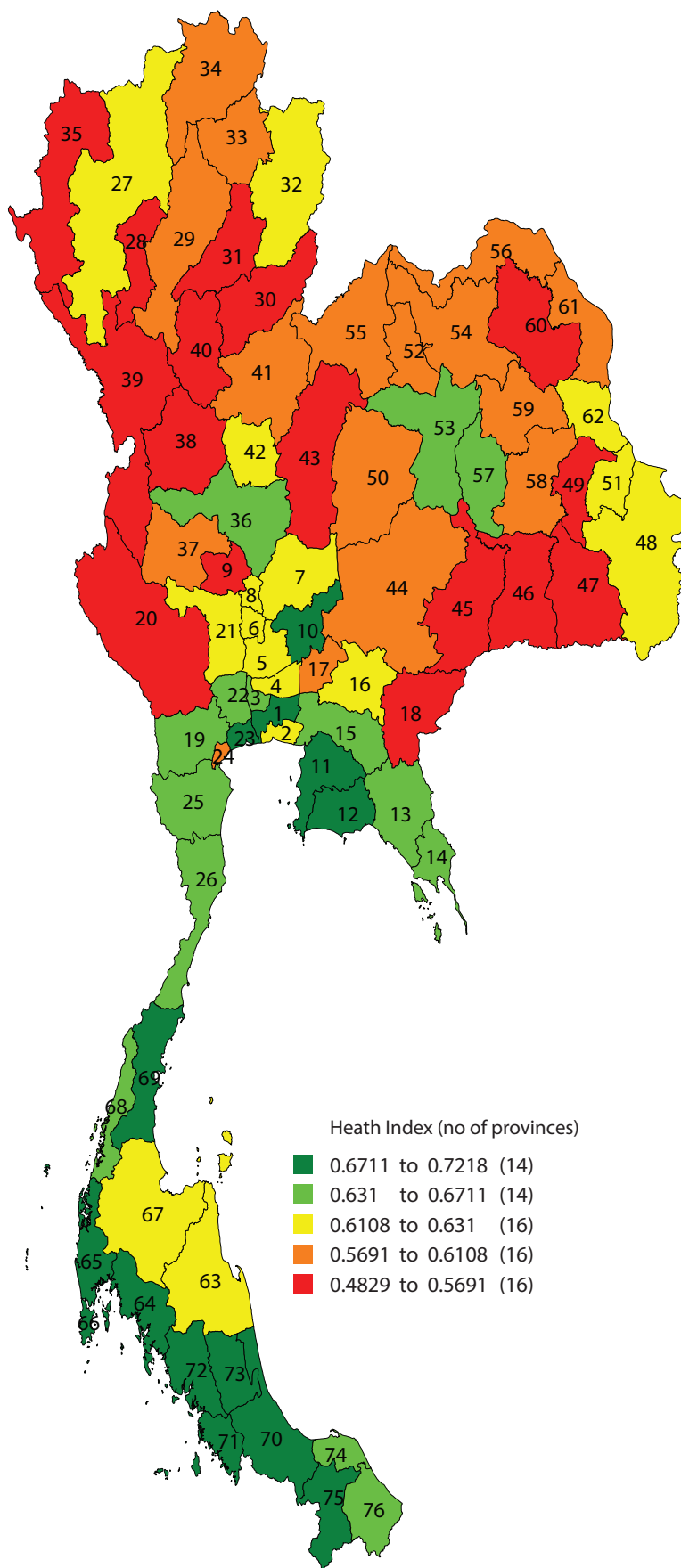
Rank		Code
1	Bangkok	1
2	Songkhla	70
3	Phang-nga	65
4	Samut Sakhon	23
5	Chumphon	69
6	Yala	75
7	Krabi	64
8	Trang	72
9	Rayong	12
10	Satun	71
11	Chon Buri	11
12	Phatthalung	73
13	Saraburi	10
14	Phuket	66
15	Nonthaburi	3
16	Nakhon Sawan	36
17	Chanthaburi	13
18	Prachuap Khiri Khan	26
19	Nakhon Pathom	22
20	Trat	14
21	Maha Sarakham	57
22	Ratchaburi	19
23	Pattani	74
24	Phetchaburi	25
25	Narathiwat	76
26	Khon Kaen	53
27	Ranong	68
28	Chachoengsao	15
29	Lop Buri	7
30	Nakhon Si Thammarat	63
31	Suphan Buri	21
32	Phra Nakhon Si Ayutthaya	5
33	Nan	32
34	Surat Thani	67
35	Samut Prakan	2
36	Phichit	42
37	Sing Buri	8
38	Amnat Charoen	51
39	Ang Thong	6
40	Prachin Buri	16
41	Ubon Ratchathani	48
42	Mukdahan	62
43	Chiang Mai	27
44	Pathum Thani	4
45	Nong Khai	56
46	Lampang	29
47	Uthai Thani	37
48	Nakhon Nayok	17
49	Samut Songkhram	24
50	Nakhon Ratchasima	44
51	Udon Thani	54
52	Chiang Rai	34
53	Phayao	33
54	Kalasin	59
55	Roi Et	58
56	Nong Bua Lam Phu	52
57	Nakhon Phanom	61
58	Chaiyaphum	50
59	Loei	55
60	Phitsanulok	41
61	Tak	39
62	Sa Kaeo	18
63	Kanchanaburi	20
64	Yasothon	49
65	Chai Nat	9
66	Uttaradit	30
67	Lamphun	28
68	Sukhothai	40
69	Sakon Nakhon	60
70	Phetchabun	43
71	Phrae	31
72	Mae Hong Son	35
73	Surin	46
74	Buri Ram	45
75	Si Sa Ket	47
76	Kamphaeng Phet	38

4.2 Education Index and Indicators

Education is an investment to help the people to develop to their full potential in terms of knowledge, rationality, morality, and life skills. Quality manpower is the most important contributor to national competitiveness.

The education index consists of 4 indicators: average years in schooling, secondary enrolment rate, average IQ of children aged 6-15, and average O-Net score of upper secondary students.

Bangkok, Nakhon Nayok, Chon Buri, Nonthaburi and Chiang Mai ranked highest on the education index, while border provinces ranked lowest: Narathiwat (South), Nong Bua Lam Phu (Northeast), Tak and Mae Hong Son (North), and Sa Kaew (Central).

Education Index			
Top five scores		Bottom five scores	
1	Bangkok	72	Sa Kaeo
2	Nakhon Nayok	73	Mae Hong Son
3	Chon Buri	74	Tak
4	Nonthaburi	75	Nong Bua Lam Phu
5	Chiang Mai	76	Narathiwat

Average years of schooling

The average years of schooling indicates the potential capacity of the people and the work force. Thailand is striving to become a knowledge and innovation-driven economy. The average years of schooling among population aged 15 and over increased from 7.9 years in 2007 to 8.2 years in 2011. That of the younger segment of the population aged 15-39 increased from 10.1 to 10.7 years.

Nonetheless, the average years of schooling of the Thai population is less than in some ASEAN countries. In 2011, it was less than Malaysia (9.5), Philippines (8.9), Singapore (8.8) and Brunei (8.6), but more than Indonesia (5.8), Cambodia (5.8), Vietnam (5.5), Lao PDR (4.6), and Myanmar (4.0). [2]

All five bottom provinces were remote border provinces; three were in the mountainous North.   Nonthaburi and Bangkok had the best records.

Average years of schooling of population 15 years and over in 2011 (years)			
Top five scores		Bottom five scores	
Nonthaburi	11.2	Trat	7.2
Bangkok	10.6	Nong Bua Lam Phu	7.1
Maha Sarakham	9.2	Phayao	6.9
Samut Prakan, Phatthalung	9.1	Mae Hong Son	6.8
Trang	8.8	Tak	6.3

Upper secondary enrolment

Upper secondary education (including vocational education) is part of basic education provided free of charge by the state, but is not obligatory.   The enrolment rate continued to increase from 36.2% in 1994 to 60.8% in 2001.   In 2011, female enrolment rate was 78.4%, higher than the male rate at 65%.

Ranong, Nakhon Nayok and Bangkok had the highest enrolment rate at 100%[3] while Narathiwat, Samut Sakhon, Kamphaeng Phet, Rayong, and Tak were the five bottom provinces.

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[2]   UNDP, International Human Development Indicators.

[3]   In the original data, the enrolment rates in Ranong, Nakhon Nayok and Bangkok were 141.6%, 119.9% and 105.3%, respectively. For calculation, these have been reset to 100%.

Upper secondary enrolment in 2011 (%)			
Top five scores		Bottom five scores	
Ranong, Nakhon Nayok, Bangkok	100.0	Tak	54.6
Chon Buri	91.7	Rayong	54.5
Lamphun	89.4	Kamphaeng Phet	52.5
Lampang	89.0	Samut Sakhon	48.3
Phrae	86.7	Narathiwat	44.6

Average IQ of students aged 6-15 years

IQ is an important asset and a basis for national competitiveness. According to the Department of Mental Health, in 76 provinces, the national average for children aged 6-15 years old was 98.6 (the normal level is 90-109). The Northeast had the lowest average of 96.0. At the provincial level, Nonthaburi had the highest average of 108.9 while Narathiwat had the lowest average of 88.1. Thirty-eight or half of all the provinces had average IQ lower than 100.

Factors contributing to IQ are children's nutrition, health promotion, good environment, and quality education. Special programmes are urgently needed to address the underlying problems in selected area, targeting disadvantaged children especially in the rural areas.

Average IQ of students aged 6-15 in 2011			
Top five scores		Bottom five scores	
Nonthaburi	108.9	Sakon Nakhon	93.7
Rayong	107.5	Ubon Ratchathani	93.5
Lampang	106.6	Roi Et	91.7
Bangkok	104.5	Pattani	91.1
Chon Buri	103.9	Narathiwat	88.1

Average O-Net scores for upper secondary education

The average O-Net scores of 8 main subjects for upper secondary level in 2011 were low especially in English language, Mathematics, Sciences, and Arts.

Students in large cities close to growth centres had higher scores. Bangkok students had the highest score, followed by Phuket, Nonthaburi, Nakhon Pathom, and Nakhon Nayok.   The five lowest scores were in Nong Bua Lam Phu in the Northeast, Mae Hong Son in the North, and in 3 southernmost provinces where students had difficulty accessing education due to security problems.

Average O-Net scores of upper secondary students in 2011 (%)			
Top five scores		Bottom five scores	
Bangkok	40.8	Mae Hong Son	31.46
Phuket	38.6	Nong Bua Lam Phu	31.29
Nonthaburi	38.4	Yala	29.28
Nakhon Pathom	38.3	Pattani	28.58
Nakhon Nayok	37.6	Narathiwat	28.56

Map 2 Education Index

Education Index (no. of provinces)

Color	Range	(no. of provinces)
■	0.5075 to 0.7094	(15)
■	0.4684 to 0.5075	(14)
■	0.4318 to 0.4684	(14)
■	0.4011 to 0.4318	(16)
■	0.2581 to 0.4011	(17)
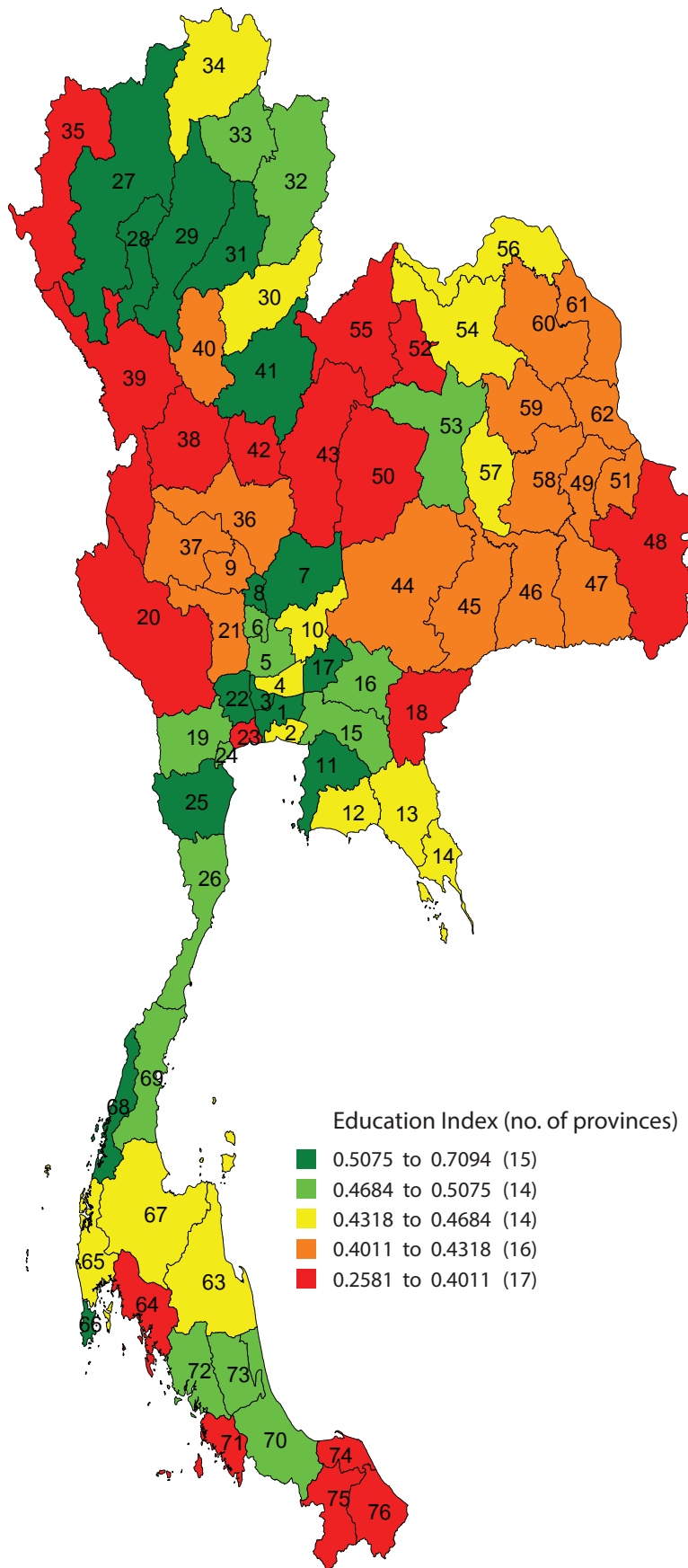
Rank		Code
1	Bangkok	1
2	Nakhon Nayok	17
3	Chon Buri	11
4	Nonthaburi	3
5	Chiang Mai	27
6	Nakhon Pathom	22
7	Lampang	29
8	Ranong	68
9	Phuket	66
10	Phrae	31
11	Lamphun	28
12	Sing Buri	8
13	Lop Buri	7
14	Phitsanulok	41
15	Phetchaburi	25
16	Prachin Buri	16
17	Phra Nakhon Si Ayutthaya	5
18	Nan	32
19	Chachoengsao	15
20	Samut Songkhram	24
21	Trang	72
22	Ratchaburi	19
23	Khon Kaen	53
24	Ang Thong	6
25	Phatthalung	73
26	Chumphon	69
27	Prachuap Khiri Khan	26
28	Phayao	33
29	Songkhla	70
30	Pathum Thani	4
31	Uttaradit	30
32	Saraburi	10
33	Samut Prakan	2
34	Maha Sarakham	57
35	Nakhon Si Thammarat	63
36	Chiang Rai	34
37	Phang-nga	65
38	Rayong	12
39	Trat	14
40	Chanthaburi	13
41	Nong Khai	56
42	Udon Thani	54
43	Surat Thani	67
44	Nakhon Ratchasima	44
45	Sukhothai	40
46	Si Sa Ket	47
47	Yasothon	49
48	Nakhon Sawan	36
49	Suphan Buri	21
50	Chai Nat	9
51	Roi Et	58
52	Mukdahan	62
53	Amnat Charoen	51
54	Nakhon Phanom	61
55	Surin	46
56	Sakon Nakhon	60
57	Uthai Thani	37
58	Kalasin	59
59	Buri Ram	45
60	Phetchabun	43
61	Loei	55
62	Satun	71
63	Ubon Ratchathani	48
64	Krabi	64
65	Phichit	42
66	Samut Sakhon	23
67	Kanchanaburi	20
68	Chaiyaphum	50
69	Kamphaeng Phet	38
70	Pattani	74
71	Yala	75
72	Sa Kaeo	18
73	Mae Hong Son	35
74	Tak	39
75	Nong Bua Lam Phu	52
76	Narathiwat	76

4.3 Employment Index and Indicators

Employment provides the means for living. Having a balanced work life, decent and safe work with adequate protection provides an environment for people to apply their knowledge and skills to the best of their ability. The results are well-being, security, success and advancement for the individual and the society.

The employment index consists of 4 indicators: unemployment rate, underemployment rate, employees covered by social security, and occupational injuries.

The top five provinces on the employment index are centres of commercial, industrial and tourism. The bottom five provinces are located in different regions.

Employment Index			
Top five provinces		**Bottom five provinces**	
1	Phuket	72	Nakhon Phanom
2	Pathum Thani	73	Phang-nga
3	Rayong	74	Sing Buri
4	Chon Buri	75	Nan
5	Bangkok	76	Pattani

Unemployment

The employed workforce increased from 37.1 million in 2007 to 39.3 million in 2011 while unemployment dropped from 1.2% in 2007 to 0.7% in 2011.   Male unemployment was higher than female's.

Five provinces in the Central Region, the South and the North had 0% unemployment. Twenty-seven provinces in different regions had unemployment between 0.1 and 0.4%. Two of six provinces with highest unemployment were Pattani and Narathiwat in the deep South.

Unemployment rate in 2011 (%)			
Top five scores		**Bottom five scores**	
Chumphon, Kamphaeng Phet, Suphan Buri, Samut Songkhram, Phang-nga	0.0	Nong Bua Lam Phu	1.3
Trat, Uttaradit, Phrae, Phayao, Mae Hong Son, Uthai Thani, Nong Khai	0.1	Narathiwat, Sing Buri	1.6
Kanchanaburi, Nakhon Pathom, Prachuap Khiri Khan, Kalasin, Mukdahan, Phuket, Surat Thani, Trang, Phatthalung	0.2	Nakhon Phanom	1.9
Pathum Thani, Chanthaburi, Lamphun, Chaiyaphum, Amnat Charoen, Loei	0.3	Pattani	2.0
Nakhon Nayok, Lampang, Nakhon Sawan, Buri Ram, Satun	0.4	Nan	2.3

Underemployment rate

Underemployment means working less than 35 hours/week and willing to work more. In 2011, 14 provinces had 0% underemployment. Twenty-three provinces had between 0.1% to 0.4% underemployment.

Phang-nga continued to show exceptionally high underemployment rate. This is partly due to the period of data collection. In most parts of the country, employment during the rainy season is generally higher and underemployment lower than at other times of the year. But in Phang-nga, heavy rain makes it difficult to work in rubber plantations, and dampens tourism, the two main sources of employment in the province.

Underemployment rate in 2011 (%)			
Top five scores		**Bottom five scores**	
Samut Prakan, Pathum Thani, Lop Buri, Saraburi, Rayong, Nakhon Pathom, Prachuap Khiri Khan, Lamphun, Chaiyaphum, Udon Thani, Nong Khai, Surat Thani, Ranong, Chumphon	0.0	Phichit	2.9
Chon Buri, Chachoengsao, Prachin Buri, Samut Sakhon, Samut Songkhram, Phayao, Nakhon Ratchasima, Khon Kaen, Mukdahan, Phuket, Narathiwat	0.1	Satun	3.4
Nonthaburi, Trat, Nakhon Nayok, Phetchaburi, Nong Bua Lam Phu, Pattani	0.2	Amnat Charoen	3.4
Chanthaburi, Suphan Buri, Ubon Ratchathani, Loei, Yala	0.3	Si Sa Ket	4.7
Sakon Nakhon	0.4	Phang-nga	9.8

Employees covered by social security

In 2012, 10.5 million employees were covered by the national social security system, an increase from 9.18 million in 2007. Most of them worked in the formal sector and were insurers under Article 33 of the Social Security Act.

The top 6 provinces consisted of Bangkok and industrial hubs in the Central Region, while all of the bottom 6 provinces were in the Northeast where the workforce was largely in the informal sector and not covered by the social security system.

Workers covered by with social security in 2011 (%)			
Top five scores		**Bottom five scores**	
Samut Sakhon	97.0	Kalasin	4.8
Samut Prakan	94.6	Nong Bua Lam Phu	4.6
Rayong	92.9	Yasothon	4.5
Bangkok, Pathum Thani	88.7	Nong Khai, Nakhon Phanom	3.9
Chon Buri	86.7	Si Sa Ket	3.7

Occupational injuries

Work safety continued to improve. In 2005, there were 214,235 occupational injuries (29 per 1,000 members of the Workmen's Compensation Fund). The number dropped to 198,652 (24 per 1,000 members of the Workmen's Compensation Fund) in 2007 and 129,632 (15.8 per 1,000 members of the Workmeners's Compensation Fund) in 2011.

Four of the 5 provinces with the highest occupational injury rates were located in the industrial hub near Bangkok. The exception was Phetchabun, an agricultural province in the North.

Occupational injuries in 2011 (per 1,000 members of the Workmen's Compensation Fund)			
Top five scores		**Bottom five scores**	
Mae Hong Son	2.5	Nakhon Pathom	21.1
Yasothon	2.9	Phetchabun	22.7
Amnat Charoen	3.3	Chachoengsao	23.3
Si Sa Ket	3.4	Samut Sakhon	25.3
Nan	3.8	Samut Prakan	34.9

Map 3   Employment Index

Employmenx Index (no. of provinces)

- 0.7054 to 0.8977 (14)
- 0.6863 to 0.7054 (14)
- 0.651 to 0.6863 (16)
- 0.6044 to 0.651 (15)
- 0.5251 to 0.6044 (17)
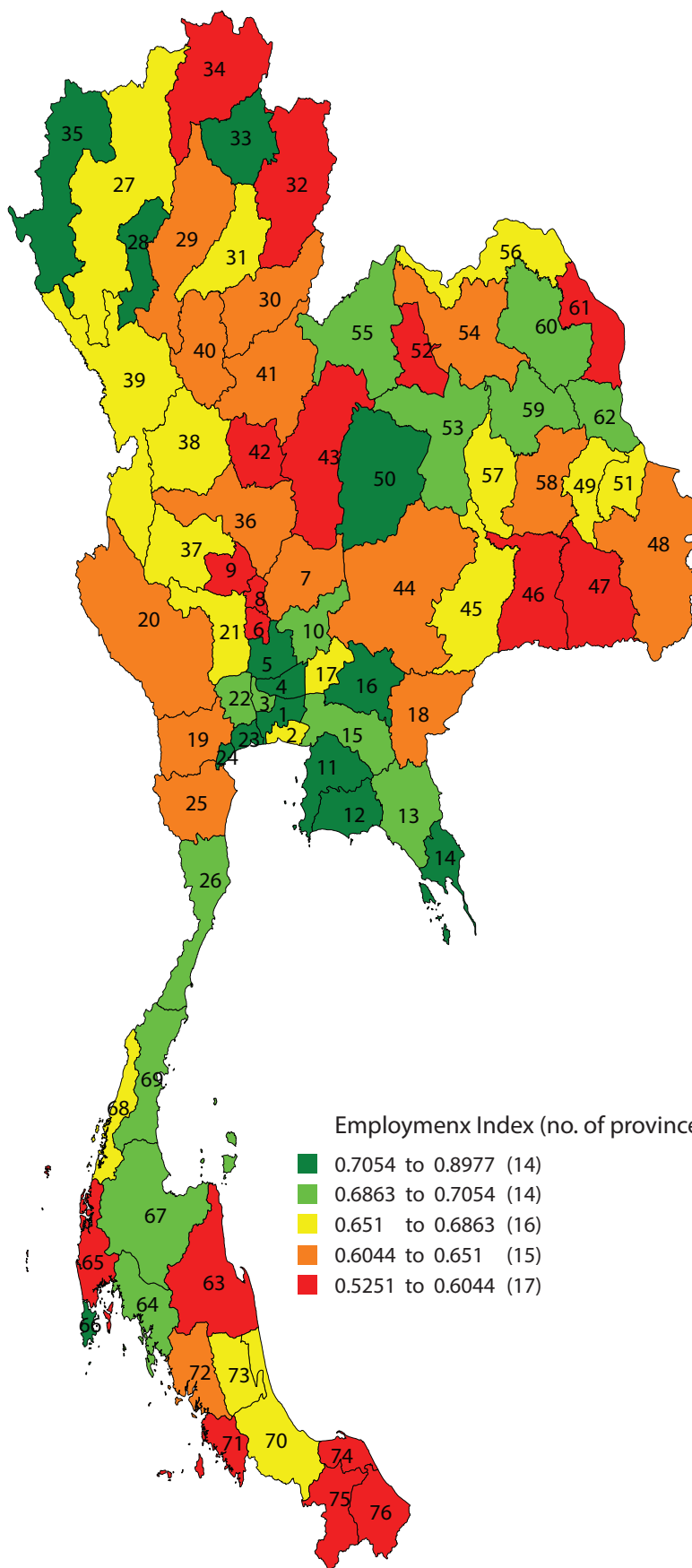
Rank		Code
1	Phuket	66
2	Pathum Thani	4
3	Rayong	12
4	Chon Buri	11
5	Bangkok	1
6	Samut Sakhon	23
7	Phra Nakhon Si Ayutthaya	5
8	Lamphun	28
9	Prachin Buri	16
10	Mae Hong Son	35
11	Trat	14
12	Phayao	33
13	Samut Songkhram	24
14	Chaiyaphum	50
15	Loei	55
16	Sakon Nakhon	60
17	Prachuap Khiri Khan	26
18	Nakhon Pathom	22
19	Nonthaburi	3
20	Chachoengsao	15
21	Krabi	64
22	Saraburi	10
23	Mukdahan	62
24	Kalasin	59
25	Khon Kaen	53
26	Surat Thani	67
27	Chumphon	69
28	Chanthaburi	13
29	Samut Prakan	2
30	Kamphaeng Phet	38
31	Yasothon	49
32	Suphan Buri	21
33	Ranong	68
34	Buri Ram	45
35	Phrae	31
36	Phatthalung	73
37	Uthai Thani	37
38	Chiang Mai	27
39	Tak	39
40	Nakhon Nayok	17
41	Nong Khai	56
42	Songkhla	70
43	Amnat Charoen	51
44	Maha Sarakham	57
45	Phetchaburi	25
46	Lop Buri	7
47	Kanchanaburi	20
48	Nakhon Ratchasima	44
49	Lampang	29
50	Phitsanulok	41
51	Ubon Ratchathani	48
52	Roi Et	58
53	Trang	72
54	Udon Thani	54
55	Sukhothai	40
56	Uttaradit	30
57	Ratchaburi	19
58	Sa Kaeo	18
59	Nakhon Sawan	36
60	Si Sa Ket	47
61	Surin	46
62	Chiang Rai	34
63	Phichit	42
64	Nong Bua Lam Phu	52
65	Chai Nat	9
66	Yala	75
67	Narathiwat	76
68	Nakhon Si Thammarat	63
69	Ang Thong	6
70	Phetchabun	43
71	Satun	71
72	Nakhon Phanom	61
73	Phang-nga	65
74	Sing Buri	8
75	Nan	32
76	Pattani	74

4.4 Income Index and Indicators

Income is the basis for a decent standard of living and a safeguard against unmanageable debt and poverty. Income distribution is a sign of economic well-being of the society.

The income index consists of 4 indicators: household income, poverty incidence, households with consumption debt, and income disparity measured by GINI.

The top five provinces on the income index were the economically advanced areas namely Bangkok, Bangkok vicinity, and Phuket. The bottom five provinces were located in remote areas in the North, Northeast, and the South.

Income Index			
Top five provinces		**Bottom five provinces**	
1	Bangkok	72	Kalasin
2	Nonthaburi	73	Amnat Charoen
3	Phuket	74	Buri Ram
4	Chachoengsao	75	Pattani
5	Samut Sakhon	76	Mae Hong Son

Household income

Average household income increased from 14,963 Baht/month in 2004 to 18,660 Baht/month in 2007 and 23,241 Baht/month in 2011.   A large part of the income was from wage/salary, business or farm activities. The Income of male-headed households was about 20% more than that of female-headed households.

Five provinces in the North and the Northeast had the lowest average household monthly income.   Bangkok, the highest income, was 5.4 times that of Mae Hong Son, the worst-off province.

Average household income in 2011 (Baht/month)			
Top five scores		**Bottom five scores**	
Bangkok	48,963	Phayao	14,457
Trang	36,249	Nakhon Phanom	14,057
Nonthaburi	35,146	Si Sa Ket	13,945
Surat Thani	34,420	Tak	12,938
Krabi	33,350	Mae Hong Son	9,024

Poverty incidence

Those in poverty proportion of poor population (as measured by expenditures) declined steadily from 32.6% of the population in 2002 to 20.9% in 2007 and 13.1% in 2011.   The Northeast had the highest proportion at 18.1%, followed by the North, the Central Region, the South and Bangkok.

Provinces with the lowest poverty incidence were Nonthaburi, Samut Prakan and Chon Buri in the Central Region, and Chumphon and Songkhla in the South.   The highest levels of poverty incidences were found in Mae Hong Son and Tak in the North, Si Sa Ket and Buri Ram in the Northeast, and Pattani in the South.

Poverty incidence in 2011 (%)			
Top five scores		**Bottom five scores**	
Nonthaburi	1.2	Pattani	33.5
Samut Prakan	1.9	Buri Ram	33.7
Chon Buri	2.4	Si Sa Ket	35.9
Chumphon	3.0	Tak	43.5
Songkhla	3.2	Mae Hong Son	60.3

Household consumption debt

In 2011, 55.8% of all households were indebted. The average debt of indebted households was 241,760 Baht, of which a large part (87.5%) was owed to institutions. The total included land and house mortgage, consumption debt, educational debt, agricultural debt, and business debt. With the exception of consumption debt, these debts can be considered as investment.

37.1% of all households had consumption debt which indicated inadequate income and potential difficulty. The lowest levels of consumption debt were observed in Samut Songkhram, Phuket, Samut Sakhon, Yala and Mae Hong Son. Five northeastern provinces had the highest levels of consumption debt.

Households with consumption debt in 2011 (%)			
Top five scores		**Bottom five scores**	
Samut Songkhram	9.8	Ubon Ratchathani	65.7
Phuket	12.3	Roi Et	68.4
Samut Sakhon	12.5	Maha Sarakham	70.6
Yala	13.6	Surin	74.7
Mae Hong Son	15.7	Amnat Charoen	78.5

Gini Index

Income distribution improved in the past five years; the GINI index (measured by income) tapered off from 53.5 in 2007 to 45.0 in 2011.

