

Nakorn Phanom

Provincial Millennium Development Goals

Report 2006



Nakorn Phanom
Provincial
Millennium
Development
Goals Report
2006

Copyright © 2006

United Nations Development Programme

12th floor, UN Building
Rajdamnern Nok Avenue
Bangkok 10200 Thailand
Tel: (66-2) 288 1828
Fax: (66-2) 280 4294
E-mail: registry.th@undp.org
Web site: www.undp.or.th

ISBN: 974-94982-8-3

Foreword

In September 2000, 189 nations came together at the United Nations Millennium Summit in New York and endorsed the Millennium Declaration, setting a global agenda for the start of the 21st Century to promote human development and reduce global inequalities.

Thailand's first Millennium Development Goals Report 2004 is a story of success, ambition and tough challenges. Thailand has made remarkable progress in meeting most, if not all, MDGs. The internationally set targets for poverty, hunger, gender, HIV/AIDS and malaria have been achieved more than 15 years ahead of schedule. The education goal is likely to be achieved soon, and progress is being made in reaching the targets of child and maternal health, as well as environmental sustainability. Unsatisfied with these achievements, Thailand commits itself to a set of more ambitious targets – called MDG Plus – that go well beyond the internationally agreed MDGs.

In spite of these impressive achievements, major challenges remain. Persistent disparities among regions and groups within the country, including marginalized and vulnerable peoples, need to be addressed. Policies and resources are needed to tackle poverty and below-average health conditions in the North-east, the remote highland areas of the North, and the three predominantly Muslim southernmost provinces – all of which are areas that are lagging behind the rest of the country. As the national report cannot reflect development results and differences at the micro-level, this Provincial MDG Report was initiated to begin the localization process.

Additionally, the national report is about Thailand reaching out to other countries and contributing to the global partnership for human development called for in MDG 8. Thailand is becoming an important development partner, engaging in technical cooperation and sharing its experience with neighbours at the national and local level, as well as opening up its expanding markets for other developing countries. Thailand is firmly committed to meeting its obligations to the international community, as well as to its own citizens. Under this goal, the role of border provinces, such as Nakorn Phanom, becomes increasingly important as decentralization proceeds, giving more opportunities for local-to-local exchanges and support, not only nationally, but also internationally.

Acknowledgements

Provincial Working Group

In an effort to begin the localization process for the Millennium Development Goals (MDGs) in Thailand, key actors within Nakorn Phanom province came together through a series of intensive and productive workshops to jointly formulate Thailand's first provincial level MDG Report. The activity took place over an 8-month period from October 2005 to June 2006. Under this initiative, the province set up a formal working group to implement this task that was chaired by the Governor and consisted of key stakeholders including representatives from provincial government offices, private sector, civil societies and NGOs in the province. It was rewarding to see how all members came together and contributed greatly to the success of this endeavour. (The list of Working Group members is contained in Annex I).

The work of this group was greatly assisted by the special efforts of the Provincial Statistics Office. We also recognize all the staff at the provincial and district level that not only provided valuable input, but are working to integrate the strategies within the formulation of the provincial development for implementation.

Supporting Contributors

Special thanks to **Nikom Keadkhunmarke** (Governor), **Theeradej Wongrate** (Vice Governor), **Vithit Jeiranai** (Vice Governor), **Manusak Kumpongphun** (Acting Chief, Nakorn Phanom Provincial Office), and **Chaiwut Watchariansoonthon** (Official, Nakorn Phanom Provincial Office).

National Economic and Social Development Board (NESDB)

We wish to acknowledge NESDB for their contributions in providing information, coordination and facilitation of the process. In particular, we would like to mention: **Arkhom Termpittayapaisith** (Deputy Secretary General), **Kittisak Sinthuvanit** (Deputy Secretary General), **Montri Boonpanich** (Chief, North-East Regional Office), and **Suthirat Vanasrisawasd** (Policy and Plan Analyst 7).

United Nations Development Programme (UNDP)

To make this possible, we also gratefully acknowledge the financial and other resources and guidance provided by the UNDP and the kind supportive inputs from: **Håkan Björkman** (Programme Director and Deputy Resident Representative), **Tongta Khiewpaisal** (Programme Manager) and **Sirinporn Pongsura pipat** (Programme Associate).