The most equitable income distribution was found in Chacheongsao, Phichit, Phuket, Trat and Suphan Buri. The five provinces with the least equitable income distribution were Nakhon Si Thammarat, Phetchabun, Sa Kaeo, Nong Bua Lam Phu and Samut Songkhram.

Gini index in 2011			
Top five scores		**Bottom five scores**	
Chachoengsao	26.6	Samut Songkhram	55.3
Phichit	31.2	Nong Bua Lam Phu	56.8
Phuket	33.8	Sa Kaeo	56.8
Trat	34.9	Phetchabun	57.7
Suphan Buri	35.0	Nakhon Si Thammarat	58.0

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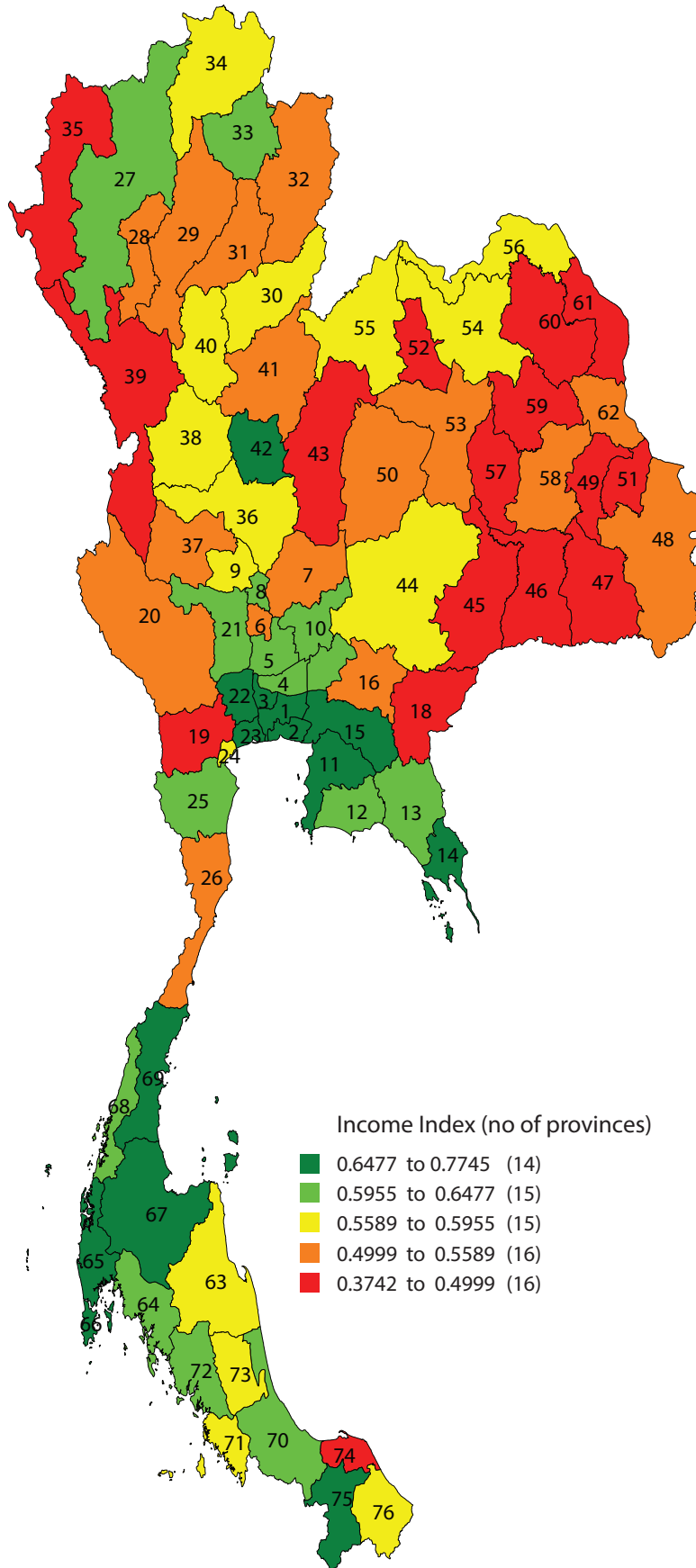
Rank		Code
1	Bangkok	1
2	Nonthaburi	3
3	Phuket	66
4	Chachoengsao	15
5	Samut Sakhon	23
6	Samut Prakan	2
7	Chumphon	69
8	Chon Buri	11
9	Nakhon Pathom	22
10	Surat Thani	67
11	Phang-nga	65
12	Yala	75
13	Phichit	42
14	Trat	14
15	Ranong	68
16	Trang	72
17	Krabi	64
18	Phra Nakhon Si Ayutthaya	5
19	Chanthaburi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

Income Index (no of provinces)

0.6477 to 0.7745	(14)
0.5955 to 0.6477	(15)
0.5589 to 0.5955	(15)
0.4999 to 0.5589	(16)
0.3742 to 0.4999	(16)

4.5 Housing and Living Environment Index and Indicators

Secure housing, basic household appliances, and safe environment are fundamental for a decent livelihood.

The housing and living environment index consists of 5 indicators: households living in own house on own land, households with a refrigerator, carbon footprint, population affected by drought, population affected by flood.

The top five provinces on the housing and living environment index were Suphan Buri, Chaiyaphum, Yala, Uttaradit and Ranong.   Bottom five provinces were located nearby Bangkok plus Rayong – an industrial centre on the east coast.

Housing and Living Environment Index			
Top five provinces		**Bottom five provinces**	
1	Suphan Buri	72	Pathum Thani
2	Chaiyaphum	73	Nonthaburi
3	Yala	74	Rayong
4	Uttaradit	75	Samut Prakan
5	Ranong	76	Samut Sakhon

Households living in own house on own land

Three-fourths of Thai households lived in their own house on their own land. The highest level of housing security was in the Northeast at 90.3%, followed by the North, the South, and the Central Region. Such housing security was more difficult to achieve in Bangkok, and Bangkok vicinity as well as Chon Buri and Phuket. In these business, industrial and tourism centres, land and houses are more costly.

Households living on own house and own land in 2011 (%)			
Top five scores		**Bottom five scores**	
Yasothon	97.0	Bangkok	42.1
Si Sa Ket	95.6	Samut Sakhon	42.0
Nong Bua Lam Phu	95.5	Chon Buri	37.1
Amnat Charoen	95.0	Samut Prakan	36.4
Roi Et	94.5	Phuket	25.9

Refrigerator

Nearly all Thai households had electricity, safe drinking water and sanitation. Most also had basic electrical appliances; 84% had a refrigerator.

Only two-thirds of Mae Hong Son households had a refrigerator, which put the province in the last place. Interestingly Phuket was also among the bottom five.

Households with a refrigerator in 2011 (%)			
Top five scores		**Bottom five scores**	
Nakhon Nayok	97.6	Surin	79.1
Phayao	97.0	Tak	78.0
Nong Khai	96.4	Si Sa Ket	76.3
Phrae	96.2	Phuket	75.0
Chon Buri	95.8	Mae Hong Son	63.1

Carbon footprint

Carbon footprint is an indicator for green gas emissions. It is measured by the amount of carbon dioxide released from the burning of fuel in households, transportation, and from products or production processes.

The largest carbon footprint was found in the industrial areas of the Central Region. Five provinces in remote areas in different regions released the least amount of carbon dioxide.

Carbon footprint in 2011 (ton CO_2/person)			
Top five scores		**Bottom five scores**	
Nong Bua Lam Phu, Narathiwat, Mae Hong Son, Amnat Charoen, Nakhon Phanom	0.5	Nonthaburi	8.3
Surin, Si Sa Ket, Yasothon, Loei, Nong Khai, Roi Et, Kalasin, Sakon Nakhon, Mukdahan, Pattani	0.7	Chon Buri	9.0
Nan, Phayao, Ubon Ratchathani, Chaiyaphum, Maha Sarakham, Yala	0.8	Rayong	10.3
Phetchabun	0.9	Samut Sakhon	12.6
Phrae, Uthai Thani, Buri Ram	1.0	Samut Prakan	14.8

Flood

The year 2011 witnessed Thailand's worst flood in the past 50 years. Over two-thirds of the land area was flooded affecting 16.2 million people especially in the Central Region. Several industrial estates and factories were flooded and were forced to close down for months. The five worst-hit provinces were Samut Sakhon, Nan, Pathum Thani, Kalasin and Sing Buri. Five provinces were flood-free in 2011.

Population affected by flood in 2011 (%)			
Top five scores		**Bottom five scores**	
Ratchaburi, Kanchanaburi, Samut Songkhram, Phetchaburi, Chaiyaphum	0	Sing Buri	62.5
Prachuap Khiri Khan	0.2	Kalasin	66.8
Trat	0.4	Pathum Thani	74.1
Ranong	1.4	Nan	82.4
Samut Prakan	1.8	Samut Sakhon	94.2

Drought

Fifty-two provinces and 16.6 million people were hit by drought in 2011. The largest impact was felt in Loei, Amnat Charoen, Maha Sarakham, Roi Et, and Yasothon in the Northeast. Twenty-four provinces were not affected by drought.

Population affected by drought in 2011 (%)			
Top five scores		**Bottom five scores**	
Bangkok, Nonthaburi, Pathum Thani, Phra Nakhon Si Ayutthaya, Ang Thong, Lop Buri, Sing Buri, Chai Nat, Ratchaburi, Suphan Buri, Nakhon Pathom, Samut Sakhon, Samut Songkhram, Nakhon Si Thammarat, Krabi, Phang-nga, Phuket, Surat Thani, Ranong, Songkhla, Phatthalung, Pattani, Yala, Narathiwat	0	Yasothon	66.8
		Roi Et	68.5
		Maha Sarakham	75.3
		Amnat Charoen	83.0
		Loei	99.1

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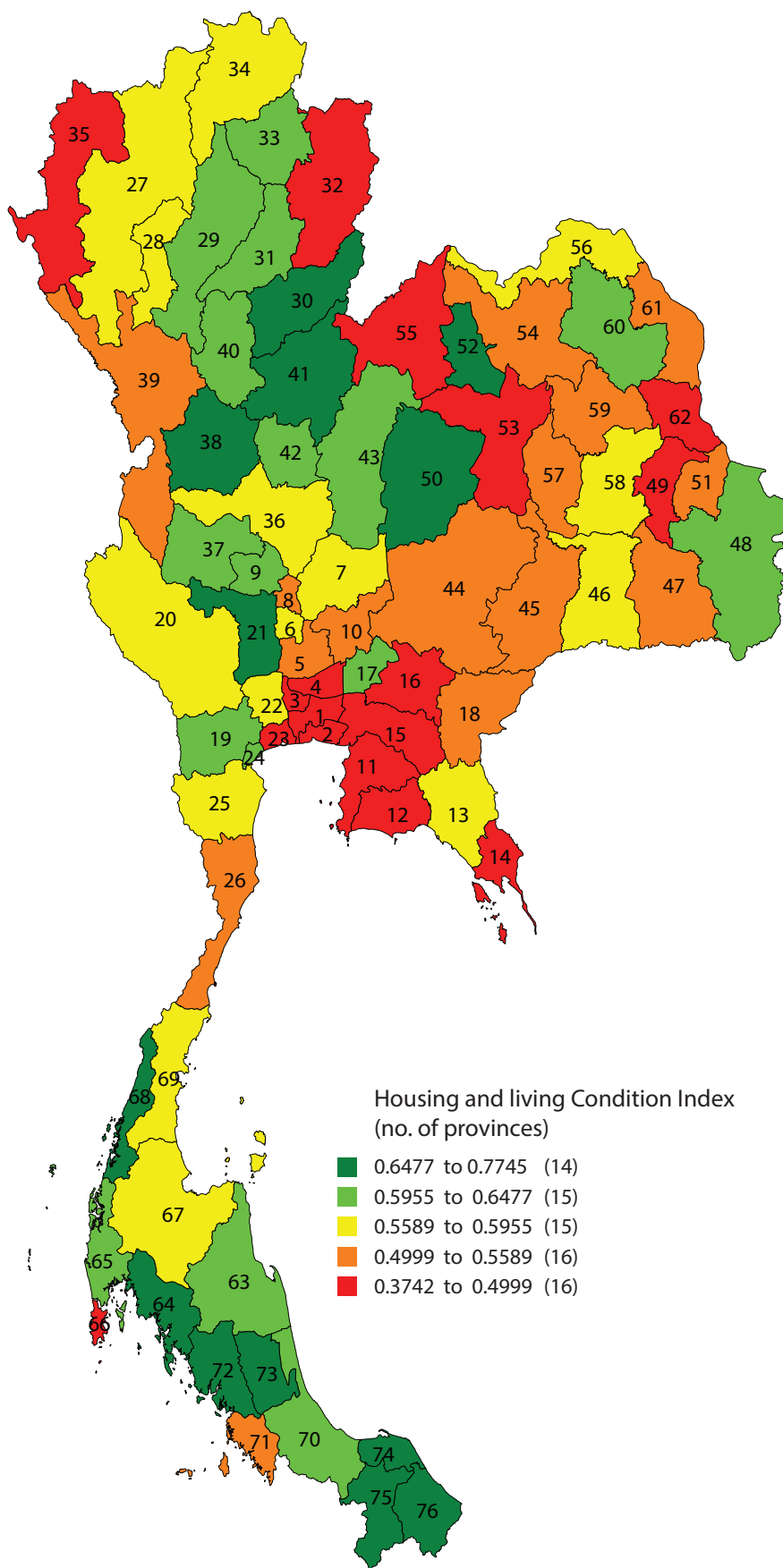
Rank		Code
1	Suphan Buri	21
2	Chaiyaphum	50
3	Yala	75
4	Uttaradit	30
5	Ranong	68
6	Trang	72
7	Narathiwat	76
8	Nong Bua Lam Phu	52
9	Kamphaeng Phet	38
10	Pattani	74
11	Phitsanulok	41
12	Krabi	64
13	Phatthalung	73
14	Chai Nat	9
15	Phayao	33
16	Nakhon Nayok	17
17	Phang-nga	65
18	Songkhla	70
19	Sakon Nakhon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

Housing and living Condition Index
(no. of provinces)

- 0.6477 to 0.7745 (14)
- 0.5955 to 0.6477 (15)
- 0.5589 to 0.5955 (15)
- 0.4999 to 0.5589 (16)
- 0.3742 to 0.4999 (16)

4.6 Family and Community Life

Family is fundamental for human and social development. Family and family ties are very important for the Asian societies including Thai.

The family and community life index consists of 6 indicators: orphans, abandoned children and children affected by AIDS, working children, single-headed households, elderly living alone, reported crimes against life, body and property and sexual crimes, drug-related arrests.

Northeastern provinces occupied the top 4 spots, leaving the 5th spot for Nonthaburi. At the opposite end, provinces in the Central Region were trapped in the bottom 4 spots, followed by Chumphon in the South.

Family and Community Life Index			
Top five scores		**Bottom five scores**	
1	Maha Sarakham	72	Chumphon
2	Buri Ram	73	Chanthaburi
3	Surin	74	Prachuap Khiri Khan
4	Udon Thani	75	Ang Thong
5	Nonthaburi	76	Chon Buri

Children in distress

The number of orphans, abandoned children, children affected by AIDS, and children with no birth certificate per 100,000 population dropped from 51.5 in 2007 to 38 in 2011.

Bangkok and nearby provinces, plus Surat Thani in the South, had the lowest ratios. The bottom five were in the North, the Northeast and the Central Region. Two of the three southernmost provinces – Narathiwat and Yala – also had high ratios at 90 and 54 per 100,000 population, respectively. But Pattani's ratio was only 25, lower than the national average.

Children in distress in 2011 (per 1,000 population)			
Top five scores		**Bottom five scores**	
Surat Thani	0.3	Chaiyaphum	119.1
Samut Songkhram	0.6	Phitsanulok	142.3
Nonthaburi	1.1	Mukdahan	156.2
Chon Buri	1.4	Lampang	172.8
Bangkok	1.8	Chai Nat	240.4

Notes: 1) There are no data for Bangkok. An average figure of Bangkok vicinity (Nonthaburi, Pathum Thani, Samut Prakan, Samut Sakhon and Nakhon Pathom) is used as a proxy for Bangkok.
2) Data cover only non-municipal areas.

Working children 15-17 years old

The number of children aged 15-17 having to leave school to work to support their family, or for lack of funding, declined from 18.5% in 2005 to 16.2% and 15.9% in 2007 and 2011, respectively. This may be credited to the education loan policy that supported more children to pursue education.

Mae Hong Son still had the highest proportion of working children. But Chumphon, Ranong and Phatthalung in the South and Ubon Ratchathani and Nong Bua Lam Phu in the Northeast were not far behind.

Nonthaburi was most successful in keeping children in school. As a result, Nonthaburi is among top five scorers on several indicators, e.g. years in schooling, O-Net score, average IQ, household income, all of which contribute to Nonthaburi taking the 3rd rank on HAI.

Working children 15-17 years old in 2011 (%)			
Top five scores		**Bottom five scores**	
Nonthaburi	1.2	Nong Bua Lam Phu	28.0
Phayao	2.1	Ranong, Phatthalung	29.4
Maha Sarakham, Phra Nakhon Si Ayutthaya	3.6	Chumphon	36.1
Samut Songkhram	4.4	Ubon Ratchathani	39.6
Uttaradit	5.7	Mae Hong Son	40.4

Single-headed households

Single-headed households tend to have more difficulties and more tension as all responsibilities are shouldered by only one person.

Single-headed households (widowed, divorced, separated) increased from 17.2% in 2005 to 18.1% and 22.7% in 2007 and 2011, respectively. Divorce and separation were the most common reasons for single-headed households. The divorce rate increased from 1 per 4.27 married couples in 2005 to 1 per 3.03, and 1 per 2.8 married couples in 2007 and 2010, respectively. This does not include common law couples.

Provinces with the lowest percentages of single-headed households were Samut Prakan, Pathum Thani and Rayong in the Central Region, and Phuket, Satun and Trang in the South. The highest percentages were recorded in Ang Thong, Nakhon Nayok and Samut Songkhram in the Central Region, Nakhon Phanom in the Northeast and Pattani in the deep South.

Single-headed households in 2011 (%)			
Top five scores		**Bottom five scores**	
Samut Prakan	13.2	Nakhon Phanom	29.7
Phuket	14.6	Samut Songkhram	29.9
Satun, Pathum Thani	16.0	Pattani	30.2
Trang	17.2	Nakhon Nayok	32.3
Rayong	17.6	Ang Thong	33.2

Elderly living alone

The elderly population (above 65 years) is projected to increase from 9.74% in 2002 to 19.99% in 2025.[4] Health and income are two important concerns for the elderly. Although a large number are cared for by their family, 3.2 million or 38.6% had to work in 2011; 90.3% of them worked in the informal sector.

The proportion of elderly living alone increased from 6.3% in 2002 to 7.8% and 8.6% in 2007 and 2011, respectively. The mental health of elderly living alone was not as good as those living with spouse, children and grandchildren, or other relatives who felt more safe, secure and stable.

Four of seven provinces with the highest percentages of elderly living alone were in the North, while three of five provinces with the lowest percentages were in the Northeast.

Elderly living alone in 2011 (%)			
Top five scores		**Bottom five scores**	
Buri Ram	4.4	Chiang Mai	12.2
Prachin Buri	4.8	Tak, Phang-nga	12.4
Samut Sakhon	5.1	Yala, Lamphun	12.9
Maha Sarakham	5.2	Lop Buri	13.1
Nong Bua Lam Phu	5.4	Kamphaeng Phet	13.2

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[4]   NESDB, Population Projections, 2000-2025.

Crimes against life, body and property and sexual crimes

In 2012, there were 119 reported crimes against life, body and property and sexual crimes.

The highest crimes rates were observed in Bangkok and provincial cities, and the lowest rates. Crimes rates were lowest in northeastern provinces.

Reported crimes against life, body and property and sexual crimes in 2012 (per 100,000 population)			
Top five scores		**Bottom five scores**	
Nakhon Phanom	38.8	Rayong	221.2
Yasothon	40.2	Phuket	233.9
Buri Ram	43.5	Chon Buri	237.2
Surin	47.3	Bangkok	250.2
Sakon Nakhon	47.5	Pathum Thani	267.9

Drug-related crimes

Drug-related arrests increased from 170 per 100,000 population in 2005 to 239 and 617 in 2007 and 2012, respectively. The sharp increase was largely due to the declaration of drug suppression as national agenda.

Drug-related crimes were most prevalent in Bangkok, large cities in the Central Region, and Surat Thani in the South. Northeastern provinces and Mae Hong Son had the least drug-related arrests.

Drug-related arrests in 2012 (per 100,000 population)			
Top five scores		**Bottom five scores**	
Mae Hong Son	64	Phetchaburi	1,013
Surin	179	Surat Thani	1,015
Si Sa Ket	190	Nakhon Pathom	1,036
Buri Ram	215	Bangkok	1,140
Nong Bua Lam Phu	233	Chon Buri	1,745

Map 6 Family and Community Life Index

Family and Community Life Index (no. of provinces)

- 0.7481 to 0.8360 (14)
- 0.7013 to 0.7481 (15)
- 0.6759 to 0.7013 (15)
- 0.6445 to 0.6759 (16)
- 0.5720 to 0.6445 (16)
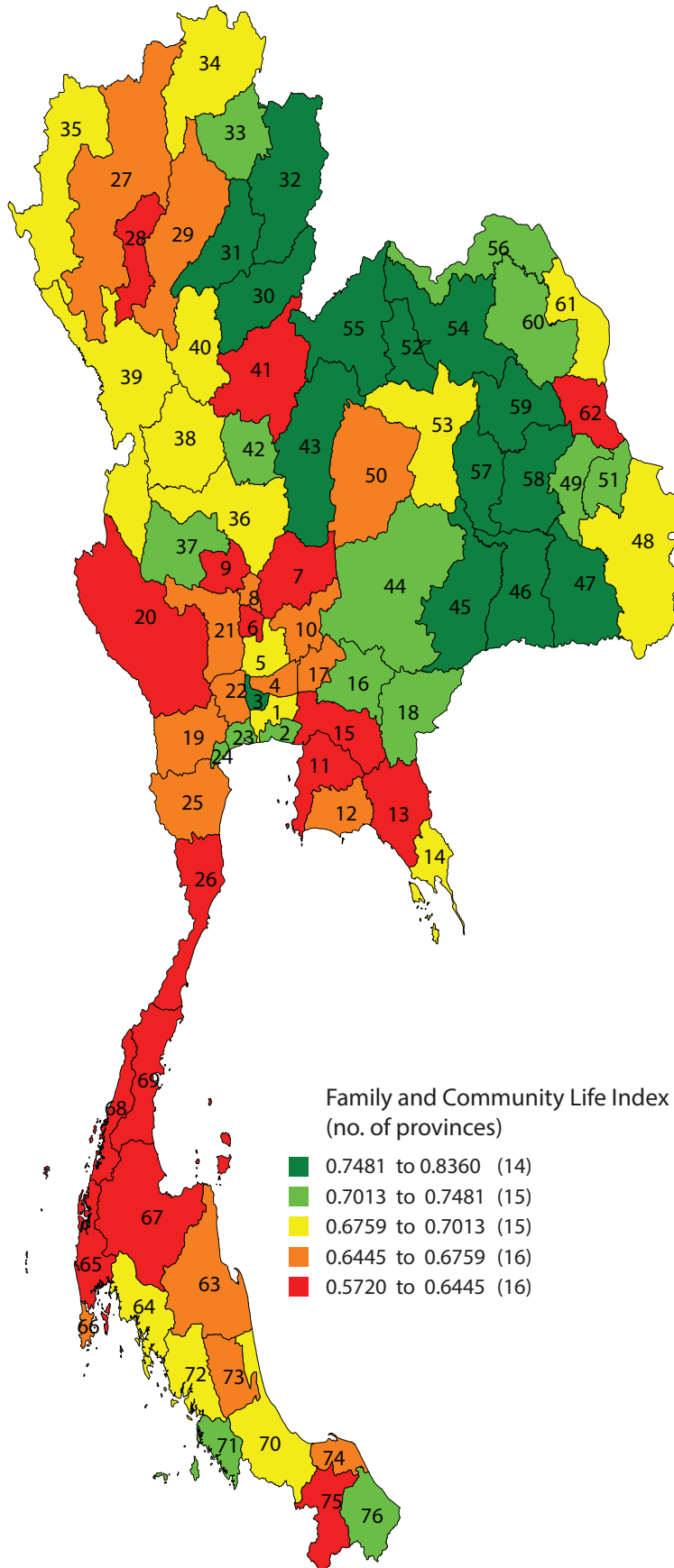
Rank		Code
1	Maha Sarakham	57
2	Buri Ram	45
3	Surin	46
4	Udon Thani	54
5	Nonthaburi	3
6	Phetchabun	43
7	Loei	55
8	Phrae	31
9	Roi Et	58
10	Nong Bua Lam Phu	52
11	Uttaradit	30
12	Nan	32
13	Si Sa Ket	47
14	Kalasin	59
15	Samut Prakan	2
16	Phayao	33
17	Yasothon	49
18	Prachin Buri	16
19	Uthai Thani	37
20	Sakon Nakhon	60
21	Nong Khai	56
22	Samut Songkhram	24
23	Amnat Charoen	51
24	Samut Sakhon	23
25	Phichit	42
26	Nakhon Ratchasima	44
27	Sa Kaeo	18
28	Satun	71
29	Narathiwat	76
30	Bangkok	1
31	Nakhon Phanom	61
32	Songkhla	70
33	Ubon Ratchathani	48
34	Sukhothai	40
35	Trang	72
36	Trat	14
37	Nakhon Sawan	36
38	Khon Kaen	53
39	Mae Hong Son	35
40	Kamphaeng Phet	38
41	Tak	39
42	Phra Nakhon Si Ayutthaya	5
43	Krabi	64
44	Chiang Rai	34
45	Nakhon Si Thammarat	63
46	Sing Buri	8
47	Chaiyaphum	50
48	Pattani	74
49	Phetchaburi	25
50	Nakhon Nayok	17
51	Phuket	66
52	Phatthalung	73
53	Pathum Thani	4
54	Lampang	29
55	Rayong	12
56	Chiang Mai	27
57	Ratchaburi	19
58	Nakhon Pathom	22
59	Suphan Buri	21
60	Saraburi	10
61	Yala	75
62	Phitsanulok	41
63	Mukdahan	62
64	Lamphun	28
65	Kanchanaburi	20
66	Lop Buri	7
67	Chachoengsao	15
68	Phang-nga	65
69	Surat Thani	67
70	Chai Nat	9
71	Ranong	68
72	Chumphon	69
73	Chanthaburi	13
74	Prachuap Khiri Khan	26
75	Ang Thong	6
76	Chon Buri	11

4.7 Transport and Communication Index

Mobility and connectivity enhance people's potential and enrich their lives. Convenient, safe transport and communication is basic infrastructure for human development and national competitiveness.

The transport and communication index consists of 6 indicators: villages with all-season road, registered vehicles, land traffic accidents, households with access to TV, population with mobile phone, population with internet access.

Bangkok and vicinity, Chon Buri on the east coast and Phuket – the tourism hub of the South, were top scorers, while Mae Hong Son in the North and 4 northeastern provinces were found at the bottom.

Transport and Communication Index			
Top five provinces		**Bottom five provinces**	
1	Phuket	72	Buri Ram
2	Bangkok	73	Amnat Charoen
3	Pathum Thani	74	Surin
4	Chon Buri	75	Si Sa Ket
5	Nonthaburi	76	Mae Hong Son

All-season main road

Thailand's road network consists of motorways, highways, rural roads, municipal roads, local roads, and concessional roads. At present, additions to the road network are quite minimal. The focus is on maintaining the existing network that has reached most parts of the country to ensure that the roads are in good condition all year round.

Provinces that had the most extensive road network were Bangkok, Phuket, Samut Sakhon, Sing Buri, and Pathum Thani and Nonthaburi. In Kamphaeng Phet, Mae Hong Son, Nakhon Sawan, Maha Sarakham and Si Sa Ket, about one-third of the villages did not have convenient access to the provincial centre as the roads were often in bad condition during the rainy reason.

Villages with all-season main road in 2011 (%)			
Top five scores		**Bottom five scores**	
Bangkok, Phuket	92.3	Nakhon Sawan	40.4
Samut Sakhon	90.1	Mae Hong Son	39.1
Sing Buri	87.3	Si Sa Ket	38.8
Pathum Thani	86.3	Maha Sarakham	37.6
Nonthaburi	85.9	Kamphaeng Phet	36.6

Notes: 1) There are no data for Bangkok. Phuket, with the highest percentage, is used as proxy for Bangkok.
2) Data cover only non-municipal areas.

Registered vehicles

The number of registered vehicles increased from 24.5 million in 2007 (64% being motorcycles) to 31.4 million (60.5% being motorcycles). In 2012, Thai people had 488 registered vehicles per 1,000 population, or 1 vehicle per 2 persons.

In Bangkok and Phuket, the ratio was higher than 1 vehicle per 1 person. However, it should be noted that Bangkok vicinities had very low ratios as residents preferred to purchase and register their vehicles in Bangkok where there were more dealers.

Registered vehicles in 2012 (per 1,000 population)			
Top five scores		**Bottom five scores**	
Bangkok	1,286	Si Sa Ket	221
Phuket	448	Mae Hong Son	196
Rayong	845	Nonthaburi	130
Chon Buri	824	Pathum Thani	105
Chiang Mai	671	Samut Prakan	77

Land traffic accidents

Despite many years of campaigning, over 60,000 road accidents were reported in 2011. Motorcycles accounted for the largest number of the accidents, followed by passenger vehicles, and pick-ups. Speeding was the leading cause. Festive seasons especially New Year and Songkran were critical periods because of heavy traffic and as traffic a large number of travelers took to the roads and a large number are involved in drunk-driving. Road accidents cause deal heavy loss to the economy. Family members may have to quit their job to provide care to the accident victims. Recently, WHO ranked Thailand as #3rd among the 10 countries with highest road accident deaths.

Provinces with extensive economic activities or provinces along major transport routes had high accident rates. Remote provinces had fewer accidents.

Land traffic accidents in 2011 (per 100,000 population)			
Top five scores		Bottom five scores	
Narathiwat	14.5	Surat Thani	126.7
Sakon Nakhon	17.9	Phuket	135.7
Pattani	18.2	Samut Prakan	191.9
Udon Thani	18.5	Chiang Mai	225.4
Nong Bua Lam Phu	19.1	Bangkok	608.0

Television

Thai people prefer television to newspapers or radio. Households having access to television increased from 95% in 2007 to 97% in 2011. Entertainment was the most favourite type of programme, followed by news. As people age, they tend to watch more news and less entertainment. Traditional media such as television, radio and newspaper are being overtaken by computer and internet.

Nearly all households had access to television. Even among the bottom 5 provinces, all but Mae Hong Son had over 90% penetration rate; Mae Hong Son's rate was only 79% .

Households with access to television in 2011 (%)			
Top five scores		Bottom five scores	
Chon Buri, Pathum Thani	99.6	Mukdahan	94.1
Samut Prakan	99.4	Prachin Buri, Surin	93.4
Ubon Ratchathani	99.1	Tak	93.0
Sakon Nakhon	98.9	Narathiwat	92.9
Phayao	98.8	Mae Hong Son	79.1

Mobile phone

The mobile phone is multi-functional and very popular. In 2011 over 70% of the population used a mobile phone. Mobile phone usage was highest in Bangkok, followed by Bangkok vicinity and Rayong, and lowest in Mae Hong Son.

Population with mobile phone in 2011 (%)			
Top five scores		Bottom five scores	
Bangkok	84.0	Nan	58.8
Chon Buri	82.5	Si Sa Ket	58.7
Nonthaburi	82.3	Mukdahan	58.1
Pathum Thani	81.7	Narathiwat	56.0
Rayong	79.2	Mae Hong Son	37.6

Internet

Computer and internet are the most important learning tools. Youth's IT skills are vital for human development in a learning society.

Population with internet access increased from 12% in 2005 to 15.5% and 26.5% in 2007 and 2011, respectively. Three-fourths of Thai households used high-speed internet via mobile phone and fixed-line broadband.

Internet penetration was highest in Bangkok and regional cities, and lowest in Nong Khai on the northeast border and Mae Hong Son on the northern border. The digital gap, on top of other aspects of deprivation, is another handicap for children and the youth in these areas.

Population with internet access in 2011 (%)			
Top five scores		Bottom five scores	
Bangkok	44.4	Chaiyaphum	17.9
Phuket	42.9	Kalasin	17.6
Pathum Thani	41.1	Suphan Buri	16.9
Nonthaburi	37.2	Mae Hong Son	16.2
Samut Prakan	34.4	Nong Khai	16.1

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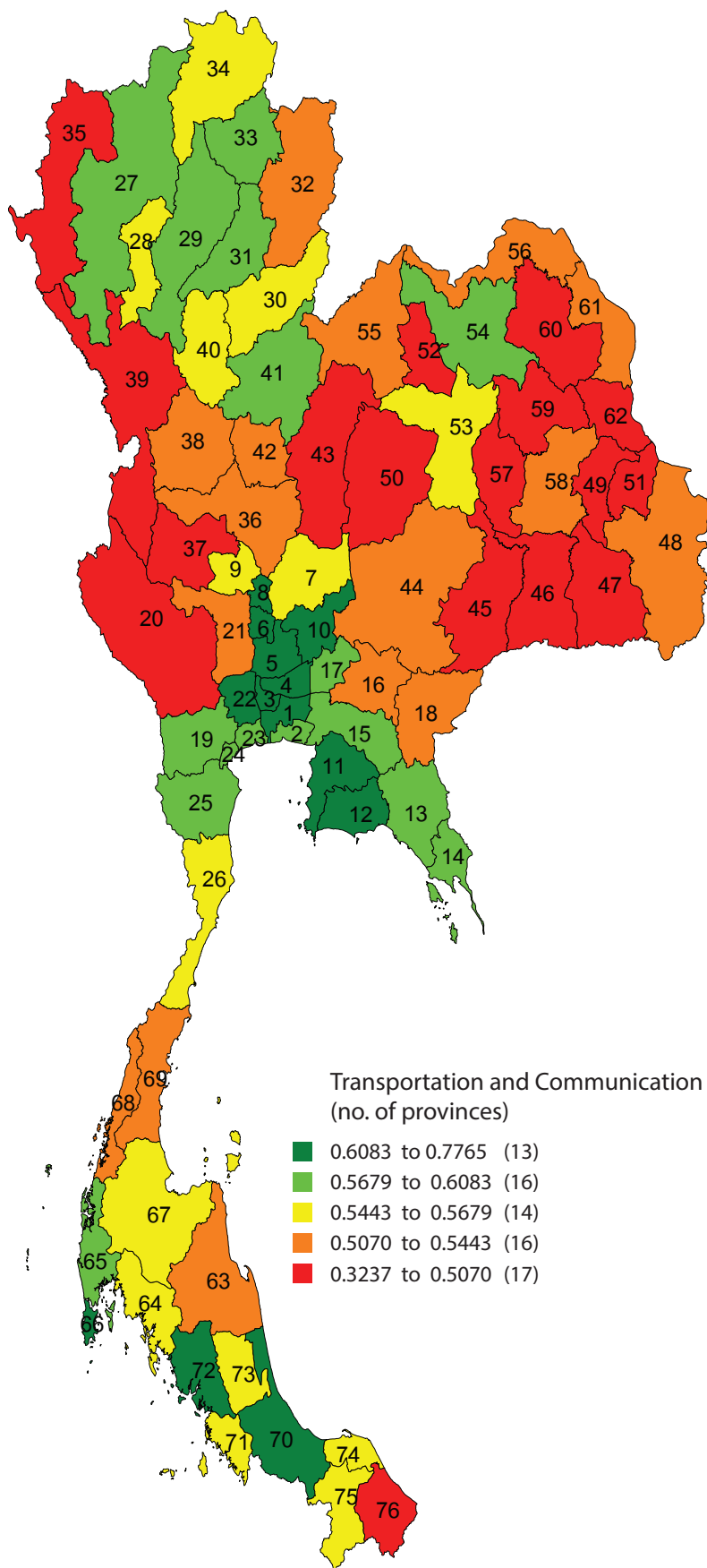
Rank		Code
1	Phuket	66
2	Bangkok	1
3	Pathum Thani	4
4	Chon Buri	11
5	Nonthaburi	3
6	Rayong	12
7	Trang	72
8	Sing Buri	8
9	Nakhon Pathom	22
10	Songkhla	70
11	Phra Nakhon Si Ayutthaya	5
12	Ang Thong	6
13	Saraburi	10
14	Samut Sakhon	23
15	Phrae	31
16	Lampang	29
17	Samut Songkhram	24
18	Nakhon Nayok	17
19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

Transportation and Communication Index (no. of provinces)

- 0.6083 to 0.7765 (13)
- 0.5679 to 0.6083 (16)
- 0.5443 to 0.5679 (14)
- 0.5070 to 0.5443 (16)
- 0.3237 to 0.5070 (17)

4.8 Participation Index and Indicators

People's participation is key to social and democratic development.   Participating in political and community activities also empowers the people and helps enhance their capacity, their knowledge and skills as well as their quality of life.

The participation index consists of 4 indicators: voter turnout, community groups, households participating in local groups, households participating in social services.

The top five provinces were largely small provinces in different regions. The bottom five provinces were split between large and bustling cities such as Bangkok, Chon Buri and Pathum Thani, and remote provinces such as Mae Hong Son in the North and Yala in the South.

Participation Index			
Top five provinces		Bottom five provinces	
1	Chai Nat	72	Yala
2	Lamphun	73	Mae Hong Son
3	Amnat Charoen	74	Pathum Thani
4	Sing Buri	75	Chon Buri
5	Nan	76	Bangkok

Voter turnout

Voter turnout increased from 70% in 2001 to 72.5% in 2005 and 74.5% in 2007 to 75% in 2011.

In 2011, voter turnout was highest at 77.2% in the Central Region, followed by the North, the South, the Northeast and Bangkok. Lamphun remained on top with the highest voter turnout.   All the bottom five provinces were in the Northeast.

Voter turnout in 2011 (%)			
Top five scores		Bottom five scores	
Lamphun	88.6	Nakhon Phanom	69.9
Chiang Mai	83.1	Sakon Nakhon	69.3
Trang, Ratchaburi	82.6	Udon Thani	69.2
Saraburi	81.5	Nong Bua Lam Phu	69.1
Mae Hong Son	81.4	Nong Khai	68.6

Community organizations

In 2012, Thailand had 136,638 community organizations or 212 per 100,000 population. They were engaged in community enterprise, occupational development, promotion of cultural/local wisdom, community welfare, environment and nat-ural resource management, community savings, community media, etc. The Community Organization Council Act 2008 also established a large number of community organization councils to promote networking among local communities. Local committees, community organization councils, and the Community Organization Development Institute have the mandate to certify and register community organizations.

The largest concentration of community organizations was in the Northeast, followed by the Central Region, the North, the South and Bangkok. The top five scorers were away from the major centres. More bustling provinces, namely Bangkok and Bangkok vicinity had the lowest concentration of community organizations.

Community organizations in 2012 (per 100,000 population)			
Top five scores		Bottom five scores	
Chai Nat	697	Samut Sakhon	92
Amnat Charoen	684	Pathum Thani	86
Trat	679	Samut Prakan	85
Mukdahan	580	Nonthaburi	54
Uthai Thani	576	Bangkok	52

Local groups

In rural areas, local groups/organizations play an important role in income generation, career development, welfare, and environmental and disaster management.

Participation in local groups was highest in more remote provinces.

Households participating in local groups in 2011 (%)			
Top five scores		**Bottom five scores**	
Roi Et, Samut Songkhram, Yasothon, Nakhon Phanom	99.9	Pathum Thani	91.8
Phrae, Maha Sarakham, Amnat Charoen	99.8	Satun	91.1
Kalasin, Ubon Ratchathani, Phayao	99.7	Chon Buri	90.8
Kamphaeng Phet	99.6	Mae Hong Son	86.4
Sing Buri	99.5	Yala, Bangkok	85.8

Notes: 1) There are no data for Bangkok. Yala, with the lowest percentage, is used as proxy for Bangkok.
2) Data cover only non-municipal areas.

Social services

Social services are voluntary and non-payable services that benefit others or the society at large, such as maintenance of public facilities and environment preservation.

Nearly all rural households participated in social services in their community. Even the bottom five provinces had higher than 90% participation rate.

Households participating in social services in 2011 (%)			
Top five scores		**Bottom five scores**	
Samut Songkhram, Phrae, Udon Thani, Nakhon Phanom, Buri Ram	100	Mae Hong Son	96.5
Phra Nakhon Si Ayutthaya, Nan, Phayao, Kamphaeng Phet, Nong Bua Lam Phu, Loei, Maha Sarakham, Kalasin	99.9	Samut Prakan, Nakhon Si Thammarat	96.2
Chaiyaphum, Surin, Si Sa Ket, Phichit, Sa Kaeo, Saraburi	99.8	Phuket	95.0
Lampang, Uttaradit, Chiang Rai, Ubon Ratchathani, Khon Kaen	99.7	Pathum Thani	94.7
Uthai Thani	99.6	Chon Buri, Bangkok	94.6

Notes: 1) There are no data for Bangkok. Chon Buri, with the lowest percentage, is used as proxy for Bangkok.
2) Data cover only non-municipal areas.

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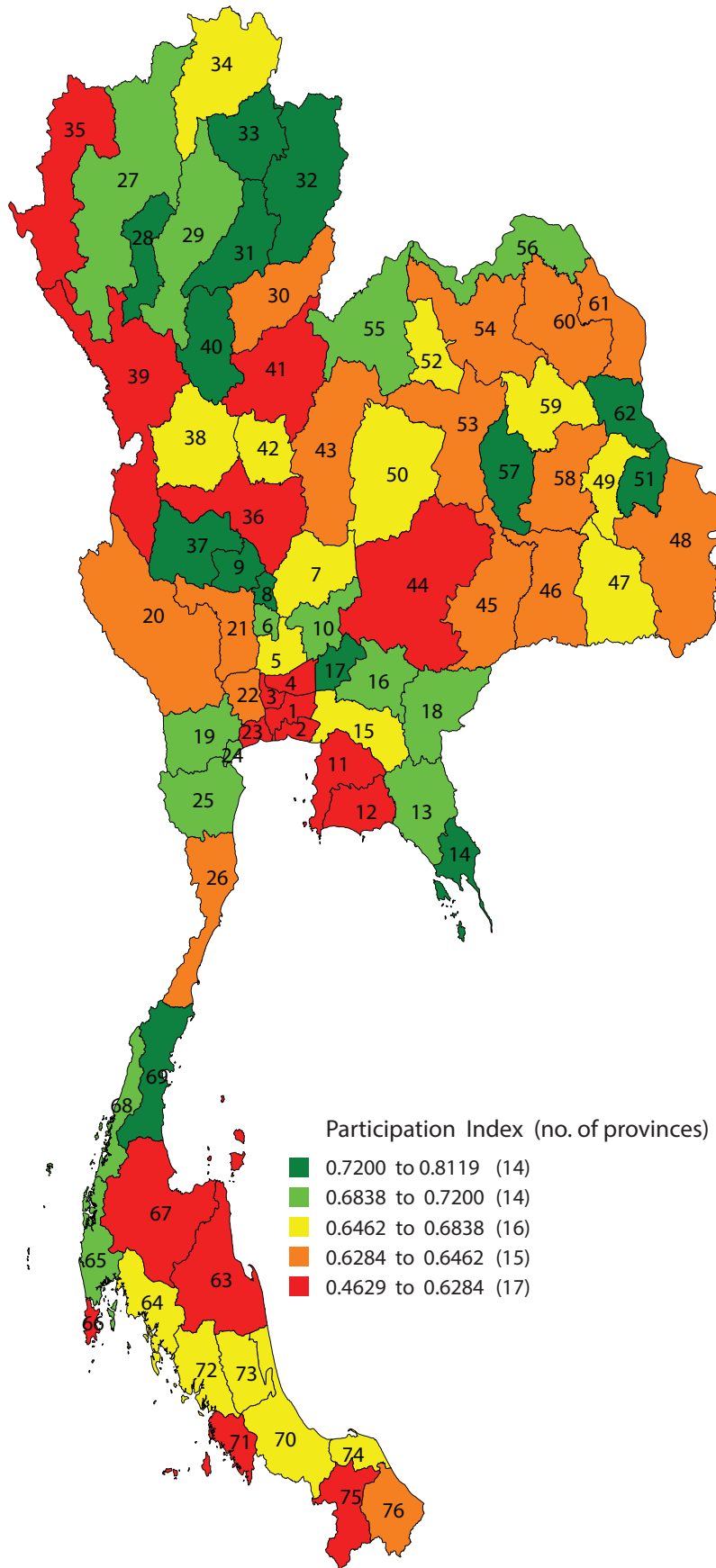
Rank		Code
1	Chai Nat	9
2	Lamphun	28
3	Amnat Charoen	51
4	Sing Buri	8
5	Nan	32
6	Trat	14
7	Mukdahan	62
8	Uthai Thani	37
9	Nakhon Nayok	17
10	Maha Sarakham	57
11	Phayao	33
12	Sukhothai	40
13	Chumphon	69
14	Phrae	31
15	Samut Songkhram	24
16	Lampang	29
17	Chiang Mai	27
18	Phang-nga	65
19	Chanthaburi	13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

Participation Index (no. of provinces)

- 0.7200 to 0.8119 (14)
- 0.6838 to 0.7200 (14)
- 0.6462 to 0.6838 (16)
- 0.6284 to 0.6462 (15)
- 0.4629 to 0.6284 (17)

ANNEX I
DATA TABLES

Table 0: Basic Data

Location	Population 2011			Household 2011		Gross Provincial Product (GPP) 2000p		Land area 2000				Population density 2011
	Male	Female	Total	Total	Average household size	Total	per capital	Total	Forest	Farm hold	Un-classified	
	(person)	(person)	(person)	(household)	(persons)	(million Baht/ year)	(Baht/year)	(sq.km.)	(sq.km.)	(sq.km.)	(sq.km.)	(person/ sq.km.)
	1	2	3	4	5	6	7	8	9	10	11	12
Kingdom	**31,529,148**	**32,546,885**	**64,076,033**	**19,985,866**	**3.2**	**10,807,473**	**160,556**	**513,115**	**171,586**	**243,731**	**97,799**	**125**
Bangkok	**2,692,954**	**2,981,889**	**5,674,843**	**1,965,903**	**3.1**	**3,142,031**	**456,911**	**1,565**	**1**	**578**	**987**	**3,626**
Samut Prakan	579,927	623,296	1,203,223	415,084	2.9	662,320	501,847	1,004	11	357	636	1,198
Nonthaburi	527,269	595,358	1,122,627	310,683	2.7	159,119	162,707	622	0	375	248	1,804
Pathum Thani	480,467	530,431	1,010,898	248,134	3.0	333,652	400,648	1,526	0	981	545	663
Phra Nakhon Si Ayutthaya	380,310	407,343	787,653	225,710	3.1	355,177	459,724	2,557	0	1,849	707	308
Ang Thong	136,354	147,707	284,061	83,133	3.0	18,120	65,791	968	0	778	190	293
Lop Buri	379,805	376,322	756,127	234,846	3.0	67,817	86,862	6,200	1,096	4,066	1,038	122
Sing Buri	101,932	111,655	213,587	71,963	3.2	23,532	99,529	822	0	719	103	260
Chai Nat	160,884	172,372	333,256	118,017	3.0	24,596	67,078	2,470	77	2,074	319	135
Saraburi	306,986	313,468	620,454	183,901	3.4	174,707	285,219	3,576	807	1,974	796	173
Chon Buri	656,537	682,119	1,338,656	388,831	2.9	657,545	544,160	4,363	481	2,660	1,223	307
Rayong	314,392	323,344	637,736	193,357	3.1	739,168	1,225,058	3,552	297	2,259	995	180
Chanthaburi	254,516	262,339	516,855	170,050	3.1	90,268	166,798	6,338	2,138	2,868	1,332	82
Trat	110,801	111,212	222,013	79,119	3.1	37,947	153,948	2,819	733	1,161	925	79
Chachoengsao	333,151	346,219	679,370	211,855	3.2	234,523	326,531	5,351	774	3,613	964	127
Prachin Buri	232,784	236,868	469,652	135,974	3.1	222,285	487,276	4,762	1,386	2,393	983	99
Nakhon Nayok	125,631	128,200	253,831	80,594	2.9	18,950	71,841	2,122	640	1,091	391	120
Sa Kaeo	274,286	271,310	545,596	180,869	3.4	26,506	48,206	7,195	1,584	3,902	1,710	76
Ratchaburi	411,063	431,621	842,684	246,479	3.0	127,890	152,380	5,196	1,756	2,406	1,035	162
Kanchanaburi	421,782	417,132	838,914	230,752	3.2	67,180	84,888	19,483	12,285	4,311	2,887	43
Suphan Buri	409,641	435,412	845,053	263,080	3.0	59,546	66,378	5,358	615	3,615	1,128	158
Nakhon Pathom	415,745	450,319	866,064	301,202	2.7	172,891	177,110	2,168	0	1,484	684	399
Samut Sakhon	241,183	257,915	499,098	188,970	2.9	303,878	524,956	872	38	505	330	572
Samut Songkhram	93,302	100,784	194,086	63,704	2.8	16,157	76,071	417	20	322	75	466
Phetchaburi	225,884	240,195	466,079	137,774	3.1	50,443	109,227	6,225	3,384	1,510	1,331	75
Prachuap Khiri Khan	256,429	256,139	512,568	146,311	3.2	66,299	136,945	6,368	2,139	2,327	1,902	80
Central Region	**7,831,061**	**8,229,080**	**16,060,141**	**4,910,392**	**3.0**	**7,852,544**	**343,204**	**102,336**	**30,261**	**50,178**	**23,463**	**157**
Chiang Mai	802,823	843,321	1,646,144	552,388	2.7	147,561	92,110	20,107	16,609	3,124	373	82
Lamphun	196,509	207,443	403,952	143,152	3.0	64,080	147,213	4,506	2,576	1,074	855	90
Lampang	373,104	384,430	757,534	271,683	2.8	55,643	67,913	12,534	9,562	1,927	1,046	60
Uttaradit	227,307	233,733	461,040	154,018	3.1	25,947	52,920	7,839	4,921	2,305	612	59
Phrae	223,491	235,259	458,750	172,141	3.0	19,840	38,375	6,539	4,116	1,182	1,241	70
Nan	240,465	236,147	476,612	152,035	3.2	21,328	43,406	11,472	8,166	1,645	1,661	42
Phayao	238,346	248,126	486,472	186,124	2.8	26,689	49,950	6,335	3,287	1,916	1,132	77
Chiang Rai	589,759	608,897	1,198,656	408,304	2.9	67,273	55,600	11,678	5,165	4,181	2,333	103
Mae Hong Son	125,240	118,808	244,048	72,446	3.0	8,961	38,277	12,681	11,268	515	899	19
Nakhon Sawan	524,806	546,880	1,071,686	366,321	3.1	80,836	70,035	9,598	881	6,942	1,775	112
Uthai Thani	161,334	166,700	328,034	100,826	3.0	19,666	61,356	6,730	3,473	2,478	779	49
Kampaeng Phet	360,906	365,103	726,009	220,482	3.1	76,519	106,219	8,607	2,027	5,536	1,045	84
Tak	269,370	261,648	531,018	164,705	3.0	34,294	64,545	16,407	12,708	2,281	1,418	32
Sukhothai	293,624	307,880	601,504	203,538	3.0	29,726	47,233	6,596	2,258	3,447	891	91
Phitsanulok	418,328	433,029	851,357	266,288	3.1	59,767	70,381	10,816	3,975	4,852	1,988	79
Phichit	269,338	280,350	549,688	186,996	3.0	34,274	57,167	4,531	13	3,810	708	121
Phetchabun	492,922	497,885	990,807	310,013	3.1	55,747	53,715	12,668	4,070	6,719	1,879	78
Northern Region	**5,807,672**	**5,975,639**	**11,783,311**	**3,931,460**	**3.0**	**828,151**	**68,015**	**169,644**	**95,075**	**53,935**	**20,634**	**69**
Nakhon Ratchasima	1,278,327	1,306,998	2,585,325	808,188	3.2	187,963	66,670	20,494	3,133	13,646	3,715	126
Buri Ram	778,059	781,026	1,559,085	450,769	3.6	60,090	36,384	10,322	963	7,492	1,867	151
Surin	690,644	689,755	1,380,399	416,245	3.3	50,730	35,085	8,124	931	6,042	1,151	170

Table 0: Basic Data

Location	Population 2011			Household 2011		Gross Provincial Product (GPP) 2000p		Land area 2000				Population density 2011
	Male	Female	Total	Total	Average household size	Total	per capital	Total	Forest	Farm hold	Un-classified	
	(person)	(person)	(person)	(household)	(persons)	(million Baht/year)	(Baht/year)	(sq.km.)	(sq.km.)	(sq.km.)	(sq.km.)	(person/sq.km.)
	1	2	3	4	5	6	7	8	9	10	11	12
Si Sa Ket	726,173	726,030	1,452,203	430,402	3.5	48,275	31,356	8,840	1,069	6,339	1,431	164
Ubon Ratchathani	911,101	904,956	1,816,057	497,644	3.7	76,613	40,976	15,745	3,035	8,559	4,151	115
Chaiyaphum	560,672	566,751	1,127,423	347,275	3.3	42,007	35,059	12,778	3,869	6,191	2,718	88
Amnat Charoen	186,476	185,765	372,241	111,570	3.4	11,620	29,144	3,161	575	2,175	412	118
Nong Bua Lam Phu	252,496	250,055	502,551	146,323	3.8	16,761	31,293	3,859	594	2,434	832	130
Khon Kaen	875,013	891,053	1,766,066	534,062	3.0	145,372	76,871	10,886	1,287	7,410	2,188	162
Udon Thani	772,960	775,147	1,548,107	460,757	3.6	75,793	46,540	11,730	1,389	7,180	3,161	132
Loei	315,516	309,404	624,920	175,153	3.5	28,535	43,224	11,425	3,926	3,988	3,511	55
Nong Khai	255,256	254,614	509,870	275,300	3.4	42,888	43,997	3,027	557	4,423	2,352	168
Maha Sarakham	465,768	473,968	939,736	296,542	3.5	38,761	37,690	5,292	332	4,561	398	178
Roi Et	651,054	654,004	1,305,058	400,651	3.2	53,855	39,571	8,299	511	5,860	1,929	157
Kalasin	489,082	492,573	981,655	284,867	3.4	38,015	37,679	6,947	752	4,748	1,447	141
Sakon Nakhon	561,563	561,788	1,123,351	340,190	3.2	38,125	33,021	9,606	1,911	5,279	2,416	117
Nakhon Phanom	351,819	352,949	704,768	216,802	3.3	27,146	36,135	5,513	849	2,787	1,877	128
Mukdahan	170,814	169,767	340,581	98,505	3.6	15,684	45,592	4,340	1,434	1,796	1,110	78
Bueng Kan	205,647	201,987	407,634	na.	na.	na.	na.	4,306	na.	na.	na.	95
Northeastern Region	**10,768,746**	**10,817,137**	**21,585,883**	**6,473,796**	**3.4**	**1,018,451**	**44,516**	**168,854**	**27,556**	**103,779**	**37,520**	**128**
Nakhon Si Thammarat	757,150	768,921	1,526,071	518,887	3.4	155,862	90,033	9,943	2,113	4,935	2,894	153
Krabi	218,708	219,331	438,039	112,970	3.2	61,470	154,620	4,709	985	2,691	1,033	93
Phang-nga	127,682	127,249	254,931	83,367	2.9	43,514	162,111	4,171	1,931	1,593	647	61
Phuket	167,370	186,477	353,847	99,489	2.6	97,569	324,385	543	154	236	154	652
Surat Thani	500,121	511,943	1,012,064	307,844	3.0	161,164	159,573	12,891	3,860	5,748	3,284	79
Ranong	95,317	88,532	183,849	56,306	3.4	24,279	127,730	3,298	1,792	855	652	56
Chumphon	244,542	247,640	492,182	159,788	3.2	64,525	126,428	6,009	1,329	3,874	806	82
Songkhla	667,250	699,760	1,367,010	421,949	3.0	196,933	134,498	7,394	1,102	4,023	2,268	185
Satun	150,319	151,148	301,467	78,522	3.6	31,433	107,479	2,479	962	1,020	496	122
Trang	307,422	319,286	626,708	201,191	3.3	80,829	117,390	4,918	1,069	3,083	765	127
Phatthalung	250,280	260,783	511,063	179,363	3.1	35,144	62,066	3,424	646	2,064	714	149
Pattani	327,632	335,853	663,485	168,876	3.9	46,175	66,624	1,940	91	1,405	444	342
Yala	244,903	248,864	493,767	126,286	3.1	53,887	110,597	4,521	1,518	2,023	980	109
Narathiwat	370,019	377,353	747,372	189,477	3.7	55,547	71,408	4,475	1,142	2,289	1,044	167
Southern Region	**4,428,715**	**4,543,140**	**8,971,855**	**2,704,315**	**3.2**	**1,108,330**	**118,184**	**70,715**	**18,694**	**35,839**	**16,182**	**127**