United Nations Children's Fund (UNICEF)

The support and information from UNICEF officials and staff helped facilitated this process to its successful conclusion.

We also appreciatively acknowledge the Thailand Environment Institute (TEI): **Chamniern Vorratnchaiphan** (Director, Grassroots Action Programme), **David Villeneuve** (Senior Advisor), **Banjamas Chotthong** (Project Manager), **Thongchan Homnetr** (Senior Trainer), **Warangkan Pungdumrong** (Researcher), **Tanirat Tanawat** (Research Assistant), and **Chewit Khemjarern** (Project Coordinator), for assisting the efforts of the Working Group to apply a more balanced and integrated approach to their development planning framework.

Executive Summary

Localizing the MDGs

Successfully operating under the Millennium Development Goals, or MDGs, requires going below the national level and working to localize them at provincial and lower jurisdictional levels. Such a local focus is important, as only working at the national level focuses on aggregate MDG targets that do not take local dimension, disparities or conditions into sufficient consideration. The inherent danger is that inequalities within a nation, across groups and places, could still persist in 'disguise.'

In an effort to further pursue this localization process for the MDGs in Thailand, NESDB and UNDP have joined with key actors within Nakorn Phanom province to organize a series of intensive and productive workshops to formulate Thailand's second provincial MDG report. Under this initiative, the province set up a formal working group that consisted of key stakeholders, including representatives from various provincial government offices, the private sector, and civil society in the province, to implement this task. They compiled and analysed key data, and assessed the development results in contrast to the universal MDGs and Thailand's MDGs⁺. They also identified their own MDGs* (MDGs Star), reflecting specific local conditions, trends and targets. Of special note, Nakorn Phanom's status as a border province led to specific consideration of how the province can further contribute to the achievement of Goal 8, relating to global partnerships to help other countries in addressing the other seven goals.

The Nakorn Phanom MDG results

Nakorn Phanom is classified as one of the poorest provinces in Thailand. It is located in the north-eastern border region of the country, separated by the Maekong River from the Khammouan province of Lao PDR. The province is known for its outstanding natural landscape and rich arts and culture. The main income stems from agriculture. During the past few years its economic condition has been steadily improving, largely based on agricultural promotion focusing on the farming of *Hom Mali* rice and rubber trees.

The results of the MDG assessment in Nakorn Phanom revealed that it had either achieved or was highly likely to achieve most of the universal MDGs, in terms of reduction of the incidence of malaria, tuberculosis and AIDS, access to safe drinking water and basic sanitation, gender equity in education, reduction of poverty and hunger, and provision of primary education. Yet, a number of challenges remained for the province to achieve all targets specified in Thailand's MDG⁺. Such challenges relate to reducing poverty to less than 4 percent by 2009, and achieving universal secondary education and more sustainable environmental management. As a result, Nakorn Phanom highlighted the following strategies regarding fairer income distribution, increased income for farmers and rural households, developing capacity and self-reliance of communities based on the 'Sufficiency Economy' philosophy, enhancement of educational systems and personnel capacity, attainment of upper secondary education of students, and implementing systematic and prudent environmental management.

More specifically, Nakorn Phanom's MDG* has elaborated strategies that will: reduce the proportion of rural households with incomes less than 20,000 Baht per head per year, reduce the malnutrition prevalence of children, reduce the drop-out rate in secondary education, increase the proportion of women in local government, maintain the protected area, and develop recreation area for urban communities. Moreover, Nakorn Phanom has continuously cooperated with, and provided support to, the neighbouring countries, especially in areas of the border trade promotion, cultural exchange, health services and environment protection. This partnership has brought Nakorn Phanom recognition for its outstanding good practice as an example for other bordering provinces.

Integrating the MDGs into the provincial development process

By virtue of undertaking the MDG Report process, Nakorn Phanom's administration is convinced of the immediate need for pursuing action in line with the above-mentioned principles and strategies. Integrating these results within the existing development framework and objectives of the province became a core feature of the process. This action was facilitated by adopting a 'Strategy Management' approach, through which the provincial working group was better able to understand who their 'partners' were, and thus more effectively analyse the situation within both the local development context and the national/global frameworks. Through this process, the group was able to quickly move from the planning stage into the more critical strategy formulation, and expects to begin implementation of those strategies in the forthcoming budget year. Additionally, the participating agencies in the province have also integrated the outcomes within their own operational strategies.