Table 1: Health

Location	Population mid-year 2011 (persons)	Birth rate 2011 (per 1,000 pop)	Under-weight births 2011 (% of live births)	Crude death 2011 (per 1,000 pop)	Under-five mortality 2011 (per 1,000 live births)	Infant mortality 2011 (per 1,000 live births)	Maternal mortality 2011 (per 100,000 live births)	AIDS patients 1984-2010 (persons)	New AIDS patients 2010 (persons)	AIDS incidence 2010 (per 100,000 pop)	Population with physical illness 2011 Male (%)	Female (%)	Total (%)	Mental health score 2012 (%)	Mental illness 2011 (per 1,000 pop)	Population consuming alcoholic beverage (11 years and over) 2011 Male (%)	Female (%)	Total (%)	Population smoking cigarette (11 years and over) 2011 Male (%)	Female (%)	Total (%)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Kingdom	**64,181,051**	**12.4**	**9.6**	**6.5**	**9.0**	**6.6**	**8.9**	**372,753**	**5,058**	**8.0**	**18.3**	**22.9**	**20.6**	**74.6**	**26.1**	**36.0**	**3.9**	**19.6**	**33.6**	**1.6**	**17.2**
Bangkok	**5,688,119**	**17.8**	**10.5**	**6.7**	**8.9**	**7.3**	**6.9**	**41,405**	**944**	**16.5**	**19.7**	**19.4**	**19.5**	**71.4**	**48.3**	**29.7**	**2.6**	**15.0**	**26.0**	**1.3**	**12.6**
Samut Prakan	1,194,202	13.8	10.1	5.8	8.2	6.3	0.0	7,380	260	22.9	26.3	22.9	24.5	66.2	18.0	42.4	3.3	21.5	29.8	0.2	14.0
Nonthaburi	1,112,185	10.2	9.6	5.6	7.8	5.4	0.0	6,462	134	12.9	18.0	24.6	21.5	71.1	27.3	31.2	2.7	16.2	22.8	0.9	11.3
Pathum Thani	998,271	10.8	10.0	5.2	9.5	7.4	9.2	7,036	89	9.8	18.4	25.7	22.2	76.0	17.4	41.8	7.6	24.0	24.7	2.3	13.1
Phra Nakhon Si Ayutthaya	784,875	11.1	9.1	7.4	9.9	6.9	11.5	5,060	128	16.7	16.8	25.1	21.2	76.9	47.0	30.7	2.4	15.9	30.2	1.4	15.2
Ang Thong	284,516	10.5	9.9	8.6	11.7	10.0	0.0	1,368	46	16.2	21.7	27.8	25.0	74.6	46.7	27.0	2.2	13.9	31.6	2.2	16.1
Lop Buri	755,991	10.4	8.9	7.6	8.4	6.2	0.0	3,539	21	2.8	11.4	22.4	17.1	74.2	11.5	35.6	6.1	20.6	30.1	1.9	15.7
Sing Buri	214,124	10.7	9.7	9.3	6.1	3.9	0.0	1,311	43	19.9	22.2	30.5	26.5	73.6	20.8	30.2	1.7	15.1	26.7	1.6	13.4
Chai Nat	334,096	8.8	10.5	8.5	7.5	4.8	0.0	723	34	10.1	14.3	27.2	21.0	75.4	62.1	31.5	3.0	16.5	29.2	1.9	14.8
Saraburi	618,919	14.1	9.8	8.3	9.3	6.7	0.0	2,988	12	1.9	17.7	21.6	19.6	75.8	36.5	36.9	5.5	21.0	29.9	2.3	15.9
Chon Buri	1,327,475	22.5	9.4	7.1	6.3	4.6	13.4	7,646	62	5.0	16.3	20.0	18.2	76.5	22.3	34.0	6.7	20.2	25.3	1.7	13.4
Rayong	632,069	16.3	9.6	6.5	7.8	5.5	0.0	9,304	45	7.6	12.2	15.1	13.6	72.5	19.6	37.6	4.4	21.0	28.9	1.9	15.4
Chanthaburi	515,736	13.0	11.0	7.2	10.3	8.2	0.0	6,227	149	29.5	7.9	18.4	13.2	76.0	12.7	36.8	4.8	20.4	27.7	1.8	14.4
Trat	221,467	11.6	8.9	6.0	5.1	2.7	0.0	3,677	17	7.7	7.3	10.3	8.8	70.5	10.3	38.8	5.5	21.9	32.0	2.6	17.1
Chachoengsao	676,652	12.7	9.0	6.9	8.3	6.4	23.3	3,549	63	9.5	16.4	29.8	23.0	72.7	11.1	31.3	2.9	16.8	31.8	2.0	16.5
Prachin Buri	468,113	13.0	9.5	7.0	8.4	5.9	0.0	2,993	28	6.1	14.0	21.0	17.5	74.6	36.9	38.5	4.7	21.4	34.0	1.3	17.4
Nakhon Nayok	253,283	15.4	10.0	9.0	6.7	5.1	0.0	1,754	35	14.0	16.7	23.9	20.4	70.9	16.3	34.0	3.6	18.5	34.0	1.9	17.6
Sa Kaeo	544,848	11.3	9.5	5.6	10.8	6.0	16.2	2,536	40	7.4	17.5	27.1	22.4	66.9	60.4	44.5	9.9	27.1	37.8	1.8	19.7
Ratchaburi	840,880	13.0	9.7	7.3	10.7	7.8	9.1	5,398	14	1.7	14.7	19.4	17.1	72.6	17.6	31.2	5.0	17.7	29.5	1.7	15.1
Kanchanaburi	839,345	11.8	10.0	5.6	8.8	5.3	0.0	4,520	171	20.4	10.1	17.8	13.9	69.9	7.9	40.8	5.0	22.6	40.5	5.0	22.5
Suphan Buri	845,452	10.8	9.2	7.6	9.1	5.4	0.0	5,016	45	5.3	13.4	24.1	19.0	74.5	17.0	27.2	2.0	14.1	25.9	0.5	12.7
Nakhon Pathom	863,155	11.0	9.3	6.3	8.1	6.2	0.0	6,016	14	1.7	23.4	26.8	25.1	73.6	14.5	32.1	1.6	16.3	25.4	1.3	12.9
Samut Sakhon	495,493	22.8	8.9	6.9	7.3	5.6	0.0	3,252	72	15.2	9.1	9.9	9.5	76.2	9.1	28.1	1.2	14.1	30.7	0.8	15.1
Samut Songkhram	194,072	7.3	8.9	7.1	9.9	5.0	0.0	1,536	18	9.3	14.7	24.7	19.8	59.8	22.7	22.8	0.7	11.2	28.3	1.4	14.1
Phetchaburi	465,056	10.8	10.1	6.8	9.2	7.4	20.0	4,635	55	12.0	16.2	19.7	18.1	75.5	13.0	31.7	1.4	15.9	32.8	1.6	16.6
Prachuap Khiri Khan	510,852	13.1	8.8	5.9	11.8	7.3	29.9	3,714	1	0.2	13.0	18.5	15.8	74.4	17.1	31.6	3.0	17.1	36.5	5.1	20.6
Central Region	**15,991,127**	**13.2**	**9.6**	**6.7**	**8.5**	**6.0**	**6.2**	**107,640**	**1,596**	**12.0**	**16.3**	**22.1**	**19.3**	**73.0**	**22.5**	**34.6**	**4.0**	**18.8**	**29.7**	**1.8**	**15.3**
Chiang Mai	1,643,312	11.3	11.3	8.3	8.5	6.5	16.2	23,117	101	6.1	29.1	34.2	31.6	77.0	57.6	43.0	4.2	23.3	28.9	5.9	17.2
Lamphun	404,257	8.2	10.8	8.8	9.1	7.9	30.3	5,399	0	0.0	18.6	25.6	22.1	71.6	65.2	41.1	4.0	22.1	34.7	7.3	20.7
Lampang	759,742	6.6	10.1	8.9	8.8	7.0	0.0	10,752	50	6.5	13.6	24.3	18.9	75.1	21.6	50.1	7.2	28.5	26.7	3.6	15.1
Uttaradit	461,829	8.6	9.5	8.0	7.6	6.1	25.3	1,960	58	12.5	17.9	23.0	20.4	73.8	42.5	45.3	5.9	25.0	29.0	1.2	14.7
Phrae	459,753	7.4	8.4	9.3	6.5	5.0	0.0	3,456	10	2.2	16.4	27.1	21.8	78.5	23.6	58.9	14.8	36.5	28.3	2.9	15.4
Nan	476,488	8.7	8.9	6.7	7.0	5.1	24.1	3,382	3	0.6	14.3	26.0	20.2	78.5	11.9	52.3	4.0	28.3	20.9	1.3	11.1
Phayao	486,388	7.9	9.2	7.5	3.1	2.3	0.0	13,149	230	47.2	15.4	21.7	18.6	73.7	59.9	43.9	7.6	25.6	24.1	2.5	13.2
Chiang Rai	1,198,438	9.8	8.7	7.4	7.2	4.7	0.0	24,217	7	0.6	29.8	30.0	29.9	73.0	27.7	46.3	14.3	30.3	25.0	4.4	14.7
Mae Hong Son	243,395	14.0	14.7	5.0	13.2	11.5	29.4	1,739	5	2.0	11.7	19.0	15.4	72.4	16.7	39.2	4.9	22.5	40.7	10.4	26.0
Nakhon Sawan	1,072,591	9.9	8.7	7.2	11.2	7.4	18.9	5,072	172	16.0	14.5	22.9	18.8	76.4	15.2	31.5	3.3	17.0	26.6	1.5	13.6
Uthai Thani	327,997	10.1	8.1	7.0	10.0	5.7	0.0	2,519	0	0.0	11.5	19.3	15.5	74.6	17.7	25.6	3.1	13.9	37.2	2.1	19.0
Kampaeng Phet	726,551	8.9	9.9	6.4	9.9	7.3	0.0	3,445	11	1.5	23.3	34.6	29.0	74.3	16.9	40.9	6.0	23.2	32.9	2.1	17.2
Tak	528,351	15.3	14.4	5.6	8.2	4.8	0.0	1,972	2	0.4	19.1	19.7	19.4	75.4	5.5	42.7	3.1	22.9	31.5	7.0	19.2
Sukhothai	601,642	8.6	8.3	7.1	7.1	5.0	0.0	2,954	63	10.4	33.1	32.8	32.9	70.3	34.5	39.8	4.1	21.3	35.2	2.9	18.4
Phitsanulok	850,525	10.6	11.1	7.6	14.9	11.3	0.0	3,978	58	6.9	19.7	28.8	24.4	71.7	9.8	48.2	8.8	28.0	33.9	1.9	17.5
Phichit	551,189	9.6	8.7	7.2	8.3	5.9	0.0	1,925	23	4.2	16.5	24.8	20.7	80.9	9.6	31.5	3.8	17.1	31.0	0.8	15.2
Phetchabun	993,420	8.9	9.4	6.6	7.5	5.5	0.0	4,986	162	16.3	28.0	35.8	32.0	78.7	26.5	43.6	6.8	24.8	38.9	2.3	20.2
Northern Region	**11,785,868**	**9.7**	**10.1**	**7.4**	**8.9**	**6.5**	**7.9**	**114,022**	**955**	**8.0**	**21.4**	**28.0**	**24.8**	**75.3**	**28.7**	**42.9**	**6.5**	**24.4**	**30.2**	**3.4**	**16.5**
Nakhon Ratchasima	2,583,707	11.1	9.6	6.4	9.4	6.5	14.0	5,997	33	1.3	27.1	27.3	27.2	78.3	22.5	37.2	3.0	19.8	33.3	1.4	17.0
Buri Ram	1,556,426	11.0	8.7	5.6	6.7	4.6	0.0	4,758	13	0.8	30.5	27.9	29.2	77.0	19.0	42.3	4.6	23.3	36.8	1.2	18.8
Surin	1,381,081	10.5	10.0	6.0	6.4	4.2	20.7	4,231	42	3.1	18.0	24.0	21.1	77.2	46.7	44.9	8.7	26.6	36.7	1.3	18.8
Si Sa Ket	1,452,338	9.8	9.9	5.6	9.7	6.9	7.1	5,320	244	16.9	34.5	33.5	34.0	73.6	17.7	39.8	5.1	22.2	40.7	1.5	20.8
Ubon Ratchathani	1,814,573	12.0	10.4	6.1	11.8	9.3	9.2	5,841	40	2.2	14.1	13.2	13.6	74.6	14.9	32.9	2.6	17.7	35.9	0.2	17.9

Table 1: Health (continued)

Location	Population mid-year 2011 (persons)	Birth rate 2011 (per 1,000 pop)	Under-weight births 2011 (% of live births)	Crude death 2011 (per 1,000 pop)	Under-five mortality 2011 (per 1,000 live births)	Infant mortality 2011 (per 1,000 live births)	Maternal mortality 2011 (per 100,000 live births)	AIDS patients 1984-2010 (persons)	New AIDS patients 2010 (persons)	AIDS incidence 2010 (per 100,000 pop)	Population with physical illness 2011 Male (%)	Female (%)	Total (%)	Mental health score 2012 (%)	Mental illness 2011 per 1,000 pop	Population consuming alcoholic beverage (11 years and over) 2011 Male (%)	Female (%)	Total (%)	Population smoking cigarette (11 years and over) 2011 Male (%)	Female (%)	Total (%)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Yasothon	539,055	9.3	9.4	6.5	6.0	4.6	0.0	1,320	55	10.2	20.5	30.4	25.1	77.5	28.4	35.9	1.8	18.7	34.0	0.3	17.0
Chaiyaphum	1,127,423	9.4	8.9	6.1	6.6	5.1	0.0	3,400	22	2.0	11.3	21.5	16.2	79.8	16.6	40.1	2.1	20.8	37.9	0.0	18.7
Amnat Charoen	372,190	10.3	8.4	5.5	5.7	2.1	0.0	2,089	54	14.6	18.0	27.6	22.7	78.6	23.0	40.4	1.4	20.8	42.2	0.5	21.3
Nong Bua Lam Phu	502,710	10.3	8.1	5.3	7.5	5.4	0.0	1,901	75	15.0	13.1	20.8	17.0	72.7	13.2	41.5	4.4	23.0	37.5	0.1	18.8
Khon Kaen	1,766,834	11.5	9.2	6.9	11.8	8.5	19.8	6,551	94	5.4	13.1	18.1	15.7	75.2	36.6	43.3	3.8	23.4	46.0	0.7	23.2
Udon Thani	1,546,447	11.2	9.0	5.9	9.1	6.2	11.6	7,076	207	13.5	20.9	27.9	24.4	77.5	14.0	42.4	4.8	23.6	35.8	0.3	18.0
Loei	624,493	11.4	9.1	6.2	9.9	7.8	0.0	2,812	72	11.7	7.7	18.6	12.9	73.5	37.3	49.3	7.4	28.4	43.8	0.1	22.1
Nong Khai	711,404	9.0	8.6	5.0	7.3	5.6	0.0	2,039	22	2.4	12.2	20.0	16.1	69.6	7.7	37.5	1.7	19.7	34.7	1.4	18.1
Maha Sarakham	940,324	8.3	8.0	6.2	7.5	5.2	38.3	2,978	54	5.8	13.9	17.4	15.7	75.9	27.9	32.3	3.4	17.6	40.1	0.8	20.1
Roi Et	1,307,384	8.6	7.9	6.3	11.3	9.0	0.0	4,767	108	8.3	18.7	24.8	21.8	78.5	5.9	49.1	3.9	26.2	38.2	0.8	19.3
Kalasin	982,117	9.2	8.2	6.2	8.1	5.7	22.1	2,960	22	2.3	13.3	18.3	15.8	73.2	22.1	39.3	1.4	20.2	41.5	0.7	20.9
Sakon Nakhon	1,123,179	12.1	10.0	6.1	9.5	6.9	7.4	1,892	41	3.7	13.2	19.8	16.5	75.7	15.4	38.9	4.9	21.8	27.0	1.0	14.0
Nakhon Phanom	704,080	9.9	9.7	5.9	9.8	7.3	14.4	2,090	50	7.2	13.8	20.9	17.5	81.6	15.2	39.9	4.5	22.1	43.6	0.9	22.2
Mukdahan	340,079	11.3	9.2	5.6	9.1	7.0	0.0	1,328	14	4.2	9.3	19.7	14.8	73.3	49.1	33.5	1.5	17.6	32.3	0.4	16.4
Bueng Kan	407,634	9.9	7.9	3.5	5.2	3.5	na.	na.	na.	na.	na.	na.	na.	77	14.5	na.	na.	na.	na.	na.	na.
Northeastern Region	**21,783,478**	**10.5**	**9.2**	**6.0**	**9.0**	**6.5**	**10.1**	**69,350**	**1,262**	**5.9**	**18.5**	**22.9**	**20.7**	**76.4**	**21.8**	**40.1**	**3.9**	**21.8**	**37.6**	**0.8**	**19.0**
Nakhon Si Thammarat	1,524,317	12.4	8.5	5.6	6.9	4.8	21.1	5,254	27	1.8	25.5	27.8	26.6	73.9	21.8	30.4	1.5	15.8	44.6	1.1	22.6
Krabi	435,372	17.2	9.8	4.5	9.0	5.9	0.0	1,685	2	0.5	11.4	15.3	13.3	79.5	9.7	14.1	0.5	7.3	32.0	0.0	16.0
Phang-nga	254,022	12.8	9.1	5.1	8.6	5.2	0.0	1,163	12	4.8	9.4	10.7	10.1	78.5	25.7	28.6	1.5	15.1	37.5	1.3	19.4
Phuket	349,457	23.7	8.9	5.1	8.7	6.7	0.0	3,971	92	28.6	32.9	41.1	37.4	68.3	15.7	32.6	6.0	19.0	29.1	1.3	14.9
Surat Thani	1,006,224	15.9	9.9	5.7	11.5	8.8	12.5	4,302	10	1.0	14.8	17.2	15.9	71.1	45.8	33.7	3.1	18.3	43.6	2.5	22.8
Ranong	183,464	11.9	9.5	4.1	8.7	6.8	0.0	3,485	31	17.1	8.7	15.5	12.0	74.3	14.9	24.4	1.9	13.2	43.6	1.0	22.5
Chumphon	491,073	13.4	8.6	6.0	7.5	5.5	15.2	1,777	0	0.0	11.6	8.8	10.3	75.2	17.5	29.9	0.4	15.1	39.8	1.4	20.5
Songkhla	1,362,017	16.1	9.4	6.4	10.6	8.0	13.7	5,077	24	1.8	14.1	19.4	16.9	76.5	40.3	22.8	0.6	11.4	37.5	1.1	18.8
Satun	299,315	16.2	8.1	4.7	8.3	5.4	20.7	1,283	7	2.4	13.8	15.8	14.7	73.8	53.5	12.5	0.8	6.7	48.7	1.7	25.2
Trang	624,684	14.3	10.0	5.8	6.8	4.6	22.3	4,173	18	2.9	14.4	22.5	18.5	80.3	20.2	32.0	0.7	16.1	42.9	1.2	21.7
Phatthalung	510,299	10.8	8.7	5.5	7.4	5.8	0.0	2,044	2	0.4	15.6	26.0	20.9	71.2	21.2	32.3	0.4	16.0	38.5	0.6	19.1
Pattani	659,373	19.2	9.1	6.2	14.3	10.8	7.9	2,415	32	5.0	15.4	14.8	15.1	73.0	17.9	4.6	0.1	2.3	40.9	1.4	20.8
Yala	490,574	22.5	9.9	5.4	10.2	7.5	9.0	1,360	19	4.0	12.0	18.1	14.9	76.6	8.6	8.3	0.9	4.6	34.0	0.8	17.2
Narathiwat	742,268	18.6	10.2	5.8	15.4	10.7	29.0	2,347	25	3.5	6.9	8.4	7.6	74.9	10.1	5.0	0.2	2.5	44.2	0.2	22.0
Southern Region	**8,932,459**	**15.8**	**9.3**	**5.7**	**10.1**	**7.4**	**13.4**	**40,336**	**301**	**3.5**	**16.0**	**20.0**	**18.0**	**74.7**	**25.1**	**23.3**	**1.2**	**12.1**	**40.7**	**1.2**	**20.7**

Table 1: Health

Location	Population 11 years and over with unhealthy behaviour (drinking and/ or smoking) 2011			Population that exercise 2011			Population with disability (Nov1994 - 31 Jan 2013)			Population per health personnel / infrastructure 2010				
	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)	Total (%)	Physician	Dentist	Pharma-cist	Nurse	hospital bed
	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Kingdom	**49.8**	**4.9**	**26.8**	**27.4**	**25.0**	**26.1**	**2.2**	**1.8**	**2.0**	**2,893**	**13,252**	**7,087**	**531**	**475**
Bangkok	**40.2**	**3.4**	**20.2**	**34.3**	**29.2**	**31.5**	**1.1**	**0.7**	**0.9**	**1,052**	**7,865**	**3,871**	**282**	**266**
Samut Prakan	51.2	3.3	25.6	31.3	22.3	26.5	1.5	1.1	1.3	2,830	15,456	6,215	767	422
Nonthaburi	39.3	3.0	20.2	23.5	19.7	21.5	1.5	1.1	1.3	2,096	8,582	5,989	469	304
Pathum Thani	50.2	8.5	28.6	12.7	8.2	10.4	1.4	1.0	1.2	1,640	15,661	7,356	585	340
Phra Nakhon Si Ayutthaya	43.2	3.1	22.3	19.1	17.2	18.1	2.3	1.7	2.0	3,993	16,927	7,786	561	521
Ang Thong	42.4	4.0	22.1	27.0	29.6	28.4	2.7	2.2	2.4	3,903	12,386	7,914	412	423
Lop Buri	47.1	7.0	26.7	20.6	19.0	19.8	2.2	1.8	2.0	3,213	15,411	8,485	556	427
Sing Buri	40.7	3.2	20.9	24.7	23.3	23.9	2.5	2.1	2.3	2,986	9,347	6,515	277	313
Chai Nat	42.0	4.3	22.2	22.1	12.3	17.1	3.5	3.1	3.3	4,858	20,949	8,175	482	581
Saraburi	49.1	6.9	27.7	39.2	33.7	36.5	2.3	1.9	2.1	2,356	12,552	6,474	388	368
Chon Buri	42.7	7.2	24.8	19.6	15.3	17.4	1.4	1.0	1.2	1,400	8,461	5,050	330	334
Rayong	48.7	5.2	26.9	30.4	30.2	30.3	1.6	1.1	1.4	3,128	15,878	6,958	483	499
Chanthaburi	47.1	6.2	26.2	24.3	26.7	25.5	2.3	1.6	2.0	2,375	15,543	6,839	397	365
Trat	51.6	7.0	29.0	19.4	14.7	17.0	1.8	1.3	1.5	2,826	16,959	7,349	338	376
Chachoengsao	47.2	4.7	25.4	37.7	22.2	30.0	2.1	1.6	1.8	4,568	12,913	9,731	580	543
Prachin Buri	50.7	5.1	27.6	23.7	19.8	21.7	2.3	1.8	2.1	3,714	15,474	8,144	539	507
Nakhon Nayok	47.7	5.2	26.1	22.9	14.8	18.7	3.0	2.5	2.8	911	7,206	5,147	309	275
Sa Kaeo	56.9	11.0	33.8	31.9	29.9	30.9	2.6	2.0	2.3	5,077	23,621	20,895	864	687
Ratchaburi	43.5	6.3	24.2	25.2	21.2	23.1	2.1	1.8	2.0	2,781	13,953	7,475	417	381
Kanchanaburi	55.4	8.1	31.4	16.1	10.9	13.5	2.0	1.5	1.8	5,295	16,404	11,305	668	533
Suphan Buri	39.0	2.4	20.0	14.8	14.5	14.6	1.9	1.4	1.7	4,379	11,578	7,684	597	465
Nakhon Pathom	42.6	2.7	21.9	28.0	23.2	25.5	1.8	1.3	1.5	2,815	12,967	7,574	600	490
Samut Sakhon	42.8	1.9	21.5	14.2	11.2	12.7	1.7	1.2	1.4	1,383	9,042	4,563	396	270
Samut Songkhram	37.9	1.8	18.9	21.4	18.4	19.9	1.9	1.5	1.7	5,239	12,924	6,685	385	405
Phetchaburi	46.4	2.6	23.7	25.4	22.8	24.0	1.9	1.5	1.7	4,023	17,135	7,584	509	541
Prachuap Khiri Khan	49.3	7.2	28.0	29.4	27.7	28.5	1.9	1.5	1.7	4,222	13,692	7,916	622	460
Central Region	**46.3**	**5.1**	**25.0**	**24.1**	**19.9**	**22.0**	**1.9**	**1.5**	**1.7**	**2,533**	**12,840**	**7,132**	**491**	**409**
Chiang Mai	50.1	9.2	29.3	35.8	31.2	33.4	2.2	1.6	1.9	2,001	5,262	4,730	350	244
Lamphun	53.8	9.9	31.4	31.1	35.6	33.4	3.8	3.1	3.4	4,446	11,240	5,864	535	475
Lampang	57.7	10.4	33.9	36.6	36.3	36.4	3.6	2.8	3.2	2,745	13,877	6,523	426	471
Uttaradit	53.3	6.7	29.4	20.0	18.3	19.1	3.6	3.5	3.5	3,354	11,287	7,587	529	502
Phrae	63.0	16.4	39.3	28.8	28.7	28.7	4.6	4.2	4.4	4,120	15,911	6,991	524	547
Nan	56.8	5.4	31.2	33.8	38.4	36.1	3.3	2.7	3.0	4,212	10,578	6,800	458	463
Phayao	51.1	9.1	30.0	30.0	47.7	38.9	4.2	3.6	3.9	5,348	14,315	7,726	442	528
Chiang Rai	52.2	17.5	34.9	31.4	36.2	33.8	2.3	1.8	2.1	3,751	14,773	8,486	595	605
Mae Hong Son	52.4	12.8	33.2	25.4	16.9	21.1	2.2	1.7	2.0	4,751	16,153	9,319	488	490
Nakhon Sawan	41.8	4.1	22.3	30.6	19.8	25.1	2.5	2.0	2.2	3,451	15,331	7,453	591	513
Uthai Thani	47.3	4.7	25.3	21.0	17.1	19.0	2.9	2.3	2.6	5,376	14,905	7,808	557	460
Kampaeng Phet	52.4	7.9	29.7	19.5	17.8	18.7	3.2	2.7	2.9	7,495	18,640	12,754	927	892
Tak	51.7	8.6	30.1	30.3	26.0	28.1	2.1	1.7	1.9	4,467	15,373	10,453	543	414
Sukhothai	54.2	6.3	29.4	34.5	27.6	30.7	3.1	2.6	2.8	5,192	16,278	9,266	574	532
Phitsanulok	56.8	9.6	32.6	24.7	24.4	24.6	2.7	2.2	2.5	1,879	10,729	5,969	538	435
Phichit	45.3	4.4	24.0	26.2	23.1	24.6	3.1	2.7	2.9	4,459	14,178	8,918	637	560
Phetchabun	56.2	7.9	31.6	18.4	19.3	18.9	2.5	1.8	2.2	5,531	21,643	12,930	890	773
Northern Region	**52.3**	**9.1**	**30.3**	**29.5**	**28.1**	**28.8**	**2.9**	**2.4**	**2.6**	**3,397**	**11,628**	**7,371**	**526**	**460**
Nakhon Ratchasima	49.1	3.7	25.9	17.0	18.9	17.9	2.0	1.7	1.9	3,342	17,770	9,508	687	650
Buri Ram	57.2	5.4	31.1	21.6	13.2	17.4	3.0	2.9	3.0	7,418	29,250	13,138	1024	819
Surin	56.9	9.4	32.9	29.8	28.0	28.9	3.3	3.6	3.5	7,186	18,646	13,661	1060	740
Si Sa Ket	53.2	5.2	28.8	25.1	33.2	29.5	2.8	2.3	2.5	9,536	27,347	16,285	1018	983
Ubon Ratchathaini	48.3	2.7	25.3	23.7	19.4	21.6	2.2	1.8	2.0	5,037	19,239	8,908	717	555

Table 1: Health

Location	Population 11 years and over with unhealthy behaviour (drinking and/ or smoking) 2011			Population that exercise 2011			Population with disability (Nov1994 - 31 Jan 2013)			Population per health personnel / infrastructure 2010				
	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)	Total (%)	Physician	Dentist	Pharma-cist	Nurse	hospital bed
	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Yasothon	51.3	1.8	26.3	30.8	23.9	27.4	3.2	3.2	3.2	6,419	23,443	8,295	705	708
Chaiyaphum	55.1	2.1	28.2	33.9	32.7	33.3	3.0	2.9	2.9	9,794	18,772	12,799	858	922
Amnat Charoen	59.1	1.8	30.3	38.1	37.4	37.8	2.3	2.3	2.3	6,754	17,689	9,776	682	728
Nong Bua Lam Phu	56.7	4.4	30.6	22.2	28.1	25.2	2.7	2.3	2.5	6,971	25,095	15,209	1086	836
Khon Kaen	58.7	3.8	31.1	22.7	24.6	23.7	2.5	2.0	2.2	1,753	7,879	7,032	434	438
Udon Thani	54.0	5.0	29.5	15.5	20.2	17.8	1.5	1.1	1.3	4,701	23,013	9,948	772	657
Loei	63.1	7.4	35.4	29.5	24.5	27.1	3.3	2.7	3.0	5,763	15,181	10,731	663	608
Nong Khai	49.7	2.4	26.2	29.4	27.6	28.5	2.4	1.8	2.1	6,692	21,165	13,190	840	767
Maha Sarakham	53.4	4.2	28.4	33.9	34.0	34.0	2.5	2.1	2.3	5,767	17,407	9,792	788	895
Roi Et	61.1	4.2	32.4	34.8	31.4	33.0	2.8	2.6	2.7	7,566	33,562	12,833	927	970
Kalasin	56.0	1.6	28.6	24.4	15.1	19.8	2.1	1.7	1.9	7,269	25,826	10,667	876	868
Sakon Nakhon	49.1	4.9	26.9	16.2	15.4	15.8	2.7	2.2	2.4	7,422	28,017	14,186	918	798
Nakhon Phanom	56.0	5.3	30.5	30.1	29.4	29.7	2.9	2.3	2.6	8,069	26,002	10,801	745	716
Mukdahan	46.9	1.7	24.3	26.7	24.8	25.6	2.7	2.0	2.3	6,050	16,134	10,267	648	623
Bueng Kan	na.	na.	na.	na.	na.	na.	2.3	1.7	2.0	na.	na.	na.	na.	na.
Northeastern Region	**54.1**	**4.3**	**29.0**	**24.8**	**24.2**	**24.5**	**2.5**	**2.2**	**2.4**	**4,947**	**18,940**	**10,735**	**766**	**704**
Nakhon Si Thammarat	53.3	2.0	27.3	35.8	35.8	35.8	2.5	2.1	2.3	4,855	19,481	8,537	702	634
Krabi	36.1	0.5	18.3	31.0	21.5	26.4	1.5	1.0	1.3	5,054	13,019	9,991	704	726
Phang-nga	48.9	2.7	25.8	34.9	28.6	31.8	2.0	1.5	1.8	4,006	8,703	6,821	384	399
Phuket	43.9	6.7	24.9	37.1	30.8	33.5	1.3	0.9	1.1	1,513	7,244	4,422	363	322
Surat Thani	53.9	3.6	28.5	21.7	19.0	20.4	1.5	1.1	1.3	3,196	15,343	5,634	441	355
Ranong	51.7	2.2	27.1	26.0	18.9	22.8	1.6	1.1	1.4	5,365	15,201	10,134	407	446
Chumphon	49.7	1.8	25.7	24.7	36.7	30.6	1.9	1.4	1.6	4,526	16,857	7,407	587	428
Songkhla	47.2	1.6	23.8	34.0	30.8	32.3	1.6	1.2	1.4	1,949	10,078	5,627	384	391
Satun	51.7	2.0	26.9	43.3	29.8	36.6	2.1	1.5	1.8	5,787	10,540	8,432	555	800
Trang	52.9	1.9	26.9	41.5	41.9	41.7	2.0	1.5	1.8	3,651	10,701	6,026	543	486
Phatthalung	49.9	0.6	24.7	35.3	42.7	39.0	2.3	1.7	2.0	5,915	14,129	8,339	573	636
Pattani	42.0	1.5	21.4	30.5	17.0	23.5	1.8	1.3	1.5	5,922	15,511	9,175	739	765
Yala	36.9	1.3	18.9	35.2	18.1	26.9	1.7	1.2	1.5	3,558	13,077	6,451	438	501
Narathiwat	45.7	0.2	22.8	17.1	10.6	13.9	1.8	1.3	1.5	5,196	19,279	10,175	674	711
Southern Region	**48.4**	**1.9**	**24.9**	**31.6**	**28.3**	**29.9**	**1.9**	**1.4**	**1.6**	**3,504**	**13,294**	**7,066**	**519**	**498**

Table 2: Education

Location	Mean years of scholing (15 years and over) 2011			Population with no education 2011				Education attainment of population 15 years and over 2011					
	Male	Female	Total	Male	Female	Total		Lower than primary	Primary	Lower secondary	Upper secondary	Diploma	University
	(years)	(years)	(years)	(persons)	(persons)	(persons)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
	1	2	3	4	5	6	7	8	9	10	11	12	13
Kingdom	**8.4**	**8.0**	**8.2**	**792,227**	**1,538,276**	**2,330,503**	**4.3**	**29.1**	**19.7**	**18.2**	**14.1**	**4.0**	**10.1**
Bangkok	**10.8**	**10.5**	**10.6**	**49,859**	**110,594**	**160,453**	**2.9**	**17.9**	**15.0**	**15.8**	**17.2**	**5.7**	**25.2**
Samut Prakan	9.3	9.0	9.1	8,952	20,121	29,073	2.8	20.2	15.8	23.8	18.7	6.4	11.7
Nonthaburi	11.3	11.1	11.2	3,496	5,401	8,897	1.1	18.3	11.3	18.7	16.4	5.0	28.7
Pathum Thani	9.2	8.9	9.1	5,816	10,501	16,317	2.5	21.8	18.7	22.8	21.9	3.8	8.6
Phra Nakhon Si Ayutthaya	8.7	8.3	8.5	3,261	10,148	13,409	2.1	28.8	13.9	21.5	18.8	5.3	9.5
Ang Thong	8.3	7.7	8.0	2,058	4,094	6,152	2.7	31.6	14.4	21.1	15.8	4.6	8.9
Lop Buri	8.2	7.8	8.0	5,810	13,347	19,157	2.9	34.1	16.4	17.5	16.9	5.2	6.8
Sing Buri	8.8	8.3	8.5	2,619	5,705	8,324	4.2	33.5	12.3	17.8	16.2	6.1	9.9
Chai Nat	8.7	8.0	8.3	3,219	9,555	12,774	4.1	34.5	16.4	18.6	13.7	4.8	8.0
Saraburi	8.6	8.0	8.3	2,134	11,252	13,386	2.6	31.5	15.6	19.4	15.2	6.7	9.1
Chon Buri	8.8	8.4	8.6	7,018	21,829	28,847	3.0	26.6	17.2	20.9	15.9	5.3	9.7
Rayong	8.6	7.7	8.2	9,536	16,199	25,735	5.3	25.9	20.2	20.5	12.3	5.2	10.2
Chanthaburi	8.1	7.4	7.7	3,230	14,263	17,493	4.0	30.0	22.9	16.7	14.6	4.1	7.3
Trat	7.3	7.1	7.2	5,753	10,655	16,407	8.2	30.9	22.7	17.7	10.5	3.2	6.8
Chachoengsao	8.4	7.6	8.0	3,305	15,139	18,444	3.2	31.9	15.2	24.2	13.5	4.8	7.1
Prachin Buri	9.0	8.0	8.4	2,072	9,923	11,995	3.3	30.3	14.7	17.6	19.7	5.1	9.3
Nakhon Nayok	8.5	8.1	8.3	2,377	4,944	7,321	3.4	33.8	19.1	19.1	14.1	5.9	4.6
Sa Kaeo	7.9	7.2	7.5	4,580	23,900	28,480	6.4	30.2	22.0	21.8	11.3	2.8	5.5
Ratchaburi	8.2	8.0	8.1	31,474	44,362	75,836	10.8	28.9	16.7	17.2	12.1	4.6	8.8
Kanchanaburi	7.8	7.2	7.5	24,070	39,091	63,161	9.6	30.2	19.9	19.0	11.2	3.2	6.9
Suphan Buri	7.9	7.4	7.6	6,895	24,013	30,909	4.1	35.0	20.3	20.2	11.8	1.8	6.8
Nakhon Pathom	9.0	8.3	8.6	9,736	19,841	29,576	3.8	26.2	19.2	20.3	15.1	4.2	11.2
Samut Sakhon	7.5	7.6	7.6	17,238	23,718	40,956	9.0	24.9	24.9	16.3	12.5	4.4	6.2
Samut Songkhram	8.3	7.9	8.0	2,157	4,687	6,844	3.8	30.6	21.4	16.8	13.7	4.4	9.3
Phetchaburi	8.2	7.9	8.0	1,500	6,322	7,822	2.0	33.7	17.7	16.2	16.4	3.0	10.1
Prachuap Khiri Khan	8.2	7.9	8.0	9,169	16,145	25,314	6.3	29.7	20.5	18.9	11.9	4.3	8.3
Central Region	**8.5**	**8.0**	**8.2**	**177,473**	**385,156**	**562,628**	**4.3**	**28.2**	**17.7**	**19.9**	**15.1**	**4.6**	**9.8**
Chiang Mai	8.7	8.3	8.5	49,490	80,198	129,688	9.8	29.3	10.3	15.0	16.7	5.1	13.8
Lamphun	7.8	7.5	7.6	9,962	12,666	22,628	6.2	32.9	14.5	17.6	15.4	4.5	8.8
Lampang	7.9	7.5	7.7	18,737	28,713	47,450	6.9	32.8	15.1	17.6	13.4	5.1	9.1
Uttaradit	8.3	7.6	7.9	2,075	6,650	8,725	2.2	36.2	19.5	15.4	14.1	3.6	9.0
Phrae	8.4	7.7	8.0	3,737	12,536	16,273	3.7	36.0	13.3	17.7	14.0	4.5	10.7
Nan	8.7	8.0	8.3	17,470	23,399	40,869	10.1	29.5	17.0	16.3	15.5	3.4	8.2
Phayao	7.3	6.6	6.9	8,989	18,612	27,601	6.2	33.5	17.2	15.8	13.5	4.4	9.4
Chiang Rai	7.6	7.2	7.4	49,628	91,796	141,424	14.1	29.3	18.5	16.2	10.6	3.8	7.5
Mae Hong Son	6.9	6.6	6.8	31,100	37,715	68,815	36.4	13.6	21.9	14.1	6.5	2.4	5.0
Nakhon Sawan	7.6	7.5	7.5	14,690	41,347	56,037	5.9	39.9	16.0	17.1	12.4	2.3	6.4
Uthai Thani	8.0	7.5	7.7	3,502	5,770	9,273	3.5	38.3	20.6	16.2	11.9	3.5	6.1
Kampaeng Phet	8.0	7.8	7.8	6,290	27,088	33,377	5.7	34.8	20.3	18.0	10.8	3.8	6.6
Tak	6.8	6.0	6.3	23,961	33,300	57,261	13.5	27.6	19.1	15.1	8.4	2.8	6.1
Sukhothai	8.0	7.6	7.7	4,693	8,857	13,550	2.6	41.2	15.4	16.7	12.6	4.7	6.7
Phitsanulok	8.3	8.2	8.3	6,911	21,234	28,146	4.0	33.9	20.0	16.1	12.5	4.5	9.1
Phichit	8.1	7.0	7.5	6,823	19,912	26,735	5.4	37.1	17.0	19.5	10.3	3.0	7.6
Phetchabun	7.9	7.3	7.6	14,617	33,412	48,030	5.7	35.3	19.9	17.8	12.9	2.2	6.1
Northern Region	**7.9**	**7.4**	**7.6**	**272,676**	**503,204**	**775,879**	**7.7**	**33.5**	**16.7**	**16.6**	**12.8**	**3.8**	**8.5**
Nakhon Ratchasima	8.4	7.8	8.0	34,784	64,659	99,443	4.5	31.2	20.1	18.2	14.1	4.2	7.7
Buri Ram	8.3	8.2	8.3	18,270	37,687	55,957	4.3	32.9	21.4	19.4	13.2	1.8	6.5
Surin	8.5	7.8	8.1	19,681	37,017	56,698	5.0	35.3	19.9	16.8	15.1	1.9	5.8
Si Sa Ket	8.5	8.3	8.4	5,578	17,464	23,041	1.9	33.9	26.0	16.1	9.3	2.8	10.0
Ubon Ratchathani	8.6	8.6	8.6	6,743	9,420	16,164	1.1	32.0	24.3	18.4	12.9	2.9	8.3

Table 2: Education

Location	Mean years of schooling (15 years and over) 2011			Population with no education 2011				Education attainment of population 15 years and over 2011					
	Male	Female	Total	Male	Female	Total		Lower than primary	Primary	Lower secondary	Upper secondary	Diploma	University
	(years)	(years)	(years)	(persons)	(persons)	(persons)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
	1	2	3	4	5	6	7	8	9	10	11	12	13
Yasothon	8.7	8.2	8.5	627	108	735	0.2	34.0	26.6	15.9	14.5	2.9	6.0
Chaiyaphum	7.7	7.2	7.4	10,281	14,706	24,987	2.6	37.3	23.5	16.7	12.0	2.2	5.7
Amnat Charoen	8.0	7.5	7.7	849	2,161	3,009	1.0	34.7	26.5	19.7	10.2	2.6	5.3
Nong Bua Lam Phu	7.3	7.0	7.1	1,773	6,706	8,478	2.0	33.7	24.5	19.6	13.0	2.3	4.9
Khon Kaen	8.3	7.7	8.0	8,272	17,678	25,950	1.7	32.3	20.7	21.3	14.2	3.6	6.2
Udon Thani	8.3	8.1	8.2	5,259	18,992	24,251	1.9	30.3	22.6	21.6	13.1	3.6	6.8
Loei	8.1	7.6	7.9	4,853	7,115	11,968	2.3	32.7	21.6	19.6	13.8	3.2	6.8
Nong Khai	7.9	7.1	7.5	3,637	9,147	12,784	1.7	31.3	25.5	20.3	12.2	2.6	6.3
Maha Sarakham	9.3	9.1	9.2	2,482	1,505	3,987	0.5	33.9	22.4	17.1	14.0	3.2	8.8
Roi Et	8.9	8.4	8.6	154	5,056	5,210	0.5	34.7	22.0	17.5	15.2	3.0	7.1
Kalasin	8.1	7.6	7.8	1,191	4,925	6,117	0.8	31.1	23.7	18.0	15.8	4.2	6.4
Sakon Nakhon	8.3	7.8	8.0	2,151	2,533	4,683	0.5	30.6	31.5	19.3	9.7	4.0	4.3
Nakhon Phanom	8.6	8.2	8.4	2,292	7,827	10,118	1.7	28.7	31.0	18.7	13.6	2.2	4.1
Mukdahan	8.8	8.1	8.5	3,641	6,517	10,158	3.7	29.5	23.3	19.6	11.3	5.4	6.7
Bueng Kan	na.	na.	na.	na.	na.	na.	na.	na.	na.	na.	na.	na.	na.
Northeastern Region	**8.4**	**7.9**	**8.1**	**132,516**	**271,224**	**403,740**	**2.2**	**32.6**	**23.4**	**18.6**	**13.2**	**3.1**	**6.8**
Nakhon Si Thammarat	8.7	8.1	8.4	13,040	20,308	33,348	2.5	29.0	21.6	16.4	14.2	4.9	11.4
Krabi	8.3	8.6	8.5	2,127	5,225	7,352	2.4	24.8	30.0	21.0	11.5	3.2	6.7
Phang-nga	8.8	8.6	8.7	4,424	6,604	11,029	5.2	27.9	22.2	19.3	9.8	5.1	9.1
Phuket	8.3	8.7	8.5	1,841	2,616	4,457	1.9	21.8	11.6	19.4	14.7	4.4	12.5
Surat Thani	8.2	8.2	8.2	11,002	16,508	27,509	3.5	26.2	25.9	22.1	12.3	3.0	6.1
Ranong	7.7	7.6	7.6	5,692	8,657	14,349	9.8	32.7	17.6	16.9	13.7	2.2	7.1
Chumphon	8.0	8.0	8.0	9,127	12,706	21,833	5.4	30.9	19.9	22.4	11.5	3.6	6.3
Songkhla	8.8	8.3	8.6	20,169	42,662	62,830	5.6	22.8	18.7	17.8	15.5	6.8	12.8
Satun	8.2	8.5	8.3	4,125	9,401	13,526	6.0	21.5	25.2	19.3	15.1	3.2	9.7
Trang	8.9	8.7	8.8	7,123	10,778	17,901	3.3	29.2	23.5	17.6	13.1	4.3	8.9
Phatthalung	9.5	8.8	9.1	2,691	9,054	11,745	2.6	26.0	18.0	17.4	18.2	6.1	11.7
Pattani	7.9	7.7	7.8	25,939	44,737	70,675	13.3	21.1	23.5	16.5	13.9	3.5	8.2
Yala	7.9	8.0	8.0	18,198	28,353	46,551	12.4	14.7	23.0	20.2	18.0	2.0	7.2
Narathiwat	7.7	7.5	7.6	34,206	50,492	84,698	14.3	16.3	28.1	18.5	13.9	2.0	6.8
Southern Region	**8.4**	**8.2**	**8.3**	**159,703**	**268,099**	**427,803**	**5.9**	**24.7**	**22.3**	**18.6**	**14.1**	**4.3**	**9.4**

Table 2: Education

Location	Enrolment 2011									Average IQ of students aged 6-15, 2011	Average O-Net score of upper secondary students 2011	Students per classroom 2011		
	Primary			Lower Secondary			Upper secondary and vocational					Primary	Lower secondary	Upper secondary
	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)	Total (%)		(%)	(persons)	(persons)	(persons)
	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Kingdom	**103.6**	**102.7**	**103.2**	**97.5**	**99.8**	**98.6**	**65.0**	**78.4**	**71.6**	**98.6**	**34.0**	**18**	**32**	**41**
Bangkok	**116.3**	**115.7**	**116.0**	**111.2**	**112.1**	**111.6**	**99.5**	**111.1**	**105.3**	**104.5**	**40.8**	**20**	**30**	**26**
Samut Prakan	101.4	104.8	103.1	93.2	100.4	96.8	50.4	61.2	55.8	100.4	37.4	27	37	45
Nonthaburi	99.0	99.4	99.2	92.9	95.5	94.2	53.6	76.4	64.7	108.9	38.4	29	45	39
Pathum Thani	97.3	96.2	96.7	93.3	94.0	93.6	54.4	63.1	58.6	103.3	36.1	24	41	48
Phra Nakhon Si Ayutthaya	114.4	113.2	113.8	108.8	107.0	107.9	74.2	80.8	77.4	100.0	35.3	18	36	56
Ang Thong	108.0	106.8	107.5	108.5	108.2	108.4	73.8	79.6	76.6	98.8	34.5	19	34	56
Lop Buri	105.5	104.7	105.1	101.7	102.9	102.3	76.4	93.3	84.5	99.6	35.6	18	38	46
Sing Buri	112.2	116.3	114.2	117.7	107.8	113.0	80.4	83.1	81.7	102.7	34.5	12	22	53
Chai Nat	96.3	93.0	94.7	92.7	92.2	92.4	58.1	67.8	62.7	99.0	33.4	17	31	58
Saraburi	106.1	105.2	105.7	94.5	95.5	95.0	68.1	75.4	71.7	97.0	35.2	23	39	70
Chon Buri	116.6	115.0	115.8	114.4	114.8	114.6	86.2	97.4	91.7	103.9	37.4	17	31	46
Rayong	118.2	116.5	117.4	109.1	111.6	110.3	43.7	65.5	54.5	107.5	36.2	17	31	35
Chanthaburi	109.2	108.0	108.6	98.8	105.0	101.8	58.3	74.6	66.3	99.7	35.1	18	31	48
Trat	114.9	114.8	114.8	99.1	101.9	100.5	62.9	72.9	67.8	103.5	34.8	22	34	49
Chachoengsao	108.3	105.6	107.0	104.4	103.4	103.9	78.4	83.9	81.1	97.0	36.0	22	33	56
Prachin Buri	106.8	106.7	106.8	105.4	103.8	104.6	73.4	90.5	81.6	99.0	34.2	20	39	51
Nakhon Nayok	107.3	107.1	107.2	105.3	105.6	105.4	129.9	107.7	119.9	98.4	37.6	19	33	66
Sa Kaeo	98.1	96.8	97.5	89.2	91.5	90.3	49.3	62.2	55.5	95.4	32.2	21	41	28
Ratchaburi	112.2	109.9	111.1	102.5	108.5	105.4	66.8	76.5	71.5	102.7	36.6	17	33	47
Kanchanaburi	118.7	114.2	116.5	97.2	100.0	98.6	51.5	63.9	57.5	97.1	34.1	22	33	48
Suphan Buri	100.9	99.8	100.4	94.8	98.3	96.5	58.8	70.1	64.3	98.5	35.1	19	35	52
Nakhon Pathom	114.6	113.8	114.2	118.6	120.4	119.5	74.6	85.4	79.9	103.1	38.3	22	25	26
Samut Sakhon	109.9	108.6	109.3	85.4	86.2	85.8	45.6	51.1	48.3	103.7	35.6	24	40	61
Samut Songkhram	106.8	104.8	105.8	96.6	96.0	96.4	68.7	78.1	73.2	102.5	36.9	23	38	69
Phetchaburi	102.0	100.6	101.3	99.1	99.4	99.2	71.3	86.0	78.5	100.8	36.4	19	34	45
Prachuap Khiri Khan	110.8	110.9	110.8	95.5	97.8	96.7	62.0	77.8	69.7	103.2	35.3	24	35	54
Central Region	**107.9**	**106.9**	**107.4**	**100.7**	**102.6**	**101.6**	**64.9**	**76.2**	**70.4**	**101.3**	**35.6**	**20**	**34**	**45**
Chiang Mai	123.2	120.5	121.9	112.7	117.5	115.0	84.2	88.8	86.5	101.4	36.8	20	30	42
Lamphun	103.4	103.0	103.2	111.7	103.5	107.7	85.7	93.2	89.4	99.1	35.6	14	33	48
Lampang	101.4	99.8	100.6	107.6	106.1	106.8	88.3	89.7	89.0	106.6	35.6	15	33	47
Uttaradit	96.1	96.7	96.4	94.1	94.5	94.3	72.6	79.1	75.7	97.1	34.6	14	29	55
Phrae	101.8	101.4	101.6	104.0	104.3	104.2	84.2	89.2	86.7	101.8	36.2	12	21	38
Nan	101.8	100.8	101.3	102.8	102.4	102.6	79.6	78.3	78.9	100.2	35.0	13	28	45
Phayao	99.5	98.7	99.1	99.7	101.1	100.4	76.2	82.9	79.5	103.3	34.2	16	30	42
Chiang Rai	118.4	119.1	118.7	102.1	105.7	103.8	71.1	77.8	74.4	99.3	34.5	17	29	40
Mae Hong Son	119.0	117.2	118.1	89.3	101.9	95.4	53.1	62.6	57.8	99.7	31.5	14	28	43
Nakhon Sawan	99.1	97.9	98.5	99.5	99.7	99.6	56.5	67.7	61.9	102.3	34.9	16	32	50
Uthai Thani	100.3	98.5	99.5	95.4	97.9	96.6	53.1	67.4	60.0	99.2	34.4	15	31	42
Kampaeng Phet	96.9	96.9	96.9	88.8	93.4	91.0	45.2	60.1	52.5	95.2	33.3	18	33	48
Tak	111.0	107.5	109.3	81.0	89.6	85.2	51.0	58.5	54.6	99.7	33.3	25	34	49
Sukhothai	96.1	94.6	95.4	91.7	94.5	93.0	63.1	73.2	67.9	99.4	33.3	18	35	54
Phitsanulok	97.3	97.5	97.4	98.7	96.9	97.8	74.2	86.2	80.1	99.8	35.3	19	31	51
Phichit	98.8	97.6	98.3	95.5	95.3	95.4	53.9	64.6	59.0	99.8	33.3	11	20	28
Phetchabun	96.1	95.2	95.7	90.4	89.6	90.0	58.1	70.7	64.2	97.7	32.8	15	28	46
Northern Region	**105.0**	**104.0**	**104.5**	**98.7**	**100.6**	**99.6**	**68.4**	**76.7**	**72.4**	**100.1**	**35.4**	**16**	**29**	**44**
Nakhon Ratchasima	99.5	98.1	98.8	98.3	99.9	99.1	61.1	76.3	68.5	95.7	33.9	17	37	42
Buri Ram	97.1	96.7	96.9	92.2	95.0	93.5	50.5	67.1	58.5	99.5	32.7	20	33	47
Surin	96.4	95.4	96.0	95.0	94.6	94.8	55.4	71.0	62.9	97.4	32.8	20	31	45
Si Sa Ket	98.0	97.1	97.5	97.9	97.9	97.9	57.4	77.7	67.2	97.4	32.3	18	38	56
Ubon Ratchathaini	95.4	95.5	95.5	92.9	93.7	93.3	50.4	67.3	58.6	93.5	32.7	18	35	50

Table 2: Education

Location	Enrolment 2011									Average IQ of students aged 6-15, 2011	Average O-Net score of upper secondary students 2011	Students per classroom 2011		
	Primary			Lower Secondary			Upper secondary and vocational					Primary	Lower secondary	Upper secondary
	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)	Total (%)		(%)	(persons)	(persons)	(persons)
	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Yasothon	98.7	98.3	98.5	96.2	98.1	97.1	57.6	74.5	65.7	97.1	32.6	15	32	51
Chaiyaphum	97.4	96.6	97.0	87.5	88.4	87.9	53.4	66.9	59.9	96.2	31.9	15	37	53
Amnat Charoen	95.9	96.2	96.0	99.4	97.6	98.5	60.4	79.5	69.6	96.3	32.2	16	31	43
Nong Bua Lam Phu	94.9	94.0	94.4	90.3	92.6	91.4	49.3	64.3	56.6	94.1	31.3	17	31	43
Khon Kaen	99.8	99.2	99.5	103.0	103.8	103.4	76.7	89.6	83.0	95.9	33.8	14	36	57
Udon Thani	96.7	96.8	96.8	94.2	96.2	95.2	61.2	73.1	67.0	97.5	34.0	18	33	48
Loei	98.6	98.0	98.3	97.6	96.7	97.1	59.8	67.7	63.7	97.1	32.2	15	29	51
Nong Khai	97.2	96.9	97.1	101.0	96.9	99.0	73.1	78.5	75.7	98.9	31.9	20	36	45
Maha Sarakham	93.9	93.9	93.9	95.7	96.7	96.2	66.0	78.3	72.0	95.3	32.2	16	38	58
Roi Et	93.4	92.7	93.1	94.0	93.6	93.8	61.0	76.3	68.4	91.7	32.7	16	29	47
Kalasin	96.3	96.0	96.2	97.3	97.6	97.5	63.9	76.7	70.1	93.8	31.7	11	28	34
Sakon Nakhon	96.4	95.4	95.9	92.1	97.0	94.5	58.2	75.0	66.4	93.7	33.1	16	29	43
Nakhon Phanom	97.7	97.4	97.6	92.4	91.7	92.0	59.5	73.3	66.2	95.6	31.9	19	32	41
Mukdahan	100.6	99.3	100.0	95.8	99.3	97.5	55.1	70.6	62.7	97.0	32.7	17	30	39
Bueng Kan	90.5	90.1	90.3	81.1	88.0	84.4	30.5	50.8	40.5	na.	31.5	20	32	36
Northeastern Region	**97.0**	**96.4**	**96.7**	**95.1**	**96.2**	**95.7**	**58.9**	**73.9**	**66.2**	**96.0**	**32.8**	**17**	**33**	**47**
Nakhon Si Thammarat	100.9	100.4	100.6	96.7	99.1	97.9	58.3	77.6	67.7	98.0	35.5	20	31	40
Krabi	103.6	109.9	106.7	84.7	93.7	89.1	49.7	66.4	57.8	93.9	33.2	24	34	42
Phang-nga	111.0	108.7	109.9	88.5	88.7	88.6	58.6	80.6	69.2	97.6	33.1	20	31	49
Phuket	103.2	101.6	102.4	90.7	95.8	93.3	72.6	85.4	79.1	102.7	38.6	44	48	63
Surat Thani	106.1	105.0	105.5	92.0	95.3	93.6	54.0	73.4	63.5	98.7	34.6	20	36	45
Ranong	118.3	115.6	117.0	91.8	94.7	93.2	156.1	126.5	141.6	96.5	34.9	25	35	132
Chumphon	107.1	105.8	106.5	90.6	91.5	91.0	64.3	84.1	74.0	99.7	34.8	15	34	18
Songkhla	105.9	102.7	104.4	90.4	96.8	93.5	58.1	73.8	65.7	98.6	36.7	23	35	42
Satun	100.2	98.8	99.5	86.6	97.9	92.0	46.7	68.6	57.2	96.9	32.8	19	30	39
Trang	103.2	102.5	102.8	92.0	97.9	94.9	60.4	80.0	70.0	100.7	36.0	24	38	48
Phatthalung	99.3	97.2	98.3	98.1	102.7	100.3	61.0	78.1	69.2	97.8	34.4	21	30	43
Pattani	99.4	95.9	97.7	90.2	105.0	97.4	51.5	81.8	66.4	91.1	28.6	22	26	31
Yala	102.1	98.8	100.5	77.3	95.2	86.0	44.6	72.5	58.3	96.5	29.3	29	22	22
Narathiwat	105.0	100.6	102.8	73.9	83.4	78.5	32.6	56.9	44.6	88.1	28.6	25	38	37
Southern Region	**103.7**	**101.9**	**102.8**	**89.2**	**96.0**	**92.5**	**56.2**	**75.7**	**65.7**	**96.9**	**33.5**	**22**	**32**	**38**

Table 3: Employment

Location	Population 2011			Population 15 years and over 2011			Employment 2011					
							Workforce			Employed		
	Male (person)	Female (person)	Total (person)	Male (person)	Female (person)	Total (person)	Male (person)	Female (person)	Total (persons)	Male (person)	Female (persons)	Total (persons)
	1	2	3	4	5	6	7	8	9	10	11	12
Kingdom	**33,200,477**	**34,421,496**	**67,621,973**	**26,273,981**	**27,797,785**	**54,071,766**	**21,304,558**	**18,318,820**	**39,623,378**	**21,148,590**	**18,168,646**	**39,317,236**
Bangkok	**3,180,818**	**3,678,130**	**6,858,948**	**2,552,513**	**3,061,843**	**5,614,356**	**1,968,082**	**1,931,588**	**3,899,671**	**1,945,710**	**1,918,150**	**3,863,860**
Samut Prakan	628,264	701,400	1,329,664	481,380	556,567	1,037,947	397,325	390,813	788,138	393,064	385,488	778,553
Nonthaburi	469,012	513,175	982,187	369,149	415,005	784,154	278,835	247,437	526,271	276,753	244,861	521,613
Pathum Thani	406,466	432,387	838,853	313,810	341,463	655,273	257,779	236,366	494,145	256,092	236,366	492,459
Phra Nakhon Si Ayutthaya	373,366	401,551	774,917	303,073	334,352	637,425	229,466	204,160	433,626	225,320	202,272	427,592
Ang Thong	131,103	144,603	275,706	108,796	122,788	231,584	84,347	80,264	164,611	83,084	79,804	162,888
Lop Buri	384,990	397,953	782,943	319,335	335,050	654,385	258,895	219,115	478,010	258,107	215,336	473,443
Sing Buri	112,266	124,124	236,390	93,847	106,518	200,365	70,578	69,571	140,149	68,981	68,879	137,861
Chai Nat	175,066	191,689	366,755	146,386	164,155	310,541	113,126	104,351	217,477	111,805	103,742	215,547
Saraburi	304,128	310,973	615,101	249,627	258,615	508,242	195,792	170,473	366,264	192,972	169,912	362,884
Chon Buri	605,255	611,893	1,217,148	476,922	488,915	965,837	385,936	321,825	707,761	385,062	318,885	703,947
Rayong	304,503	303,700	608,203	239,901	241,685	481,586	205,812	156,737	362,549	203,858	156,299	360,157
Chanthaburi	267,488	277,224	544,712	213,209	225,279	438,488	178,135	159,584	337,719	177,341	159,413	336,754
Trat	122,831	125,599	248,430	98,230	101,865	200,095	80,091	66,286	146,377	79,796	66,199	145,994
Chachoengsao	355,350	368,433	723,783	281,201	296,580	577,781	226,051	181,322	407,373	225,044	180,369	405,414
Prachin Buri	227,503	232,391	459,894	180,444	187,273	367,717	146,635	122,780	269,415	146,272	121,344	267,616
Nakhon Nayok	130,996	134,389	265,385	105,769	110,283	216,052	84,211	74,500	158,711	83,897	73,545	157,442
Sa Kaeo	277,130	278,574	555,704	220,469	224,152	444,621	179,224	146,718	325,943	178,253	145,863	324,116
Ratchaburi	409,750	433,462	843,212	336,781	363,861	700,642	267,413	243,176	510,589	265,588	241,063	506,651
Kanchanaburi	393,954	403,014	796,968	321,851	334,925	656,776	262,119	232,802	494,921	261,433	232,344	493,777
Suphan Buri	435,506	465,094	900,600	360,913	393,676	754,589	297,012	257,065	554,077	296,885	257,065	553,950
Nakhon Pathom	475,652	508,209	983,861	373,668	407,454	781,122	304,065	281,878	585,943	302,785	281,878	584,663
Samut Sakhon	281,681	301,449	583,130	216,963	237,919	454,882	188,509	175,150	363,659	186,633	174,698	361,331
Samut Songkhram	101,839	111,129	212,968	84,146	94,293	178,439	68,242	62,406	130,648	68,242	62,360	130,602
Phetchaburi	224,446	239,444	463,890	184,244	201,281	385,525	145,078	138,532	283,610	144,233	137,928	282,161
Prachuap Khiri Khan	241,945	245,134	487,079	198,988	203,981	402,969	169,882	138,679	308,561	169,325	138,585	307,910
Central Region	**7,840,490**	**8,256,993**	**16,097,483**	**6,279,102**	**6,747,935**	**13,027,037**	**5,074,559**	**4,481,990**	**9,556,550**	**5,040,825**	**4,454,499**	**9,495,324**
Chiang Mai	793,254	812,211	1,605,465	651,427	676,265	1,327,692	514,562	473,081	987,643	510,848	464,681	975,529
Lamphun	213,888	221,185	435,073	177,516	186,394	363,910	145,664	137,941	283,605	145,091	137,646	282,737
Lampang	408,477	410,821	819,298	341,095	345,931	687,026	258,004	234,204	492,208	256,306	231,775	488,080
Uttaradit	239,976	250,642	490,618	195,528	208,732	404,260	152,229	124,024	276,254	151,685	124,024	275,709
Phrae	255,255	261,702	516,957	213,686	221,556	435,242	167,642	149,747	317,389	167,428	149,408	316,836
Nan	247,805	245,150	492,955	203,527	202,419	405,946	175,167	145,739	320,906	172,257	141,137	313,394
Phayao	266,688	268,349	535,037	221,550	225,258	446,808	174,694	146,798	321,492	174,359	145,462	319,821
Chiang Rai	608,209	605,748	1,213,957	500,033	502,407	1,002,440	407,673	332,642	740,314	404,179	328,111	732,290
Mae Hong Son	121,430	114,809	236,239	97,125	91,999	189,124	81,940	67,864	149,804	81,655	67,686	149,341
Nakhon Sawan	563,452	593,080	1,156,532	457,141	491,963	949,104	366,981	317,468	684,449	365,028	316,620	681,648
Uthai Thani	156,345	164,890	321,235	126,497	136,501	262,998	100,746	90,186	190,932	100,453	89,474	189,927
Kampaeng Phet	357,037	366,298	723,335	287,281	300,264	587,545	234,839	201,030	435,870	234,839	200,942	435,781
Tak	267,798	267,197	534,995	211,697	213,790	425,487	174,778	135,651	310,429	173,036	135,420	308,456
Sukhothai	305,678	324,666	630,344	248,206	270,376	518,582	202,050	177,694	379,744	197,632	176,547	374,179
Phitsanulok	417,790	433,735	851,525	337,938	357,729	695,667	269,283	229,011	498,294	268,744	225,074	493,818
Phichit	289,679	310,693	600,372	235,760	259,407	495,167	192,181	156,234	348,414	190,144	155,106	345,251
Phetchabun	513,461	528,118	1,041,579	413,001	432,558	845,559	336,427	277,449	613,876	335,260	274,269	609,529
Northern Region	**6,026,222**	**6,179,294**	**12,205,516**	**4,919,008**	**5,123,549**	**10,042,557**	**3,954,859**	**3,396,764**	**7,351,622**	**3,928,943**	**3,363,384**	**7,292,328**
Nakhon Ratchasima	1,395,308	1,434,703	2,830,011	1,082,840	1,138,692	2,221,532	838,124	740,843	1,578,967	836,460	732,240	1,568,700
Buri Ram	827,013	832,923	1,659,936	639,093	654,832	1,293,925	503,640	401,249	904,890	500,186	396,961	897,146

Table 3: Employment

Location	Population 2011			Population 15 years and over 2011			Employment 2011					
							Workforce			Employed		
	Male (person)	Female (person)	Total (person)	Male (person)	Female (person)	Total (person)	Male (person)	Female (person)	Total (persons)	Male (person)	Female (persons)	Total (persons)
	1	2	3	4	5	6	7	8	9	10	11	12
Surin	722,492	730,674	1,453,166	561,087	578,643	1,139,730	440,648	341,510	782,158	436,066	340,118	776,184
Si Sa Ket	766,945	779,851	1,546,796	595,154	618,135	1,213,289	510,667	448,331	958,998	510,295	443,939	954,234
Ubon Ratchathaini	938,431	940,339	1,878,770	725,428	738,605	1,464,033	613,784	520,075	1,133,860	601,297	514,192	1,115,489
Yasothon	307,848	311,365	619,213	241,430	248,359	489,789	197,250	185,394	382,645	197,037	183,738	380,775
Chaiyaphum	595,193	606,105	1,201,298	467,834	485,468	953,302	388,368	321,000	709,368	386,504	321,000	707,504
Amnat Charoen	200,118	200,215	400,333	155,900	158,237	314,137	130,257	111,800	242,057	129,635	111,661	241,296
Nong Bua Lam Phu	270,524	267,858	538,382	211,661	211,881	423,542	185,870	139,205	325,075	184,445	135,917	320,362
Khon Kaen	945,310	951,396	1,896,706	748,624	764,638	1,513,262	596,498	467,211	1,063,709	593,004	461,862	1,054,866
Udon Thani	820,602	815,774	1,636,376	641,551	645,797	1,287,348	519,212	386,622	905,834	515,961	383,800	899,760
Loei	333,008	328,532	661,540	265,419	264,440	529,859	218,716	175,343	394,059	218,716	174,357	393,073
Nong Khai	492,896	486,679	979,575	384,399	383,702	768,101	317,611	259,114	576,725	316,918	259,114	576,032
Maha Sarakham	509,593	521,382	1,030,975	403,968	421,123	825,091	334,467	294,570	629,037	332,544	291,175	623,718
Roi Et	679,336	686,220	1,365,556	537,805	551,936	1,089,741	446,459	376,362	822,821	434,245	374,947	809,192
Kalasin	504,510	507,859	1,012,369	399,604	407,420	807,024	335,184	274,988	610,172	334,239	274,988	609,228
Sakon Nakhon	579,281	581,191	1,160,472	452,030	460,489	912,519	360,544	302,814	663,358	355,795	301,901	657,695
Nakhon Phanom	377,057	378,145	755,202	295,062	299,609	594,671	247,404	212,677	460,080	243,894	207,522	451,416
Mukdahan	173,600	172,326	345,926	135,908	136,563	272,471	116,090	100,466	216,556	115,916	100,242	216,158
Bueng Kan	na.	na.	na.	na.	na.	na.	na.	na.	na.	na.	na.	na.
Northeastern Region	**11,439,065**	**11,533,537**	**22,972,602**	**8,944,797**	**9,168,569**	**18,113,366**	**7,300,792**	**6,059,573**	**13,360,365**	**7,243,156**	**6,009,674**	**13,252,830**
Nakhon Si Thammarat	869,492	880,756	1,750,248	668,856	690,095	1,358,951	575,143	461,443	1,036,586	573,367	453,776	1,027,143
Krabi	202,729	200,234	402,963	152,757	152,460	305,217	126,063	104,400	230,463	124,674	103,715	228,388
Phang-nga	136,208	134,894	271,102	105,059	105,312	210,371	88,801	64,585	153,385	88,739	64,585	153,324
Phuket	149,378	153,811	303,189	111,596	117,585	229,181	93,128	73,755	166,884	93,128	73,426	166,554
Surat Thani	508,639	511,508	1,020,147	388,389	397,374	785,763	325,335	271,383	596,717	325,043	269,375	594,417
Ranong	97,284	94,925	192,209	74,106	72,923	147,029	64,358	43,964	108,322	63,425	43,908	107,333
Chumphon	257,786	256,963	514,749	199,702	201,500	401,202	173,250	145,376	318,626	173,250	145,315	318,564
Songkhla	727,334	752,554	1,479,888	548,686	583,274	1,131,960	455,985	398,321	854,306	453,793	392,497	846,290
Satun	149,062	147,348	296,410	112,103	112,963	225,066	95,145	68,061	163,206	94,836	67,797	162,633
Trang	344,340	352,090	696,430	261,531	273,793	535,324	222,624	200,116	422,740	221,713	200,116	421,829
Phatthalung	281,887	289,931	571,818	216,883	228,533	445,416	190,563	162,602	353,165	190,197	162,175	352,372
Pattani	348,391	355,019	703,410	259,972	270,761	530,733	208,390	163,066	371,456	204,602	159,319	363,921
Yala	246,471	248,083	494,554	184,597	189,351	373,948	149,509	117,244	266,753	147,899	116,263	264,162
Narathiwat	394,881	395,426	790,307	294,324	299,965	594,289	237,972	174,589	412,561	235,290	170,672	405,962
Southern Region	**4,713,882**	**4,773,542**	**9,487,424**	**3,578,561**	**3,695,889**	**7,274,450**	**3,006,266**	**2,448,904**	**5,455,170**	**2,989,956**	**2,422,937**	**5,412,894**

Table 3: Employment

Location	Employment 2011								Labour protection 2011				
	Unemployed			Unemploy-ment rate	Underemployed			Underem-ployment rate	Employed with social security		Members of Workmen's Compensa-tion Fund	Occupational injuries (all cases)	
	Male (persons)	Female (person)	Total (persons)	(% of workforce)	Male (persons)	Female (persons)	Total (persons)	(% of employed)	(persons)	%	(persons)	(persons)	(per 1,000 members of Workmen's Compensation Fund
	13	14	15	16	17	18	19	20	21	22	23	24	25
Kingdom	**137,708**	**124,732**	**262,440**	**0.7**	**170,277**	**107,883**	**278,160**	**0.7**	**10,499,993**	**26.7**	**8,222,960**	**129,632**	**15.8**
Bangkok	**22,373**	**12,650**	**35,023**	**0.9**	**2,732**	**0**	**2,732**	**0.1**	**3,426,940**	**88.7**	**2,972,446**	**37,177**	**12.5**
Samut Prakan	3,813	5,324	9,138	1.2	0	0	0	0.0	736,279	94.6	653,750	22,818	34.9
Nonthaburi	2,082	2,576	4,658	0.9	961	0	961	0.2	272,729	52.3	211,750	3,771	17.8
Pathum Thani	1,686		1,686	0.3	0	0	0	0.0	436,613	88.7	371,706	5,557	15.0
Phra Nakhon Si Ayutthaya	3,723	1,759	5,482	1.3	1,744	602	2,346	0.5	353,511	82.7	320,550	3,627	11.3
Ang Thong	1,263	460	1,723	1.0	1,610	795	2,405	1.5	18,629	11.4	8,380	116	13.8
Lop Buri	788	3,655	4,443	0.9	0	0	0	0.0	85,305	18.0	63,913	798	12.5
Sing Buri	1,597	692	2,289	1.6	69	765	833	0.6	24,798	18.0	16,172	298	18.4
Chai Nat	1,321	609	1,930	0.9	326	1,340	1,666	0.8	22,077	10.2	11,234	179	15.9
Saraburi	2,820	561	3,380	0.9	0	0	0	0.0	164,263	45.3	141,621	2,146	15.2
Chon Buri	874	2,939	3,814	0.5	513	0	513	0.1	610,402	86.7	542,339	9,104	16.8
Rayong	1,954	438	2,392	0.7	0	0	0	0.0	334,495	92.9	304,117	4,228	13.9
Chanthaburi	794	171	965	0.3	883	204	1,087	0.3	40,375	12.0	22,930	256	11.2
Trat	82	88	170	0.1	130	100	230	0.2	21,680	14.8	9,860	89	9.0
Chachoengsao	1,007	953	1,960	0.5	279	0	279	0.1	201,844	49.8	179,088	4,172	23.3
Prachin Buri	363	1,370	1,734	0.6	77	279	357	0.1	124,505	46.5	109,231	1,512	13.8
Nakhon Nayok	314	393	707	0.4	276	0	276	0.2	21,448	13.6	13,376	207	15.5
Sa Kaeo	971	855	1,826	0.6	5,058	2,795	7,854	2.4	23,705	7.3	10,659	100	9.4
Ratchaburi	1,825	2,113	3,938	0.8	989	1,552	2,541	0.5	102,192	20.2	76,213	1,396	18.3
Kanchanaburi	686	459	1,145	0.2	3,478	5,235	8,713	1.8	56,381	11.4	36,066	506	14.0
Suphan Buri	127		127	0.0	257	1,160	1,417	0.3	48,626	8.8	29,875	455	15.2
Nakhon Pathom	1,280		1,280	0.2	170	0	170	0.0	210,860	36.1	175,170	3,695	21.1
Samut Sakhon	1,877	452	2,328	0.6	225	0	225	0.1	350,493	97.0	318,380	8,057	25.3
Samut Songkhram		46	46	0.0	111	0	111	0.1	19,578	15.0	11,976	154	12.9
Phetchaburi	844	604	1,448	0.5	230	269	498	0.2	46,855	16.6	32,702	535	16.4
Prachuap Khiri Khan	557	94	651	0.2	0	0	0	0.0	60,892	19.8	43,647	624	14.3
Central Region	**32,650**	**26,611**	**59,262**	**0.6**	**17,387**	**15,097**	**32,484**	**0.3**	**2,381,561**	**25.1**	**3,714,705**	**74,400**	**20.0**
Chiang Mai	2,887	4,731	7,619	0.8	9,056	4,659	13,715	1.4	248,102	25.4	147,497	1,626	11.0
Lamphun	573	295	868	0.3	0	0	0	0.0	99,235	35.1	72,976	853	11.7
Lampang	1,010	1,184	2,194	0.4	3,387	1,436	4,824	1.0	70,083	14.4	41,679	635	15.2
Uttaradit	316		316	0.1	3,546	2,629	6,174	2.2	25,203	9.1	10,631	185	17.4
Phrae	214	181	395	0.1	544	1,505	2,048	0.6	31,553	10.0	10,690	157	14.7
Nan	2,910	4,332	7,242	2.3	1,787	1,064	2,851	0.9	21,756	6.9	7,027	27	3.8
Phayao		304	304	0.1	239	0	239	0.1	26,224	8.2	9,163	69	7.5
Chiang Rai	3,494	4,530	8,024	1.1	3,995	5,370	9,364	1.3	75,338	10.3	37,104	377	10.2
Mae Hong Son	56	41	97	0.1	919	930	1,849	1.2	10,217	6.8	2,433	6	2.5
Nakhon Sawan	1,953	702	2,655	0.4	1,829	2,684	4,514	0.7	63,462	9.3	37,480	777	20.7
Uthai Thani		130	130	0.1	1,014	1,288	2,302	1.2	17,361	9.1	6,299	88	14.0
Kampaeng Phet		88	88	0.0	6,081	2,129	8,209	1.9	34,559	7.9	16,908	148	8.8
Tak	1,742	231	1,972	0.6	2,251	1,709	3,960	1.3	30,653	9.9	11,791	81	6.9
Sukhothai	3,026	749	3,775	1.0	2,136	1,306	3,442	0.9	22,541	6.0	9,537	70	7.3
Phitsanulok	281	3,936	4,218	0.8	3,338	1,416	4,754	1.0	69,473	14.1	35,420	404	11.4
Phichit	1,635	466	2,101	0.6	8,853	1,161	10,015	2.9	30,158	8.7	13,955	162	11.6
Phetchabun	728	2,365	3,093	0.5	3,442	1,078	4,520	0.7	43,160	7.1	21,253	482	22.7
Northern Region	**20,825**	**24,265**	**45,090**	**0.6**	**52,416**	**30,364**	**82,780**	**1.1**	**919,078**	**12.6**	**491,843**	**6,147**	**12.5**
Nakhon Ratchasima	1,664	8,603	10,266	0.7	1,100	967	2,067	0.1	257,687	16.4	194,382	3,025	15.6
Buri Ram	2,734	836	3,570	0.4	4,210	3,362	7,572	0.8	46,149	5.1	21,835	166	7.6

Table 3: Employment

Location	Unemployed Male (persons) 13	Unemployed Female (person) 14	Unemployed Total (persons) 15	Unemployment rate (% of workforce) 16	Underemployed Male (persons) 17	Underemployed Female (persons) 18	Underemployed Total (persons) 19	Underemployment rate (% of employed) 20	Employed with social security (persons) 21	% 22	Members of Workmen's Compensation Fund (persons) 23	Occupational injuries (persons) 24	Occupational injuries (per 1,000 members of Workmen's Compensation Fund) 25
Surin	4,583	1,392	5,974	0.8	7,991	3,573	11,564	1.5	40,514	5.2	19,562	216	11.0
Si Sa Ket	372	4,392	4,765	0.5	24,108	20,440	44,548	4.7	34,997	3.7	11,112	38	3.4
Ubon Ratchathani	10,013	4,029	14,042	1.2	3,215	190	3,404	0.3	71,496	6.4	36,491	166	4.6
Yasothon	213	1,656	1,870	0.5	2,609	1,993	4,602	1.2	17,253	4.5	7,495	22	2.9
Chaiyaphum	1,863		1,863	0.3	0	0	0	0.0	35,431	5.0	16,744	104	6.2
Amnat Charoen	622	139	761	0.3	5,339	2,953	8,292	3.4	14,617	6.1	2,734	9	3.3
Nong Bua Lam Phu	953	3,288	4,241	1.3	249	492	741	0.2	14,757	4.6	5,936	51	8.6
Khon Kaen	3,494	1,585	5,079	0.5	640	0	640	0.1	133,128	12.6	91,082	723	7.9
Udon Thani	3,062	1,273	4,334	0.5	0	0	0	0.0	69,537	7.7	36,988	693	18.7
Loei		986	986	0.3	1,300	0	1,300	0.3	23,826	6.1	9,196	56	6.1
Nong Khai	692		692	0.1	0	0	0	0.0	22,635	3.9	9,315	157	16.9
Maha Sarakham	1,923	3,395	5,319	0.8	4,097	1,179	5,276	0.8	35,478	5.7	15,139	63	4.2
Roi Et	9,620	155	9,775	1.2	0	0	0	0.0	40,389	5.0	18,929	118	6.2
Kalasin	944		944	0.2	1,896	1,773	3,669	0.6	29,082	4.8	12,302	91	7.4
Sakon Nakhon	270	442	713	0.1	1,158	1,712	2,870	0.4	38,073	5.8	14,343	119	8.3
Nakhon Phanom	3,510	5,155	8,664	1.9	0	93	93	0.0	17,485	3.9	6,193	35	5.7
Mukdahan	174	189	363	0.2	0	299	299	0.1	15,675	7.3	6,794	66	9.7
Bueng Kan	na.	na.	na.	na.	na.	na.	na.	na.	5,817	na.	1,877	na.	na.
Northeastern Region	**46,708**	**37,513**	**84,221**	**0.6**	**57,912**	**39,025**	**96,937**	**0.7**	**964,026**	**7.3**	**538,449**	**5,918**	**11.0**
Nakhon Si Thammarat	1,408	6,888	8,296	0.8	15,915	9,464	25,379	2.5	73,551	7.2	38,505	455	11.8
Krabi	600	433	1,033	0.4	1,004	34	1,038	0.5	43,106	18.9	28,539	265	9.3
Phang-nga	62		62	0.0	9,093	5,877	14,970	9.8	22,628	14.8	12,483	66	5.3
Phuket		329	329	0.2	122	0	122	0.1	141,965	85.2	114,123	1,100	9.6
Surat Thani	292	764	1,056	0.2	200	0	200	0.0	104,457	17.6	70,988	1,043	14.7
Ranong	933	56	989	0.9	23	20	43	0.0	13,852	12.9	7,332	43	5.9
Chumphon		61	61	0.0	0	0	0	0.0	34,078	10.7	20,972	301	14.4
Songkhla	2,192	5,824	8,015	0.9	3,853	767	4,620	0.5	201,619	23.8	135,503	1,554	11.5
Satun	309	264	573	0.4	3,010	2,493	5,503	3.4	17,026	10.5	7,630	144	18.9
Trang	911		911	0.2	3,328	2,111	5,438	1.3	44,328	10.5	26,303	510	19.4
Phatthalung	366	427	793	0.2	1,904	2,349	4,253	1.2	24,368	6.9	8,295	85	10.3
Pattani	3,788	3,747	7,535	2.0	447	283	729	0.2	31,140	8.6	13,506	152	11.3
Yala	1,610	981	2,592	1.0	679	0	679	0.3	25,533	9.7	12,535	213	17.0
Narathiwat	2,682	3,916	6,599	1.6	253	0	253	0.1	23,763	5.9	8,803	59	6.7
Southern Region	**15,152**	**23,692**	**38,844**	**0.7**	**39,831**	**23,397**	**63,228**	**1.2**	**801,414**	**14.8**	**505,517**	**5,990**	**11.8**

Table 4: Income

Location	House-hold income 2007	Household income 2011			House-hold income change 2007-2011	Household expenditure		Household expenditure change 2007-2011	Household consumption debt 2011		Poverty 2011			GINI index (income-based) 2009
		Male-headed	Female-headed	Total		Household expenditure 2007	Household expenditure 2011		indebted households	Average debt (institutional and informal debt)	Poverty incidence	Number of the poor	Poverty line	
	(Baht/month)	(Baht/month)	(Baht/month)	(Baht/month)	(%)	(Baht/month)	(Baht/month)	(%)	(% of total households)	(Baht)	(%)	(in 1,000)	Baht/month/person	(%)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Kingdom	**18,660**	**24,704**	**20,369**	**23,241**	**24.6**	**14,500**	**17,412**	**20.1**	**37.1**	**186,533**	**13.2**	**8,766.5**	**2,422**	**45.0**
Bangkok	**39,020**	**51,735**	**43,032**	**48,963**	**25.5**	**25,615**	**29,992**	**17.1**	**30.4**	**273,247**	**7.8**	**664.1**	**2,910**	**37.6**
Samut Prakan	21,302	24,413	22,174	23,832	11.9	15,910	20,227	27.1	27.3	200,955	1.9	36.1	2,670	35.2
Nonthaburi	32,743	37,098	32,140	35,146	7.3	26,414	29,153	10.4	25.7	330,354	1.2	16.9	2,797	37.2
Pathum Thani	26,107	22,519	19,527	21,654	-17.1	19,468	19,071	-2.0	51.6	184,072	3.6	52.1	2,662	38.1
Phra Nakhon Si Ayutthaya	21,676	23,867	20,424	22,307	2.9	16,757	17,540	4.7	25.5	189,700	6.9	61.2	2,527	43.9
Ang Thong	17,704	23,908	18,406	21,143	19.4	13,432	16,598	23.6	50.7	155,278	14.4	36.5	2,546	42.3
Lop Buri	16,852	18,127	16,001	17,181	2.0	14,462	14,882	2.9	42.1	110,735	22.1	172.9	2,582	47.9
Sing Buri	20,558	24,645	27,821	26,086	26.9	14,988	19,244	28.4	35.2	197,626	9.5	18.5	2,485	43.0
Chai Nat	13,995	22,353	17,196	20,188	44.3	12,841	17,407	35.6	38.7	191,094	10.0	32.6	2,653	44.8
Saraburi	22,363	27,716	26,073	27,123	21.3	15,467	19,396	25.4	44.5	192,137	8.3	60.6	2,468	42.3
Chon Buri	22,260	24,304	20,372	23,007	3.4	21,048	20,573	-2.3	27.7	224,231	2.4	39.9	2,776	36.8
Rayong	25,090	23,322	18,567	21,929	-12.6	18,165	18,546	2.1	31.6	195,181	3.6	31.3	2,598	45.3
Chanthaburi	18,866	27,449	19,314	24,282	28.7	16,449	18,869	14.7	34.1	186,468	12.1	59.0	2,601	37.5
Trat	16,664	22,251	40,019	28,119	68.7	13,463	17,053	26.7	29.8	201,879	20.0	50.1	2,576	34.9
Chachoengsao	20,665	25,693	18,686	23,031	11.4	16,231	17,959	10.6	18.6	501,447	7.9	57.8	2,522	26.6
Prachin Buri	18,263	28,513	19,933	25,338	38.7	16,471	22,884	38.9	43.7	201,236	14.8	83.4	2,517	49.2
Nakhon Nayok	15,983	19,468	14,593	17,042	6.6	13,584	13,807	1.6	29.9	93,587	13.1	32.3	2,546	39.8
Sa Kaeo	13,593	19,503	14,258	17,781	30.8	9,975	15,130	51.7	40.6	185,530	27.4	155.3	2,448	56.8
Ratchaburi	17,576	20,343	16,461	18,715	6.5	14,786	13,852	-6.3	39.5	129,786	30.1	240.5	2,577	52.1
Kanchanaburi	15,326	15,794	14,306	15,219	-0.7	12,457	13,795	10.7	30.9	109,472	32.6	264.5	2,533	35.5
Suphan Buri	15,111	17,973	13,839	15,930	5.4	11,892	11,912	0.2	17.8	103,988	26.8	227.4	2,548	35.0
Nakhon Pathom	25,447	21,657	25,028	22,956	-9.8	18,139	15,983	-11.9	20.1	185,006	6.7	64.3	2,664	38.4
Samut Sakhon	18,735	20,733	21,028	20,853	11.3	14,076	18,169	29.1	12.5	251,804	3.4	32.6	2,670	36.7
Samut Songkhram	12,634	16,883	12,858	15,069	19.3	9,918	15,604	57.3	9.8	92,386	6.8	12.3	2,520	55.3
Phetchaburi	17,855	21,053	18,653	20,026	12.2	13,256	18,275	37.9	33.6	173,312	8.4	39.7	2,535	43.1
Prachuap Khiri Khan	17,932	18,221	16,479	17,505	-2.4	15,977	17,245	7.9	31.2	160,634	13.0	60.8	2,527	51.5
Central Region	**20,547**	**23,264**	**20,017**	**22,028**	**7.2**	**16,309**	**18,114**	**11.1**	**30.9**	**183,605**	**10.3**	**1,938.6**	**2,617**	**44.8**
Chiang Mai	14,386	19,877	15,469	18,325	27.4	12,480	15,611	25.1	25.3	194,637	7.9	139.3	2,279	43.7
Lamphun	14,104	19,231	17,394	18,779	33.1	12,789	16,607	29.8	44.3	158,693	9.6	40.4	2,284	44.7
Lampang	13,530	18,890	17,643	18,455	36.4	11,360	14,695	29.4	31.8	179,795	12.4	91.4	2,256	52.4
Uttaradit	15,001	18,666	15,559	17,602	17.3	11,217	13,433	19.8	29.1	206,027	18.3	78.3	2,107	43.2
Phrae	14,044	18,152	18,172	18,158	29.3	11,491	14,137	23.0	37.3	201,109	13.1	54.4	2,181	49.8
Nan	11,407	16,418	15,780	16,256	42.5	11,578	14,280	23.3	35.6	149,886	19.3	85.5	2,085	45.3
Phayao	11,348	15,060	12,796	14,457	27.4	10,495	12,349	17.7	21.8	149,062	11.1	45.6	2,277	39.7
Chiang Rai	13,736	15,865	13,094	15,036	9.5	10,702	12,731	19.0	20.2	242,004	17.8	209.2	2,198	48.0
Mae Hong Son	7,245	9,339	8,150	9,024	24.6	5,333	7,224	35.5	15.7	97,096	60.3	115.6	2,084	54.5
Nakhon Sawan	15,141	23,409	18,310	21,562	42.4	10,699	13,851	29.5	33.1	186,790	13.3	129.0	2,164	44.6
Uthai Thani	12,036	20,776	14,908	18,487	53.6	9,727	12,710	30.7	35.3	192,203	24.1	69.8	2,096	46.4
Kampaeng Phet	15,559	19,544	17,031	18,672	20.0	12,461	13,540	8.7	33.3	111,382	14.0	112.2	2,077	40.9
Tak	10,791	14,065	10,877	12,938	19.9	8,874	10,265	15.7	30.0	93,837	43.5	225.8	2,096	46.7
Sukhothai	12,720	18,444	17,528	18,102	42.3	8,695	13,323	53.2	32.3	133,578	13.4	83.2	2,123	41.9
Phitsanulok	13,364	18,313	16,073	17,474	30.8	11,276	15,164	34.5	38.9	252,890	13.6	123.6	2,069	50.4
Phichit	15,603	19,788	15,918	18,133	16.2	10,161	14,629	44.0	31.6	251,350	6.8	35.9	2,081	31.2
Phetchabun	12,914	16,631	13,727	15,682	21.4	10,946	11,432	4.4	31.3	173,229	23.3	216.3	2,055	57.7
Northern Region	**13,568**	**18,248**	**15,582**	**17,352**	**27.9**	**10,990**	**13,671**	**24.4**	**30.3**	**177,123**	**16.0**	**1,855.6**	**2,160**	**47.7**
Nakhon Ratchasima	14,177	20,437	17,527	19,405	36.9	11,305	14,263	26.2	33.9	205,876	14.6	369.9	2,123	46.3
Buri Ram	10,263	18,404	14,764	17,317	68.7	8,537	13,630	59.7	54.0	194,067	33.7	423.7	2,097	47.4
Surin	12,257	20,514	14,667	18,288	49.2	12,116	14,401	18.9	74.7	173,029	26.0	284.5	2,075	38.5

Table 4: Income

Location	House-hold income 2007	Household income 2011			House-hold income change 2007-2011	Household expenditure		Household expenditure change 2007-2011	Household consumption debt 2011		Poverty 2011			GINI index (income-based) 2009
		Male-headed	Female-headed	Total		Household expenditure 2007	Household expenditure 2011		indebted households	Average debt (institutional and informal debt)	Poverty incidence	Number of the poor	Poverty line	
	(Baht/month)	(Baht/month)	(Baht/month)	(Baht/month)	(%)	(Baht/month)	(Baht/month)	(%)	(% of total households)	(Baht)	(%)	(in 1,000)	Baht/month/person	(%)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Si Sa Ket	10,782	14,965	11,801	13,945	29.3	9,070	11,675	28.7	47.0	171,136	35.9	365.3	2,069	43.2
Ubon Ratchathani	14,534	22,129	19,806	21,660	49.0	10,399	16,032	54.2	65.7	218,240	7.4	129.1	2,053	44.8
Yasothon	10,039	18,084	13,867	16,767	67.0	9,210	12,842	39.4	57.8	212,648	32.6	155.4	2,162	41.9
Chaiyaphum	11,253	17,585	11,651	15,794	40.4	9,344	12,145	30.0	41.6	131,003	23.8	223.7	2,084	38.4
Amnat Charoen	11,889	17,304	13,524	15,976	34.4	10,224	14,863	45.4	78.5	131,312	14.8	40.7	2,148	45.0
Nong Bua Lam Phu	12,824	17,756	15,979	17,144	33.7	11,717	16,391	39.9	40.2	104,734	14.0	67.6	2,115	56.8
Khon Kaen	15,065	16,446	14,895	16,031	6.4	11,247	12,868	14.4	47.3	124,628	9.3	163.4	2,245	47.1
Udon Thani	17,273	22,825	20,489	22,026	27.5	14,759	19,104	29.4	30.1	113,411	11.0	139.6	2,105	51.9
Loei	13,765	18,771	15,784	17,959	30.5	12,341	15,159	22.8	24.0	249,966	14.2	75.7	2,123	45.7
Nong Khai	12,885	17,189	16,559	16,979	31.8	12,131	15,517	27.9	33.8	84,695	8.0	64.3	2,119	47.9
Maha Sarakham	15,812	28,475	19,230	25,462	61.0	11,605	16,639	43.4	70.6	161,233	12.9	104.5	2,114	47.3
Roi Et	11,778	20,793	18,807	20,169	71.2	10,638	15,481	45.5	68.4	209,552	9.4	101.5	2,208	38.1
Kalasin	12,507	17,862	16,395	17,295	38.3	10,099	13,033	29.1	49.5	193,194	28.6	268.8	2,154	52.8
Sakon Nakhon	11,957	16,224	13,884	15,332	28.2	10,916	12,337	13.0	48.0	262,423	24.2	201.9	2,248	45.4
Nakhon Phanom	10,009	15,518	11,701	14,057	40.4	9,652	12,057	24.9	33.8	119,541	32.3	184.3	2,133	48.4
Mukdahan	13,406	18,699	20,117	19,049	42.1	11,818	15,639	32.3	40.3	271,854	10.0	37.5	2,188	51.2
Bueng Kan	na.	na.	na.	na.	na.	na.	na.	na.	na.	na.	na.	na.	na.	na.
Northeastern Region	**12,995**	**19,280**	**15,977**	**18,219**	**40.2**	**10,920**	**14,379**	**31.7**	**49.1**	**173,032**	**18.1**	**3,401.2**	**2,131**	**47.6**
Nakhon Si Thammarat	18,087	33,726	21,412	29,977	65.7	14,990	20,770	38.6	34.7	157,338	11.2	162.4	2,402	58.0
Krabi	18,852	32,709	35,043	33,350	76.9	15,553	19,812	27.4	44.8	271,883	5.3	19.3	2,415	44.5
Phang-nga	22,211	24,498	24,413	24,470	10.2	17,870	19,272	7.8	25.9	109,806	4.6	11.9	2,454	40.8
Phuket	25,084	28,277	21,979	26,048	3.8	19,329	21,255	10.0	12.3	225,226	5.8	33.7	2,900	33.7
Surat Thani	26,207	37,994	27,185	34,420	31.3	18,134	22,832	25.9	39.8	239,202	4.1	42.3	2,558	41.4
Ranong	21,619	28,764	18,193	26,051	20.5	16,358	23,607	44.3	35.0	253,624	9.4	24.9	2,583	38.4
Chumphon	19,003	28,757	26,405	28,022	47.5	15,074	20,568	36.4	30.3	214,225	3.0	14.0	2,487	38.2
Songkhla	22,342	29,990	19,971	26,714	19.6	18,668	20,619	10.4	28.2	203,996	3.2	48.3	2,604	50.0
Satun	17,328	22,192	18,261	21,049	21.5	14,716	18,959	28.8	51.9	185,950	11.5	31.7	2,351	41.1
Trang	23,650	35,682	37,556	36,249	53.3	19,149	22,695	18.5	49.7	221,971	8.3	49.7	2,479	42.1
Phatthalung	18,670	26,148	22,848	25,205	35.0	15,750	18,118	15.0	40.4	240,652	8.4	41.8	2,605	46.1
Pattani	11,840	17,443	14,124	16,126	36.2	12,531	14,021	11.9	50.1	159,931	33.5	203.2	2,284	49.2
Yala	13,698	23,215	19,278	21,859	59.6	11,990	14,778	23.2	13.6	224,267	13.4	58.1	2,477	40.0
Narathiwat	13,148	18,726	11,003	16,835	28.0	9,711	13,901	43.2	19.9	185,857	24.7	165.7	2,287	38.7
Southern Region	**19,716**	**29,472**	**22,636**	**27,329**	**38.6**	**15,875**	**19,692**	**24.0**	**34.3**	**201,327**	**10.1**	**907.0**	**2,500**	**47.3**

Table 5: Housing and Living Environment

Location	Housing 2011				Living conditions 2011			
	Households owning house and land	Permanent building material	Persons per room	Persons per sleeping rool	Safe sanitation	Clean drinking water	Electricity in dwelling	Telephone in structure
	(%)	(%)	(persons)	(persons)	(%)	(%)	(%)	(%)
	1	2	3	4	5	6	7	8
Kingdom	**76.0**	**99.0**	**0.7**	**1.8**	**99.6**	**99.4**	**98.2**	**16.7**
Bangkok	**42.1**	**99.4**	**0.8**	**1.6**	**99.9**	**100.0**	**97.7**	**47.3**
Samut Prakan	36.4	99.9	0.7	1.8	100.0	100.0	98.4	19.8
Nonthaburi	46.7	99.4	0.6	1.4	99.8	100.0	96.5	41.7
Pathum Thani	47.9	99.9	0.7	1.7	99.9	100.0	99.2	18.3
Phra Nakhon Si Ayutthaya	71.9	99.2	0.9	1.9	100.0	98.1	99.0	24.8
Ang Thong	80.6	96.9	0.7	1.7	99.5	97.5	99.4	18.0
Lop Buri	81.0	99.8	0.7	2.0	100.0	99.7	99.7	12.9
Sing Buri	77.1	98.4	0.6	1.7	99.6	100.0	98.2	22.3
Chai Nat	78.6	97.4	0.6	2.0	99.7	99.6	98.3	18.3
Saraburi	70.4	98.2	0.7	2.0	100.0	100.0	99.5	20.2
Chon Buri	37.1	100.0	0.8	1.7	97.6	100.0	98.9	16.4
Rayong	56.9	96.5	0.7	1.9	100.0	100.0	100.0	11.3
Chanthaburi	68.9	99.1	0.7	1.7	99.2	100.0	98.2	20.2
Trat	63.9	99.5	0.9	1.8	99.1	100.0	94.9	12.8
Chachoengsao	71.4	99.3	0.9	2.0	100.0	99.7	99.5	13.5
Prachin Buri	66.7	98.4	0.7	1.8	99.9	99.6	96.3	11.2
Nakhon Nayok	76.6	99.1	0.9	2.1	100.0	100.0	99.4	15.3
Sa Kaeo	86.3	96.3	0.9	2.1	97.1	99.6	95.6	4.8
Ratchaburi	64.4	95.5	0.8	1.8	98.4	99.7	97.7	20.4
Kanchanaburi	68.3	99.3	0.7	2.1	99.9	97.6	92.6	8.7
Suphan Buri	89.2	98.3	0.7	1.9	100.0	100.0	99.5	9.4
Nakhon Pathom	60.5	99.0	0.7	1.7	99.7	100.0	97.1	15.9
Samut Sakhon	42.0	97.9	0.8	1.7	99.8	100.0	97.5	12.5
Samut Songkhram	60.7	98.6	0.8	1.8	99.6	100.0	100.0	29.7
Phetchaburi	81.3	97.1	0.8	1.7	98.7	100.0	99.8	27.3
Prachuap Khiri Khan	64.4	95.2	0.7	1.9	97.5	98.6	95.3	10.3
Central Region	**62.1**	**98.6**	**0.7**	**1.8**	**99.4**	**99.6**	**98.0**	**17.7**
Chiang Mai	82.4	98.7	0.6	1.4	100.0	98.0	97.7	23.8
Lamphun	91.6	99.0	0.6	1.4	99.7	100.0	98.6	24.1
Lampang	90.1	99.9	0.7	1.3	100.0	99.5	99.2	21.6
Uttaradit	92.5	99.1	0.7	1.9	99.8	100.0	99.1	16.8
Phrae	90.2	100.0	0.8	1.5	99.7	97.1	99.2	21.9
Nan	78.6	98.3	0.6	1.4	99.9	99.7	99.0	12.9
Phayao	94.0	99.7	0.6	1.4	100.0	97.7	99.1	15.2
Chiang Rai	82.6	97.7	0.9	1.3	99.9	96.6	99.2	15.3
Mae Hong Son	74.6	95.9	0.6	1.9	97.3	56.1	97.8	5.6
Nakhon Sawan	81.6	98.9	0.7	2.0	99.6	100.0	98.1	12.2
Uthai Thani	85.0	98.8	0.6	1.9	99.7	99.6	98.8	9.5
Kampaeng Phet	88.7	99.0	0.6	1.9	100.0	99.9	98.5	8.4
Tak	81.0	95.7	0.6	1.7	99.5	100.0	96.9	10.1
Sukhothai	89.6	99.2	0.7	2.0	99.6	100.0	97.3	14.5
Phitsanulok	87.2	97.7	0.7	1.9	99.9	97.6	98.4	14.6
Phichit	87.9	99.3	0.7	1.8	100.0	100.0	99.2	12.5
Phetchabun	90.1	98.8	0.6	1.8	99.7	100.0	99.4	10.7
Northern Region	**86.1**	**98.7**	**0.7**	**1.6**	**99.8**	**98.1**	**98.5**	**15.7**
Nakhon Ratchasima	82.5	98.8	0.6	1.7	99.7	100.0	95.8	12.9
Buri Ram	90.0	98.5	0.6	2.0	97.8	100.0	98.4	8.1
Surin	91.4	98.0	0.8	2.0	99.2	99.6	98.1	5.7
Si Sa Ket	95.6	99.9	0.6	2.0	98.9	97.7	99.0	4.1
Ubon Ratchathani	91.2	100.0	0.6	1.8	100.0	100.0	98.8	10.5
Yasothon	97.0	100.0	0.8	1.9	100.0	99.6	98.2	5.6

Table 5: Housing and Living Environment

Location	Housing 2011				Living conditions 2011			
	Households owning house and land	Permanent building material	Persons per room	Persons per sleeping rool	Safe sanitation	Clean drinking water	Electricity in dwelling	Telephone in structure
	(%)	(%)	(persons)	(persons)	(%)	(%)	(%)	(%)
	1	2	3	4	5	6	7	8
Chaiyaphum	92.4	98.8	0.7	1.8	100.0	100.0	99.4	6.6
Amnat Charoen	95.0	100.0	0.7	2.0	99.5	100.0	99.2	6.6
Nong Bua Lam Phu	95.5	100.0	0.7	1.9	99.9	100.0	97.7	6.3
Khon Kaen	83.8	99.5	0.6	1.6	99.9	100.0	97.1	7.6
Udon Thani	86.0	99.6	0.7	1.8	99.7	100.0	97.3	11.3
Loei	92.1	99.6	0.6	1.6	99.7	99.9	97.6	10.2
Nong Khai	93.8	100.0	0.6	1.7	100.0	100.0	96.7	11.6
Maha Sarakham	91.2	100.0	0.6	1.9	99.5	99.5	100.0	9.3
Roi Et	94.5	100.0	0.6	1.7	100.0	100.0	99.5	6.8
Kalasin	94.3	99.6	0.6	2.0	100.0	100.0	99.8	6.3
Sakon Nakhon	91.3	99.5	0.8	2.1	100.0	98.8	97.8	6.9
Nakhon Phanom	94.2	100.0	0.7	1.9	99.6	100.0	97.7	6.8
Mukdahan	89.9	98.4	0.7	1.8	99.6	94.9	99.5	10.5
Bueng Kan	na.	na.	na.	na.	na.	na.	na.	na.
Northeastern Region	**90.3**	**99.4**	**0.6**	**1.8**	**99.6**	**99.6**	**98.1**	**8.5**
Nakhon Si Thammarat	86.3	99.3	0.6	1.8	98.7	100.0	99.6	12.6
Krabi	76.6	99.9	0.6	1.9	99.9	100.0	94.7	8.6
Phang-nga	75.3	98.7	0.6	1.5	99.9	99.0	98.4	20.5
Phuket	25.9	98.2	0.7	1.8	100.0	100.0	97.8	14.4
Surat Thani	72.3	99.2	0.6	1.9	99.6	99.7	98.8	17.0
Ranong	82.2	100.0	0.6	1.8	98.8	90.9	95.3	16.8
Chumphon	74.6	99.2	0.6	1.9	99.5	100.0	95.5	11.2
Songkhla	68.6	99.9	0.6	1.6	99.6	99.6	98.2	15.0
Satun	83.1	99.1	0.5	2.1	99.1	100.0	98.2	9.2
Trang	76.9	100.0	0.6	1.6	100.0	99.9	98.3	15.7
Phatthalung	88.3	99.6	0.5	1.4	99.9	100.0	99.1	15.0
Pattani	83.4	100.0	0.6	2.4	100.0	99.5	99.8	7.5
Yala	78.8	98.1	0.5	1.8	99.7	99.6	98.6	17.4
Narathiwat	88.5	99.6	0.6	2.3	95.6	99.6	98.1	7.7
Southern Region	**77.2**	**99.4**	**0.6**	**1.8**	**99.2**	**99.6**	**98.3**	**13.5**

Table 5: Housing and Living Environment

Location	Living conditions 2011			Environment 2011				
	Electric fan	Refrigerator	Cooking gas or electric stove	Population affected by flood		Population affected by drought		Carbon footprint
	(%)	(%)	(%)	(persons)	(%)	(persons)	(%)	(ton CO2/person)
	9	10	11	12	13	14	15	16
Kingdom	**98.1**	**89.6**	**81.4**	**16,224,302**	**25.3**	**16,560,561**	**25.8**	**2.8**
Bangkok	**98.9**	**84.5**	**84.5**	**2,243,640**	**39.5**	**0**	**0.0**	**5.6**
Samut Prakan	99.6	82.5	84.4	21,136	1.8	26,928	2.2	14.8
Nonthaburi	99.9	89.9	90.6	678,859	60.5	0	0.0	8.3
Pathum Thani	99.8	92.8	93.6	749,349	74.1	0	0.0	6.0
Phra Nakhon Si Ayutthaya	99.6	94.5	91.2	299,613	38.0	0	0.0	5.5
Ang Thong	98.7	87.5	92.5	104,620	36.8	0	0.0	1.6
Lop Buri	99.7	94.8	89.0	348,529	46.1	0	0.0	2.4
Sing Buri	99.1	92.6	87.1	133,410	62.5	0	0.0	3.2
Chai Nat	99.4	92.1	86.9	81,513	24.5	0	0.0	1.5
Saraburi	99.5	94.0	88.9	159,251	25.7	12,100	2.0	8.0
Chon Buri	99.3	95.8	87.2	33,499	2.5	5,002	0.4	9.0
Rayong	99.9	87.1	88.2	28,148	4.4	339,574	53.2	10.3
Chanthaburi	99.3	91.9	90.7	54,635	10.6	117,933	22.8	2.1
Trat	97.9	85.9	90.4	803	0.4	141,112	63.6	2.1
Chachoengsao	99.0	95.0	91.9	195,178	28.7	319,110	47.0	6.2
Prachin Buri	97.5	91.5	84.2	117,345	25.0	211,533	45.0	3.8
Nakhon Nayok	100.0	97.6	93.4	80,096	31.6	403	0.2	1.7
Sa Kaeo	98.5	88.2	81.7	76,830	14.1	289,630	53.1	1.2
Ratchaburi	98.2	90.8	89.2	0	0.0	0	0.0	3.4
Kanchanaburi	95.7	86.8	76.3	0	0.0	187,081	22.3	1.9
Suphan Buri	99.0	94.1	85.9	120,754	14.3	0	0.0	1.7
Nakhon Pathom	99.9	89.4	85.5	115,351	13.3	0	0.0	4.3
Samut Sakhon	99.2	83.0	88.4	469,934	94.2	0	0.0	12.6
Samut Songkhram	99.2	92.0	95.2	0	0.0	0	0.0	2.7
Phetchaburi	97.9	86.5	83.1	0	0.0	201,606	43.3	3.0
Prachuap Khiri Khan	96.2	86.4	86.2	941	0.2	189,705	37.0	3.4
Central Region	**99.0**	**90.4**	**87.6**	**3,869,794**	**24.1**	**2,041,717**	**12.7**	**5.8**
Chiang Mai	94.3	88.9	76.2	215,785	13.1	434,835	26.4	1.9
Lamphun	93.6	91.6	85.7	94,627	23.4	159,809	39.6	2.4
Lampang	97.8	93.4	88.8	124,193	16.4	233,117	30.8	1.9
Uttaradit	98.1	93.6	85.6	73,082	15.9	48,157	10.4	1.1
Phrae	98.7	96.2	86.9	91,641	20.0	203,076	44.3	1.0
Nan	93.6	94.7	77.6	392,847	82.4	215,137	45.1	0.8
Phayao	98.7	97.0	91.4	79,532	16.3	198,289	40.8	0.8
Chiang Rai	94.8	92.1	84.8	54,288	4.5	628,852	52.5	1.2
Mae Hong Son	65.7	63.1	44.1	79,153	32.4	117,461	48.1	0.5
Nakhon Sawan	99.9	94.9	88.1	502,092	46.9	137,626	12.8	1.5
Uthai Thani	99.0	89.9	85.1	19,739	6.0	115,252	35.1	1.0
Kampaeng Phet	99.2	91.1	86.2	189,332	26.1	30,045	4.1	1.2
Tak	89.2	78.0	78.9	74,222	14.0	233,453	44.0	1.8
Sukhothai	97.3	91.3	86.8	97,972	16.3	209,229	34.8	1.1
Phitsanulok	99.0	91.0	86.2	122,557	14.4	119,840	14.1	1.7
Phichit	99.5	93.8	90.2	153,441	27.9	124,906	22.7	1.4
Phetchabun	97.8	89.6	82.1	78,004	7.9	433,151	43.7	0.9
Northern Region	**96.3**	**91.1**	**83.7**	**2,442,507**	**20.7**	**3,642,235**	**30.9**	**1.4**
Nakhon Ratchasima	98.6	91.0	89.1	138,447	5.4	1,488,218	57.6	2.1
Buri Ram	97.3	84.5	66.3	313,862	20.1	855,886	54.9	1.0
Surin	94.8	79.1	61.8	119,187	8.6	629,879	45.6	0.7
Si Sa Ket	98.8	76.3	57.3	686,132	47.2	448,428	30.9	0.7
Ubon Ratchathani	98.8	89.3	58.0	393,463	21.7	388,454	21.4	0.8
Yasothon	99.0	93.0	58.8	283,591	52.6	359,877	66.8	0.7

Table 5: Housing and Living Environment

Location	Living conditions 2011			Environment 2011				
	Electric fan	Refrigerator	Cooking gas or electric stove	Population affected by flood		Population affected by drought		Carbon footprint
	(%)	(%)	(%)	(persons)	(%)	(persons)	(%)	(ton CO2/person)
	9	10	11	12	13	14	15	16
Chaiyaphum	98.5	90.4	78.0	0	0.0	197,840	17.5	0.8
Amnat Charoen	98.0	91.6	62.2	56,926	15.3	309,129	83.0	0.5
Nong Bua Lam Phu	99.4	94.4	80.0	122,160	24.3	120,303	23.9	0.5
Khon Kaen	98.3	92.2	70.1	777,567	44.0	1,033,668	58.5	1.6
Udon Thani	98.7	93.3	80.2	560,302	36.2	1,010,985	65.3	1.2
Loei	98.2	94.0	80.4	140,965	22.6	619,205	99.1	0.7
Nong Khai	99.6	96.4	74.8	156,839	30.8	273,858	53.7	0.7
Maha Sarakham	99.0	92.5	72.5	299,253	31.8	707,555	75.3	0.8
Roi Et	99.0	90.7	75.0	190,382	14.6	893,743	68.5	0.7
Kalasin	99.2	93.0	73.9	655,823	66.8	458,706	46.7	0.7
Sakon Nakhon	97.3	90.2	62.5	341,336	30.4	152,159	13.5	0.7
Nakhon Phanom	98.2	88.2	33.4	313,148	44.4	372,425	52.8	0.5
Mukdahan	96.0	83.6	48.5	178,958	52.5	200,626	58.9	0.7
Bueng Kan	na.	na.	na.	141,935	34.8	194,227	47.6	na.
Northeastern Region	**98.3**	**89.2**	**69.9**	**5,870,276**	**27.2**	**10,715,171**	**49.6**	**1.0**
Nakhon Si Thammarat	99.4	94.3	97.0	624,345	40.9	0	0.0	1.6
Krabi	96.8	87.5	89.4	14,785	3.4	0	0.0	2.7
Phang-nga	95.8	90.2	83.6	36,358	14.3	0	0.0	2.4
Phuket	99.0	75.0	68.6	9,000	2.5	0	0.0	5.4
Surat Thani	99.3	94.0	93.9	489,308	48.3	0	0.0	3.1
Ranong	95.9	89.5	93.7	2,548	1.4	0	0.0	2.0
Chumphon	96.7	85.9	85.3	56,721	11.5	71,508	14.5	2.4
Songkhla	98.9	92.1	91.3	60,739	4.4	0	0.0	3.4
Satun	98.4	93.1	96.9	144,541	47.9	86,258	28.6	1.2
Trang	97.6	93.2	93.9	32,828	5.2	3,672	0.6	1.4
Phatthalung	98.4	92.2	93.3	194,037	38.0	0	0.0	0.8
Pattani	98.4	81.8	96.8	64,133	9.7	0	0.0	0.7
Yala	98.5	90.3	89.6	10,132	2.1	0	0.0	0.8
Narathiwat	99.1	83.7	96.7	58,610	7.8	0	0.0	0.5
Southern Region	**98.5**	**90.2**	**92.4**	**1,798,085**	**20.0**	**161,438**	**1.8**	**2.1**

Table 6: Family and Community Life

Location	Female-headed households		Elderly-headed households				Single-headed households				Elderly living alone	
	(households)	(% of total households)	Male-headed (households)	Female-headed (households)	Total elderly-headed households	(% of total households)	Male-headed (households)	Female-headed (households)	Total (households)	(% of total households)	(persons)	(% of total elderly)
	1	2	3	4	5	6	7	8	9	10	11	12
Kingdom	**6,745,038**	**33.7**	**3,833,552**	**2,588,825**	**6,422,377**	**32.1**	**1,121,492**	**3,408,737**	**4,530,228**	**22.7**	**709,498**	**8.6**
Bangkok	**626,340**	**31.9**	**288,086**	**210,798**	**498,884**	**25.4**	**95,868**	**263,411**	**359,280**	**18.3**	**45,730**	**5.6**
Samut Prakan	107,674	25.9	31,453	29,085	60,538	14.6	9,583	45,190	54,773	13.2	7,202	6.8
Nonthaburi	122,282	39.4	36,108	29,656	65,764	21.2	10,813	47,200	58,013	18.7	7,392	6.8
Pathum Thani	71,746	28.9	32,926	27,966	60,892	24.5	10,902	28,912	39,815	16.0	4,748	6.4
Phra Nakhon Si Ayutthaya	102,293	45.3	44,959	39,461	84,421	37.4	11,454	41,087	52,541	23.3	11,721	11.3
Ang Thong	41,771	50.2	19,360	19,043	38,403	46.2	6,548	21,031	27,579	33.2	5,413	11.6
Lop Buri	104,573	44.5	45,653	39,494	85,146	36.3	13,163	52,283	65,446	27.9	14,774	13.1
Sing Buri	32,649	45.4	12,415	12,119	24,534	34.1	4,320	13,998	18,318	25.5	3,849	8.9
Chai Nat	49,548	42.0	24,602	17,463	42,065	35.6	9,559	20,664	30,223	25.6	4,868	7.5
Saraburi	66,318	36.1	35,631	24,849	60,480	32.9	8,182	31,061	39,243	21.3	7,996	10.6
Chon Buri	128,205	33.0	36,368	33,318	69,686	17.9	19,707	53,007	72,714	18.7	10,664	8.9
Rayong	56,663	29.3	21,751	13,667	35,418	18.3	11,417	22,620	34,038	17.6	6,311	10.6
Chanthaburi	66,207	38.9	27,722	25,005	52,727	31.0	8,545	31,393	39,938	23.5	7,681	11.8
Trat	26,129	33.0	12,006	9,235	21,241	26.8	4,768	13,779	18,547	23.4	2,564	8.5
Chachoengsao	80,498	38.0	32,846	31,306	64,152	30.3	12,397	35,085	47,482	22.4	9,749	11.3
Prachin Buri	50,308	37.0	19,676	15,544	35,219	25.9	6,387	23,254	29,641	21.8	2,667	4.8
Nakhon Nayok	40,100	49.8	18,982	20,832	39,814	49.4	5,022	21,012	26,035	32.3	3,133	8.2
Sa Kaeo	59,380	32.8	35,598	28,362	63,960	35.4	9,462	35,742	45,204	25.0	4,113	6.8
Ratchaburi	103,360	41.9	47,185	38,470	85,654	34.8	14,272	48,800	63,071	25.6	12,487	10.6
Kanchanaburi	89,197	38.7	37,300	31,479	68,779	29.8	12,109	40,018	52,127	22.6	9,826	10.4
Suphan Buri	130,010	49.4	49,008	60,054	109,062	41.5	11,315	63,398	74,714	28.4	15,269	10.8
Nakhon Pathom	116,070	38.5	43,712	34,345	78,058	25.9	23,260	41,514	64,774	21.5	9,653	9.2
Samut Sakhon	77,050	40.8	10,216	15,629	25,845	13.7	7,295	26,337	33,632	17.8	2,527	5.1
Samut Songkhram	28,709	45.1	15,817	10,588	26,406	41.5	4,722	14,295	19,017	29.9	3,189	8.9
Phetchaburi	58,967	42.8	25,874	19,049	44,923	32.6	12,373	23,663	36,037	26.2	5,814	8.8
Prachuap Khiri Khan	60,104	41.1	23,134	18,697	41,831	28.6	9,096	25,006	34,102	23.3	6,430	11.3
Central Region	**1,869,811**	**38.1**	**740,301**	**644,718**	**1,385,019**	**28.2**	**256,670**	**820,350**	**1,077,020**	**21.9**	**180,042**	**9.4**
Chiang Mai	194,494	35.2	116,415	67,783	184,198	33.3	32,880	114,801	147,681	26.7	26,115	12.2
Lamphun	35,213	24.6	35,162	17,118	52,280	36.5	13,112	24,020	37,132	25.9	8,535	12.9
Lampang	94,766	34.9	49,099	36,462	85,561	31.5	14,336	53,267	67,603	24.9	14,669	11.7
Uttaradit	52,712	34.2	38,320	21,706	60,027	39.0	10,510	28,575	39,085	25.4	6,756	9.0
Phrae	51,205	29.7	43,682	23,275	66,958	38.9	14,571	32,309	46,880	27.2	6,826	8.0
Nan	38,513	25.3	36,382	18,687	55,069	36.2	13,783	24,944	38,728	25.5	5,422	8.6
Phayao	49,542	26.6	41,756	24,363	66,118	35.5	15,282	32,836	48,118	25.9	7,911	10.2
Chiang Rai	122,135	29.9	101,742	45,137	146,880	36.0	40,172	70,094	110,266	27.0	17,571	11.2
Mae Hong Son	19,168	26.5	15,300	7,362	22,661	31.3	3,490	11,312	14,802	20.4	1,945	8.4
Nakhon Sawan	132,696	36.2	71,986	52,094	124,080	33.9	14,601	73,812	88,413	24.1	18,381	11.0
Uthai Thani	39,327	39.0	22,881	16,944	39,824	39.5	5,396	20,244	25,640	25.4	5,254	11.0
Kampaeng Phet	76,485	34.7	50,328	34,822	85,150	38.6	15,009	44,098	59,107	26.8	12,298	13.2
Tak	58,250	35.4	33,427	25,099	58,526	35.5	10,606	33,508	44,114	26.8	7,096	12.4
Sukhothai	76,031	37.4	44,042	30,392	74,434	36.6	14,768	37,303	52,071	25.6	10,732	11.8
Phitsanulok	99,715	37.4	68,365	38,398	106,764	40.1	18,664	51,696	70,360	26.4	9,087	8.0
Phichit	79,997	42.8	33,209	33,972	67,181	35.9	6,688	43,467	50,155	26.8	9,796	10.5
Phetchabun	101,227	32.7	59,161	37,821	96,983	31.3	15,808	47,170	62,978	20.3	9,694	7.3
Northern Region	**1,321,475**	**33.6**	**861,258**	**531,434**	**1,392,692**	**35.4**	**259,674**	**743,459**	**1,003,132**	**25.5**	**178,088**	**10.6**
Nakhon Ratchasima	286,538	35.5	192,221	108,846	301,067	37.3	53,525	140,117	193,641	24.0	35,231	9.5
Buri Ram	134,628	29.9	91,418	58,885	150,303	33.3	23,678	70,736	94,414	20.9	9,355	4.4

Table 6: Family and Community Life

Location	Female-headed households		Elderly-headed households				Single-headed households				Elderly living alone	
						Family life 2011						
	(households)	(% of total households)	Male-headed (households)	Female-headed (households)	Total elderly-headed households	(% of total households)	Male-headed (households)	Female-headed (households)	Total (households)	(% of total households)	(persons)	(% of total elderly)
	1	2	3	4	5	6	7	8	9	10	11	12
Surin	158,507	38.1	88,882	70,412	159,293	38.3	15,523	87,528	103,051	24.8	10,932	5.6
Si Sa Ket	138,691	32.2	75,588	43,624	119,212	27.7	20,058	58,278	78,337	18.2	16,263	7.9
Ubon Ratchathani	100,356	20.2	134,504	47,091	181,594	36.5	24,405	75,425	99,830	20.1	14,461	6.3
Yasothon	57,032	31.2	47,575	26,068	73,643	40.3	14,532	31,990	46,522	25.5	7,328	8.3
Chaiyaphum	104,827	30.2	102,260	55,191	157,450	45.3	25,652	67,093	92,745	26.7	13,581	7.9
Amnat Charoen	39,205	35.1	27,497	17,999	45,495	40.8	6,179	20,793	26,972	24.2	3,362	6.7
Nong Bua Lam Phu	50,429	34.5	26,138	22,356	48,494	33.1	8,543	27,920	36,463	24.9	2,968	5.4
Khon Kaen	142,961	26.8	129,552	70,440	199,991	37.4	48,383	104,403	152,786	28.6	21,673	9.5
Udon Thani	157,565	34.2	109,437	59,634	169,072	36.7	23,931	74,312	98,244	21.3	9,791	5.9
Loei	47,579	27.2	42,012	15,718	57,729	33.0	9,230	23,405	32,635	18.6	4,692	6.0
Nong Khai	91,944	33.4	68,328	36,154	104,482	38.0	15,565	44,163	59,728	21.7	8,346	8.3
Maha Sarakham	96,618	32.6	63,497	46,565	110,063	37.1	12,835	59,022	71,858	24.2	6,867	5.2
Roi Et	125,820	31.4	93,901	75,491	169,392	42.3	27,018	88,475	115,493	28.8	11,117	6.3
Kalasin	109,991	38.6	57,750	42,186	99,936	35.1	11,225	50,721	61,946	21.7	10,106	8.6
Sakon Nakhon	129,660	38.1	58,917	54,908	113,825	33.5	18,492	66,275	84,767	24.9	11,796	10.0
Nakhon Phanom	82,963	38.3	44,371	36,873	81,245	37.5	16,001	48,424	64,424	29.7	7,505	9.0
Mukdahan	24,317	24.7	18,253	8,713	26,966	27.4	5,149	13,043	18,192	18.5	3,379	9.2
Bueng Kan	na.	na.	na.	na.	na.	na.	na.	na.	na.	na.	na.	na.
Northeastern Region	**2,079,630**	**32.1**	**1,472,100**	**897,152**	**2,369,252**	**36.6**	**379,923**	**1,152,123**	**1,532,046**	**23.7**	**208,753**	**7.4**
Nakhon Si Thammarat	157,968	30.4	104,555	76,962	181,517	35.0	27,579	86,566	114,144	22.0	14,806	6.8
Krabi	31,048	27.5	12,601	9,324	21,926	19.4	4,574	18,060	22,634	20.0	3,125	9.1
Phang-nga	27,463	32.9	19,670	8,112	27,781	33.3	7,576	10,691	18,266	21.9	3,916	12.4
Phuket	35,210	35.4	6,554	4,607	11,161	11.2	2,435	12,132	14,567	14.6	2,153	8.1
Surat Thani	101,801	33.1	44,487	33,969	78,456	25.5	11,180	54,147	65,326	21.2	12,066	11.0
Ranong	14,451	25.7	10,346	5,814	16,160	28.7	3,396	8,779	12,175	21.6	2,023	10.9
Chumphon	49,969	31.3	25,361	16,617	41,978	26.3	10,653	24,234	34,887	21.8	5,444	8.8
Songkhla	137,968	32.7	65,987	45,599	111,586	26.4	16,038	64,876	80,915	19.2	14,903	9.0
Satun	22,830	29.1	15,762	4,473	20,235	25.8	2,467	10,112	12,579	16.0	3,439	12.1
Trang	60,900	30.3	37,667	20,111	57,778	28.7	11,280	23,350	34,630	17.2	6,288	8.5
Phatthalung	51,256	28.6	38,893	20,309	59,202	33.0	8,717	26,413	35,129	19.6	8,278	11.0
Pattani	67,019	39.7	29,283	29,524	58,807	34.8	7,348	43,633	50,981	30.2	7,912	10.9
Yala	43,502	34.4	18,909	12,542	31,452	24.9	6,612	19,648	26,259	20.8	6,144	12.9
Narathiwat	46,396	24.5	41,733	16,759	58,492	30.9	9,503	26,755	36,258	19.1	6,390	8.6
Southern Region	**847,782**	**31.3**	**471,807**	**304,723**	**776,530**	**28.7**	**129,357**	**429,393**	**558,750**	**20.7**	**96,885**	**9.3**

Table 6: Family and Community Life

Location	Family life 2011				Community safety 2012	
	Children in distress	Chldren 15-17 years old			Reported crimes against life, body, property and sexual crimes	Drug-related crimes arrested
	(per 100,000 pop)	Total children (persons)	Working children (persons)	Working children (% of total)	(per 100,000 pop)	(per 100,000 pop)
	13	14	15	16	17	18
Kingdom	**38.0**	**3,070,786**	**488,732**	**15.9**	**119.1**	**617.7**
Bangkok	**na.**	**208,705**	**13,705**	**6.6**	**250.2**	**1,140.4**
Samut Prakan	2.2	35,839	4,657	13.0	175.3	934.7
Nonthaburi	1.1	33,557	408	1.2	184.2	509.3
Pathum Thani	40.1	31,282	7,369	23.6	267.9	647.3
Phra Nakhon Si Ayutthaya	2.5	33,421	1,212	3.6	165.2	854.3
Ang Thong	10.6	12,730	1,106	8.7	149.4	1,010.3
Lop Buri	33.2	35,812	3,499	9.8	116.3	659.6
Sing Buri	12.6	10,024	711	7.1	169.3	921.1
Chai Nat	240.4	16,640	1,090	6.6	93.9	648.6
Saraburi	12.6	28,853	3,533	12.2	208.7	817.0
Chon Buri	1.4	46,391	9,378	20.2	237.2	1,745.3
Rayong	9.9	26,143	2,783	10.6	221.2	1,008.7
Chanthaburi	14.7	23,342	5,214	22.3	166.9	705.4
Trat	3.6	11,612	2,549	22.0	145.8	561.8
Chachoengsao	55.1	32,096	2,339	7.3	176.6	893.1
Prachin Buri	26.6	21,655	1,774	8.2	166.7	857.8
Nakhon Nayok	9.5	12,291	1,399	11.4	132.1	841.8
Sa Kaeo	21.1	30,044	5,689	18.9	109.6	692.3
Ratchaburi	21.1	38,208	7,731	20.2	119.2	719.1
Kanchanaburi	10.9	40,370	10,969	27.2	113.6	876.8
Suphan Buri	19.9	40,712	6,454	15.9	105.7	808.8
Nakhon Pathom	24.0	41,008	7,248	17.7	161.4	1,036.1
Samut Sakhon	8.3	20,226	4,689	23.2	148.0	932.4
Samut Songkhram	0.6	8,856	389	4.4	109.3	505.6
Phetchaburi	8.2	20,803	2,951	14.2	121.6	1,012.9
Prachuap Khiri Khan	12.0	23,060	6,338	27.5	141.4	789.9
Central Region	**12.3**	**674,975**	**101,481**	**15.0**	**166.2**	**882.4**
Chiang Mai	19.5	69,862	10,118	14.5	151.0	408.2
Lamphun	50.5	17,561	3,087	17.6	122.1	305.7
Lampang	172.8	36,464	3,257	8.9	68.8	289.5
Uttaradit	42.6	19,969	1,144	5.7	78.5	396.7
Phrae	36.9	23,014	1,607	7.0	63.2	277.1
Nan	30.7	23,997	3,554	14.8	58.4	303.8
Phayao	71.3	24,524	525	2.1	47.9	419.0
Chiang Rai	118.2	59,903	4,196	7.0	59.6	434.8
Mae Hong Son	90.4	14,177	5,728	40.4	49.5	63.8
Nakhon Sawan	38.5	51,480	5,892	11.4	127.0	454.2
Uthai Thani	10.5	14,553	1,133	7.8	70.8	419.2
Kampaeng Phet	34.8	35,509	3,260	9.2	71.7	444.1
Tak	20.0	28,121	4,927	17.5	66.5	386.8
Sukhothai	51.4	27,461	4,672	17.0	55.3	365.7
Phitsanulok	142.3	36,746	5,456	14.8	124.4	490.3
Phichit	22.0	27,465	4,059	14.8	64.8	421.2
Phetchabun	15.8	47,552	9,107	19.2	52.4	398.6
Northern Region	**29.5**	**558,358**	**71,724**	**12.8**	**86.9**	**392.7**
Nakhon Ratchasima	53.7	129,076	26,587	20.6	65.8	317.2
Buri Ram	46.4	85,846	15,629	18.2	43.5	214.9

Table 6: Family and Community Life

Location	Family life 2011				Community safety 2012	
	Children in distress	Chldren 15-17 years old			Reported crimes against life, body, property and sexual crimes	Drug-related crimes arrested
	(per 100,000 pop)	Total children (persons)	Working children (persons)	Working children (% of total)	(per 100,000 pop)	(per 100,000 pop)
	13	14	15	16	17	18
Surin	54.2	79,224	8,627	10.9	47.3	178.8
Si Sa Ket	80.1	81,357	20,292	24.9	50.0	190.2
Ubon Ratchathani	66.7	96,046	38,030	39.6	59.9	471.0
Yasothon	67.1	30,623	3,194	10.4	40.2	497.2
Chaiyaphum	119.1	55,600	14,341	25.8	51.9	273.7
Amnat Charoen	35.3	20,607	4,148	20.1	52.2	740.6
Nong Bua Lam Phu	37.3	28,230	7,901	28.0	58.2	232.8
Khon Kaen	86.0	91,315	13,224	14.5	68.6	347.6
Udon Thani	47.1	83,640	13,251	15.8	55.7	250.4
Loei	20.3	31,632	4,827	15.3	70.3	816.1
Nong Khai	103.4	51,256	6,079	11.9	64.4	415.5
Maha Sarakham	42.4	52,357	1,866	3.6	54.0	293.0
Roi Et	38.5	73,062	10,838	14.8	51.1	397.8
Kalasin	65.5	50,630	3,543	7.0	59.5	660.8
Sakon Nakhon	79.1	59,601	4,863	8.2	47.5	358.3
Nakhon Phanom	19.0	39,542	7,373	18.6	38.8	742.9
Mukdahan	156.2	18,104	4,820	26.6	55.1	724.5
Bueng Kan	30.5	na.	na.	na.	41.2	508.2
Northeastern Region	**37.3**	**1,157,748**	**209,433**	**18.1**	**55.1**	**372.9**
Nakhon Si Thammarat	58.0	84,519	20,574	24.3	118.6	782.1
Krabi	29.9	20,621	3,661	17.8	186.8	526.3
Phang-nga	32.6	12,908	3,137	24.3	114.6	628.4
Phuket	18.0	12,407	2,866	23.1	233.9	801.0
Surat Thani	0.3	46,255	8,053	17.4	178.3	1,014.8
Ranong	3.8	9,160	2,693	29.4	124.3	894.6
Chumphon	39.7	23,384	8,437	36.1	136.1	680.0
Songkhla	6.7	67,486	11,483	17.0	180.8	627.8
Satun	12.7	15,503	2,530	16.3	116.4	609.7
Trang	42.5	34,850	7,084	20.3	115.8	968.3
Phatthalung	7.2	27,248	8,006	29.4	107.9	734.1
Pattani	25.0	41,642	5,681	13.6	122.7	287.2
Yala	54.1	28,616	2,915	10.2	163.1	605.4
Narathiwat	90.3	46,401	5,269	11.4	146.6	453.9
Southern Region	**43.2**	**471,000**	**92,388**	**19.6**	**147.9**	**696.0**

Table 7: Transport and Communication

Location	Transport				Communication 2011				
	Villages 2011	Villages with all-season main road 2011	Registered vehicles as of 31 December 2012		Land traffic accidents reported	Households with TV	Household with radio	Population with mobile phone	Population with internet access
	(villages)	(%)	(vehicles)	(per 1,000 pop)	(per 100,000 pop)	(%)	(%)	(%)	(%)
	1	2	3	4	5	6	7	8	9
Kingdom	**71,137**	**51.6**	**31,439,643**	**481**	**101**	**97.1**	**57.5**	**70.1**	**26.5**
Bangkok	**na.**	**na.**	**7,361,024**	**1,286**	**608**	**97.0**	**56.8**	**84.0**	**44.4**
Samut Prakan	318	71.7	110,965	77	192	99.4	64.6	78.8	34.4
Nonthaburi	297	85.9	149,644	130	19	98.4	73.3	82.3	37.2
Pathum Thani	424	86.3	108,938	105	50	99.6	66.3	81.7	41.1
Phra Nakhon Si Ayutthaya	1,130	74.1	334,330	419	38	98.1	35.3	76.8	28.4
Ang Thong	432	85.2	131,430	461	40	94.7	56.6	70.5	26.9
Lop Buri	1,100	53.4	363,490	463	76	96.4	60.3	73.3	21.5
Sing Buri	330	87.3	123,929	578	76	96.3	56.3	73.8	26.7
Chai Nat	495	48.5	151,948	450	30	97.9	61.3	68.9	23.1
Saraburi	886	63.3	339,269	536	83	98.2	42.4	76.2	28.8
Chon Buri	554	62.8	1,127,547	824	43	99.6	77.7	82.5	34.0
Rayong	412	62.1	550,047	845	40	97.2	42.2	79.2	30.7
Chanthaburi	666	47.9	311,883	594	47	97.7	46.8	73.6	25.3
Trat	242	66.1	118,756	533	55	95.9	32.3	71.7	21.3
Chachoengsao	863	54.1	300,512	435	47	98.3	42.6	74.2	24.1
Prachin Buri	694	47.4	216,489	452	49	93.4	47.4	73.3	26.1
Nakhon Nayok	404	73.3	107,512	420	36	98.5	79.6	72.4	20.4
Sa Kaeo	708	46.0	178,323	315	75	95.6	37.2	70.6	23.8
Ratchaburi	836	64.0	429,550	506	24	95.2	51.3	70.5	23.0
Kanchanaburi	910	41.5	337,304	397	40	94.0	65.0	66.1	19.0
Suphan Buri	977	55.0	415,008	484	65	98.5	60.2	71.9	16.9
Nakhon Pathom	845	74.8	372,402	425	35	98.6	59.0	76.6	30.9
Samut Sakhon	243	90.1	186,266	366	28	96.3	42.0	66.3	19.6
Samut Songkhram	270	70.4	59,002	304	26	97.9	37.1	74.1	25.7
Phetchaburi	586	67.7	269,491	572	51	94.8	52.1	71.8	24.4
Prachuap Khiri Khan	410	49.0	280,505	540	30	95.0	37.8	74.0	23.9
Central Region	**15,032**	**62.0**	**7,074,540**	**432**	**56**	**97.4**	**55.7**	**75.1**	**27.5**
Chiang Mai	1,832	56.3	1,114,447	671	225	95.9	81.0	69.3	30.9
Lamphun	500	51.4	245,241	605	41	96.4	74.1	69.9	23.8
Lampang	849	63.4	396,771	523	63	97.6	67.9	74.0	26.6
Uttaradit	590	57.1	230,931	469	27	96.4	77.2	68.3	23.4
Phrae	648	66.2	228,213	495	51	97.9	79.0	73.1	25.8
Nan	849	58.3	195,317	407	118	95.4	82.2	58.8	28.6
Phayao	785	60.3	234,313	475	121	98.8	82.2	73.7	26.7
Chiang Rai	1,596	50.8	597,548	492	100	97.7	74.5	71.5	27.5
Mae Hong Son	435	39.1	47,923	196	23	79.1	56.7	37.6	16.2
Nakhon Sawan	1,388	40.4	489,529	440	63	98.1	49.0	74.5	22.9
Uthai Thani	592	42.2	157,584	467	52	95.7	59.8	64.6	21.1
Kampaeng Phet	939	36.6	308,481	410	20	97.2	53.3	70.4	23.0
Tak	549	45.4	184,815	348	25	93.0	43.2	59.6	23.6
Sukhothai	784	56.6	263,961	423	22	96.9	65.2	67.8	19.9
Phitsanulok	1,001	52.9	410,671	465	43	96.1	61.5	71.8	27.8
Phichit	856	44.2	262,801	465	33	97.4	66.5	70.9	23.0
Phetchabun	1,417	42.0	383,116	369	39	98.4	56.3	64.5	20.0
Northern Region	**15,610**	**50.6**	**5,751,662**	**478**	**79**	**96.6**	**67.2**	**68.9**	**25.0**
Nakhon Ratchasima	3,681	41.8	1,079,392	390	45	98.7	55.5	68.2	22.7
Buri Ram	2,464	42.9	420,309	262	41	96.1	43.2	59.7	20.6
Surin	2,116	44.2	377,565	267	20	93.4	49.7	59.5	20.5
Si Sa Ket	2,549	38.8	328,960	221	37	95.3	39.7	58.7	23.0
Ubon Ratchathaini	2,652	45.6	594,490	320	43	99.1	63.4	64.8	22.6
Yasothon	885	47.3	176,429	321	35	97.1	55.4	61.8	18.3
Chaiyaphum	1,574	50.4	305,992	250	27	96.2	61.8	60.0	17.9
Amnat Charoen	591	41.1	105,597	278	29	96.1	59.4	60.9	19.5

Table 7: Transport and Communication

Location	Transport				Communication 2011				
	Villages 2011	Villages with all-season main road 2011	Registered vehicles as of 31 December 2012		Land traffic accidents reported	Households with TV	Household with radio	Population with mobile phone	Population with internet access
	(villages)	(%)	(vehicles)	(per 1,000 pop)	(per 100,000 pop)	(%)	(%)	(%)	(%)
	1	2	3	4	5	6	7	8	9
Nong Bua Lam Phu	602	44.5	127,378	247	19	98.1	60.9	66.1	19.0
Khon Kaen	2,224	48.8	689,407	383	22	97.9	67.7	68.2	24.1
Udon Thani	1,720	54.9	549,777	347	18	98.7	64.9	71.3	24.7
Loei	903	55.1	226,109	352	27	98.1	65.4	65.1	22.6
Nong Khai	662	51.1	232,962	448	26	98.6	63.7	66.8	16.1
Maha Sarakham	1,892	37.6	262,362	272	29	97.0	59.2	65.6	22.1
Roi Et	2,418	42.1	337,197	251	24	97.8	70.7	66.4	25.7
Kalasin	1,500	41.1	248,032	246	27	98.2	57.0	62.7	17.6
Sakon Nakhon	1,561	43.4	387,908	339	18	98.9	67.6	61.0	20.9
Nakhon Phanom	1,056	66.1	195,123	273	20	96.2	72.9	61.9	19.2
Mukdahan	526	57.4	126,579	366	28	94.1	66.3	58.1	20.0
Bueng Kan	560	55.0	32,789	78	17	na.	na.	60.6	12.0
Northeastern Region	**32,136**	**45.6**	**6,804,357**	**305**	**30**	**97.4**	**59.2**	**64.1**	**21.5**
Nakhon Si Thammarat	1,534	44.5	596,733	388	85	96.4	45.9	68.8	24.7
Krabi	385	58.4	238,714	536	126	94.8	31.7	69.2	24.9
Phang-nga	318	74.8	115,593	448	77	95.3	53.3	70.8	24.5
Phuket	91	92.3	386,792	1,071	136	95.2	23.9	77.9	42.9
Surat Thani	986	51.3	575,619	560	127	98.0	42.9	72.7	22.7
Ranong	167	60.5	72,853	398	39	94.4	50.5	61.7	20.7
Chumphon	712	46.3	275,548	555	64	97.6	30.1	72.3	20.6
Songkhla	967	68.8	748,341	541	44	98.7	24.1	71.3	31.7
Satun	270	55.2	130,911	427	26	95.9	38.7	65.9	27.4
Trang	716	81.6	360,083	568	24	97.9	45.3	69.9	28.3
Phatthalung	669	54.9	232,406	450	35	97.3	40.6	66.7	26.5
Pattani	613	71.8	215,483	321	18	94.2	41.1	62.0	20.9
Yala	346	53.8	262,646	524	31	97.8	72.6	59.5	23.3
Narathiwat	585	54.7	236,338	312	14	92.9	83.1	56.0	19.3
Southern Region	**8,359**	**58.4**	**4,448,060**	**490**	**62**	**96.7**	**43.1**	**67.8**	**25.5**

Table 8: Participation

Location	Political participation 2011		Civil society participation		
	Eligible voters	Voter turnout (party-list ballot)	Civil society participation as of December 2012	Households participating in local groups 2011	Households participating in social services 2011
	(persons)	(%)	(per 100,000 pop)	(%)	(%)
	1	2	3	4	5
Kingdom	**46,939,549**	**75.0**	**212**	**97.7**	**99.0**
Bangkok	**4,260,951**	**71.8**	**52**	**na.**	**na.**
Samut Prakan	881,486	75.2	85	93.6	96.2
Nonthaburi	838,452	76.0	54	93.9	97.2
Pathum Thani	737,143	77.0	86	91.8	94.7
Phra Nakhon Si Ayutthaya	590,918	78.4	149	99.4	99.9
Ang Thong	218,787	77.5	337	99.0	97.6
Lop Buri	565,277	77.0	238	97.6	99.2
Sing Buri	166,440	79.2	554	99.5	100.0
Chai Nat	259,082	78.6	697	97.6	99.0
Saraburi	454,969	81.5	163	99.3	99.8
Chon Buri	961,466	75.4	101	90.8	94.6
Rayong	453,374	76.4	242	93.5	96.7
Chanthaburi	385,384	77.6	369	97.8	98.9
Trat	159,110	74.1	679	98.4	99.0
Chachoengsao	503,487	78.8	217	96.2	98.4
Prachin Buri	345,197	78.5	357	97.1	98.3
Nakhon Nayok	191,723	79.1	573	96.3	97.5
Sa Kaeo	386,110	74.4	361	99.3	99.8
Ratchaburi	627,318	82.6	232	97.4	98.3
Kanchanaburi	575,775	76.0	226	96.8	98.3
Suphan Buri	642,872	76.3	154	98.5	99.1
Nakhon Pathom	648,621	77.8	155	97.3	98.8
Samut Sakhon	362,112	75.6	92	94.5	98.0
Samut Songkhram	147,669	77.6	325	99.9	100.0
Phetchaburi	350,963	80.0	222	98.8	99.3
Prachuap Khiri Khan	374,979	73.1	158	98.8	99.3
Central Region	**11,828,714**	**77.2**	**206**	**96.8**	**98.3**
Chiang Mai	1,205,955	83.1	310	97.1	99.0
Lamphun	317,727	88.6	478	98.6	99.3
Lampang	605,156	80.4	295	99.0	99.7
Uttaradit	356,897	75.0	129	98.7	99.7
Phrae	366,265	80.1	314	99.8	100.0
Nan	366,019	79.2	556	99.3	99.9
Phayao	382,453	77.6	409	99.7	99.9
Chiang Rai	870,086	77.0	147	98.9	99.7
Mae Hong Son	151,965	81.4	108	86.4	96.5
Nakhon Sawan	806,120	74.0	177	97.2	98.7
Uthai Thani	247,020	73.5	576	99.3	99.6
Kampaeng Phet	530,486	72.6	213	99.6	99.9
Tak	329,450	77.5	130	92.7	98.5
Sukhothai	461,405	74.6	485	98.4	99.6
Phitsanulok	644,229	73.5	200	96.9	98.6
Phichit	418,866	71.3	217	99.1	99.8
Phetchabun	739,554	72.1	170	98.5	100.0
Northern Region	**8,799,653**	**77.1**	**267**	**98.0**	**99.4**
Nakhon Ratchasima	1,916,728	76.2	109	97.8	99.4
Buri Ram	1,120,068	71.2	199	99.1	100.0
Surin	973,364	70.8	176	99.2	99.8
Si Sa Ket	1,053,283	71.6	207	99.2	99.8
Ubon Ratchathaini	1,295,904	74.3	129	99.7	99.7
Yasothon	404,751	72.2	217	99.9	100.0
Chaiyaphum	836,599	73.7	287	99.1	99.8
Amnat Charoen	273,399	72.7	684	99.8	100.0
Nong Bua Lam Phu	365,518	69.1	334	99.3	99.9

Table 8: Participation

Location	Political participation 2011		Civil society participation		
	Eligible voters	Voter turnout (party-list ballot)	Civil society participation as of December 2012	Households participating in local groups 2011	Households participating in social services 2011
	(persons)	(%)	(per 100,000 pop)	(%)	(%)
	1	2	3	4	5
Khon Kaen	1,329,944	73.2	181	98.8	99.7
Udon Thani	1,126,011	69.2	226	99.2	100.0
Loei	465,300	79.4	189	99.4	99.9
Nong Khai	367,002	68.6	465	98.3	99.4
Maha Sarakham	707,705	73.6	478	99.8	99.9
Roi Et	980,638	70.3	200	99.9	100.0
Kalasin	734,589	73.1	198	99.7	99.9
Sakon Nakhon	813,426	69.3	184	99.6	100.0
Nakhon Phanom	510,581	69.9	158	99.9	100.0
Mukdahan	246,900	75.3	580	99.4	100.0
Bueng Kan	288,123	71.6	42	98.7	99.7
Northeastern Region	**15,809,833**	**72.5**	**217**	**99.2**	**99.8**
Nakhon Si Thammarat	1,112,309	72.3	192	93.7	96.2
Krabi	298,890	79.0	283	94.6	96.8
Phang-nga	182,939	78.6	445	96.1	97.8
Phuket	244,263	75.6	132	94.4	95.0
Surat Thani	720,329	74.5	111	95.3	96.9
Ranong	119,536	73.8	480	96.0	96.8
Chumphon	360,987	77.1	462	97.4	98.7
Songkhla	964,925	77.3	265	96.2	98.3
Satun	204,641	80.8	260	91.1	96.4
Trang	436,630	82.6	164	95.2	97.9
Phatthalung	377,447	80.3	284	96.6	98.4
Pattani	422,114	76.8	297	95.1	99.1
Yala	316,002	77.5	193	85.8	97.2
Narathiwat	479,386	78.0	186	95.3	98.7
Southern Region	**6,240,398**	**76.8**	**237**	**94.7**	**97.5**

ANNEX II
DATA SOURCES

Table 0 Basic Data

Columns 1-3	**Key Registration Statistics 2011**, Bureau of Registration Administration, Department of Local Administration, Ministry of Interior. Data as of 31 December, 2011.
Columns 4-5	**Household Socio-economic Survey 2011**, National Statistical Office.
Columns 6-7	Gross Domestic Product and Per Capital Income by Region and Province, National Account Division, Office of the National Economic and Social Development Board, 2000. (GPP at current prices).
Columns 8-11	Land Development Department, Ministry of Agriculture and Cooperatives, http://www.oae.go.th/download/use_soilNew/landused2553.html
Column 12	Calculated from total population and provincial area data.

Table 1 Health

Columns 1-7	Bureau of Policy and Strategy, Office of the Permanent Secretary, Ministry of Public Health.
Columns 8-10	Bureau of Epidemiology, Department of Disease Control, Ministry of Public Health.
Columns 11-13	**Health and Welfare Survey 2011**, National Statistical Office Note: 1. Interviewees were asked whether they had any illness or were sick during the one-month period prior to the interview.
Column 14	**Mental Health Survey 2012**, Department of Mental Health and the National Statistical Office.
Column 15	International Mental Health Center, Department of Mental Health. 2011 Notes: 1. Mental health patients include cases of schizophrenia, anxiety, depression, mental retardation, epilepsy, drug-addiction, other mental illnesses, attempted suicide or suicide. 2. Data include only those who seek treatment. 3. Calculated from population mid-year 2011.
Columns 16-24	**Cigarette Smoking and Alcohol Drinking Behavior Survey 2011**, National Statistical Office. Notes: 1. The survey covers population 11 years and over. 2. Drinkers include those who drink every day, almost every day (5-6 days/week), every other day (3-4 times/week), every week (1-2 times/week), every month (1-3 times/month). 3. Smokers include regular smokers.
Columns 25-27	**Exercise Behaviour Survey 2011**, National Statistical Office. Notes: 1. The survey covers population 11 years and over. 2. Population that exercise means those who are engaged in sports or physical exercise less than 3 days/week, 3-5 days/week, 6-7 days/week or occasionally.
Columns 28-30	Office for Empowerment of Persons with Disability, Ministry of Social Development and Human Security Note: 1. Data include persons with disability who registered with the MSDHS classified by region and sex.
Columns 31-35	Health Information Cluster, Bureau of Policy and Strategy, Ministry of Public Health, http://bps.ops.moph.go.th/Healthinformation/index.htm Note: 1. The 2000 data are from the Monitoring and Management System (MMS).

Table 2 Education

Columns 1-3	Calculated from **Labor Force Survey, Quarter 3/2005**, National Statistical Office.
Columns 4-13	**Labor Force Survey, Quarter 3/2011**, National Statistical Office Notes: 1. Upper secondary level includes general education, vocational/technical and teacher training. 2. Diploma level includes academic education, higher vocational/technical education 25and teacher training.

3. University level includes Undergraduate Degree, Master Degree and Doctoral Degree.

| Columns 14-22 | Bureau of Information and Communication Technology, Office of Permanent Secretary, Ministry of Education |

Notes: 1. Number of students includes students in schools that are under various authorities, academic year 2011

2. Population by age group, sex, and province as of December 2011 is from Bureau of Registration Administration, Department of Local Administration, Ministry of Interior.

Column 23　　　　Department of Mental Health, Ministry of Public Health.

Note: 1. Department of Mental Health conducted a survey to assess the IQ level of 72,780 Thai children aged 6-15 years old who were in grades 1-6 in 787 schools.

Column 24　　　　National Education Assessment Office (Public Organization)

Note: 1. The average O-Net score of upper secondary students in 2011 is based on 8 subjects: Thai, social studies, English, mathematics, science, health education, arts, occupation and technology.

Columns 25-27　　Bureau of Information and Communication Technology, Office of Permanent Secretary, Ministry of Education.

Note: 1. Data include only schools under the Office of the Basic Education Commission and exclude vocational/technical students.

Table 3 Employment

Columns 1-20　　**Labor Force Survey, Q3/2011**, National Statistical Office.

Notes: 1. The survey covers population 15 years and over.
2. Current labor force = employed + unemployed
3. Unemployment rate = (unemployed/current labor force) x 100
4. Underemployment rate = (employed who work less than 35 hours/week and willing to work more/employed) x 100

Columns 21-22　　Contribution Bureau, Social Security Office, Ministry of Labour

Notes: 1. Insured persons include those under Articles 33, 39, 40 as of December 2011
2. Workers with social security = number of insured workers/ current labor force from the Labor Force Survey, Q3/2011.

Columns 23-25 of Labour　　**Annual Report 2011**, Workmen's Compensation Fund, Social Security Office, Ministry

Note: 1. Occupational injuries covered by Workmen's Compensation Fund are death or disappearance, impairment, loss of organ, injury/ sickness that results in 3 days off, injury/sickness that results in less than 3 days off.

Table 4 Income

Columns 1-10　　**Household Socio-economic Survey 2007 and 2011**, National Statistical Office.

Notes: 1. Household income change is not adjusted by inflation rate.
2. Household debt includes institutional and informal debt for consumption.

Columns 11-13　　Office of the National Economic and Social Development Board, http:/social.nesdb.go.th/SocialStat/StatSubDefault_Final.aspx?catid=13

Note: 1. Poverty line, poverty incidence, number of the poor are expenditure-based.

Column 14　　　　GINI index (income based) is from Poverty Map 2009, National Statistical Office.

Table 5 Housing and Living Environment

Columns 1-11　　**Household Socio-economic Survey 2011**, National Statistical Office

Notes: 1. Housing security is defined as living in one's own house and on one's own land.
2. Safe sanitation includes flush latrine, molded latrine.
3. Permanent building material includes cement, brick, wood.

Columns 12-15	Department of Disaster Prevention and Mitigation, Ministry of Interior.
	<u>Notes:</u> 1. Flood in Thailand by province 2011 (1 January 2011- 26 March 2012).
	2. Drought in Thailand by province 2011 (1 November 2010 - 20 July 2011)
	3. Calculation is based on population as of 31 December 2011 from Bureau of Registration Administration, Department of Local Administration, Ministry of Interior.

Column 16	Healthy Public Policy Foundation.
	<u>Note:</u> 1. Calculation is based on 1) data on electricity use by province from **Annual Report: Electric Power in Thailand**, Department of Energy Development and Efficiency, using the conversion factor of 0.6093 kgco2eq/kwh recommended by Thailand Greenhouse Gas Management (Public Organization) and 2) data on petroleum consumption by province from the Department of Energy Business, using emission factors for various kinds of petroleum products as recommended by the IPCC 2006 Emission Factors Tool, www.carbonmetrics.com/ipcc-emission-factors-tool).

Table 6 Family and Community Life

Columns 1-10	**Household Socio-economic Survey 2011**, National Statistical Office.
	<u>Notes:</u> 1. Elderly is defined as a person aged 60 and over.
	2. Single headed household means that the status of the household head is either widowed, divorced or separated.

Columns 11-12	**Elderly Survey 2011**, National Statistical Office.

Column 13	**National Rural Development 2C (Khor Chor Chor 2 Khor), 2011**, Rural Development Information Center, Community Development Department, Ministry of Interior.

Columns 14-16	**Labor Force Survey, Q3/2011**, National Statistical Office.
	<u>Note:</u> 1. Working children are children aged 15-17 not attending school. They may be employed, unemployed, seasonally unemployed or assigned to do household work.

Columns 17-18	Crime statistics by province 2012, Royal Thai Police.
	<u>Note:</u> 1. Calculation is based on population as of 31 December 2012, Bureau of Registration Administration, Department of Local Administration, Ministry of Interior.

Table 7 Transport and Communication

Columns 1-2	**National Rural Development 2C** (Khor Chor Chor 2 Khor), 2011, Rural Development Information Center, Community Development Department, Ministry of Interior.

Columns 3-4	Transport Statistics Sub-Division, Planning Division, Department of Land Transport, http://apps.dit.go.th/statistics_web/brochure/cumcar12.pdf
	<u>Notes:</u> 1. Vehicle means all types of vehicles under the Motor Vehicle Act (excluding tractors, steamrollers, farm vehicles, trailers).
	2. Calculation is based on population as of 31December 2012 from the Bureau of Registration Administration, Department of Local Administration, Ministry of Interior.

Column 5	Disaster Mitigation Center, Department of Disaster Prevention and Mitigation, http//www.disaster.go.th. Data are as of 31 December 2011. ICT Center, Royal Thai Police is cited as data source.

Columns 6-7	**Household Socio-economic Survey 2011**, National Statistical Office

Columns 8-9	**ICT Survey (Household), 2011**, National Statistical Office
	<u>Note:</u> 1. The survey covers population 6 years and over.

Table 8 Participation

Columns 1-2	Result of the general election for Members of House of Representatives, 3 July 2011, Election Commission of Thailand.
	<u>Note:</u> 1. Data are from party list ballot.

Column 3	Community Organization Development Institute. (Public Organization)
	<u>Notes:</u> 1. Cumulative data as of December 2012.

2. Calculation is based on population as of 31 December 2012 from Bureau of Registration Administration, Department of Local Administration, Ministry of Interior.

Columns 4-5   **Basic Minimum Needs (BMN) 2011**, Rural Development Information Center, Community Development Department, Ministry of Interior.