The way forward

Nakorn Phanom should move forward on a number of actions, further localizing MDGs to pursue sustainable development in a balanced and integrated way, and addressing all strategic development concerns. To support implementation, the efficiency of database system management must be profoundly increased. Intra-agency coordination between the national and provincial levels that deal with data collection, analysis and distribution is essential for making effective use of the data for planning and development activities. For the next step, training and participation of local government personnel should be supported and further strengthened. When localizing MDGs, issues of poverty, nutrition and environment should be particularly implemented and encouraged in rural as well as urban communities. Lastly, Nakorn Phanom is strategically located and shares many commonalities with neighbouring countries, which could lead to building more sustainable partnerships, namely with Lao PDR and Viet Nam. Poverty eradication, education, culture, health and tourism are the common issues and interests, and these should be jointly addressed to ensure mutual benefits and partnership.

Contents

Foreword	iii
Acknowledgements	iv
Executive Summary	v
Acronyms	ix
Map of Nakorn Phanom	x
1. Introduction	1
Background to this initiative	1
The MDG context	1
Preparing the MDGR at the provincial level	2
Nakorn Phanom development context	3
2. Achieving the MDGs in Nakorn Phanom	7
Achieving the MDGs in Nakorn Phanom	7
MDGs of Nakorn Phanom	13
Comparison of the assessment results of MDGs in pilot provinces	17
3. Report on Nakorn Phanom's MDGs 1–7	19
Goal 1: Eradicate extreme poverty and hunger	19
Goal 2: Achieve universal primary education	26
Goal 3: Promote gender equality and empower women	31
Goal 4: Reduce child mortality	34
Goal 5: Improve maternal health	36
Goal 6: Combat HIV/AIDS, malaria and other diseases	39
Goal 7: Ensure environmental sustainability	45
4. Report on Nakorn Phanom's Contribution to MDG 8	55
National context	55
Nakorn Phanom's contribution to MDG 8	56
5. The Way Forward	61
Integrating the MDGs into policies, strategies and operations	61
Database system development	62
Human resource development	62
Support from external agencies	63

Annex

Annex I	Nakorn Phanom Provincial Working Groups	65
Annex II	The MDG Process, Personnel Capacity Building and Support for Provincial Development	69
Annex III	Data Table on MDGs, Thailand's MDGs ⁺ and Nakorn Phanom's MDGs*, 1990–2006	71
Annex IV	Data Rating Scale	83

Boxes

Box 1.1	Global MDGs	1
Box 1.2	Sufficiency Economy Philosophy	2
Box 2.1	Evaluation Levels and Conditions	7
Box 4.1	Millennium Development Goal 8	55

Figures

Figure 2.1	Achieving the MDGs in Nakorn Phanom	9
Figure 2.2	MDG assessment of Nakorn Phanom, Mae Hong Son and Thailand	17
Figure 3.1	Proportion of population below poverty line	20
Figure 3.2	Proportion of the population with income lower than Thailand's and Nakorn Phanom's food poverty line	24
Figure 3.3	Proportion of underweight children (under 5 years old)	25
Figure 3.4	Enrolment ratio in Nakorn Phanom schools	27
Figure 3.5	Retention rates in primary and secondary school	28
Figure 3.6	Ratio of girls to boys in primary, secondary and tertiary education	32
Figure 3.7	Under-five mortality rate and infant mortality rate	35
Figure 3.8	Maternal mortality rate	37
Figure 3.9	HIV prevalence among pregnant women	40
Figure 3.10	HIV prevalence among Nakorn Phanom's conscripts	40
Figure 3.11	Incidence and death rates associated with malaria	43
Figure 3.12	Prevalence and death rates associated with tuberculosis	43
Figure 3.13	Proportion of land areas covered by forest	46
Figure 3.14	Proportion of renewable energy to primary commercialized energy	47
Figure 3.15	Proportion of households with access to safe drinking water	50
Figure 3.16	Proportion of households with access to improved sanitation	50
Figure 3.17	Proportion of households with secure tenure	52

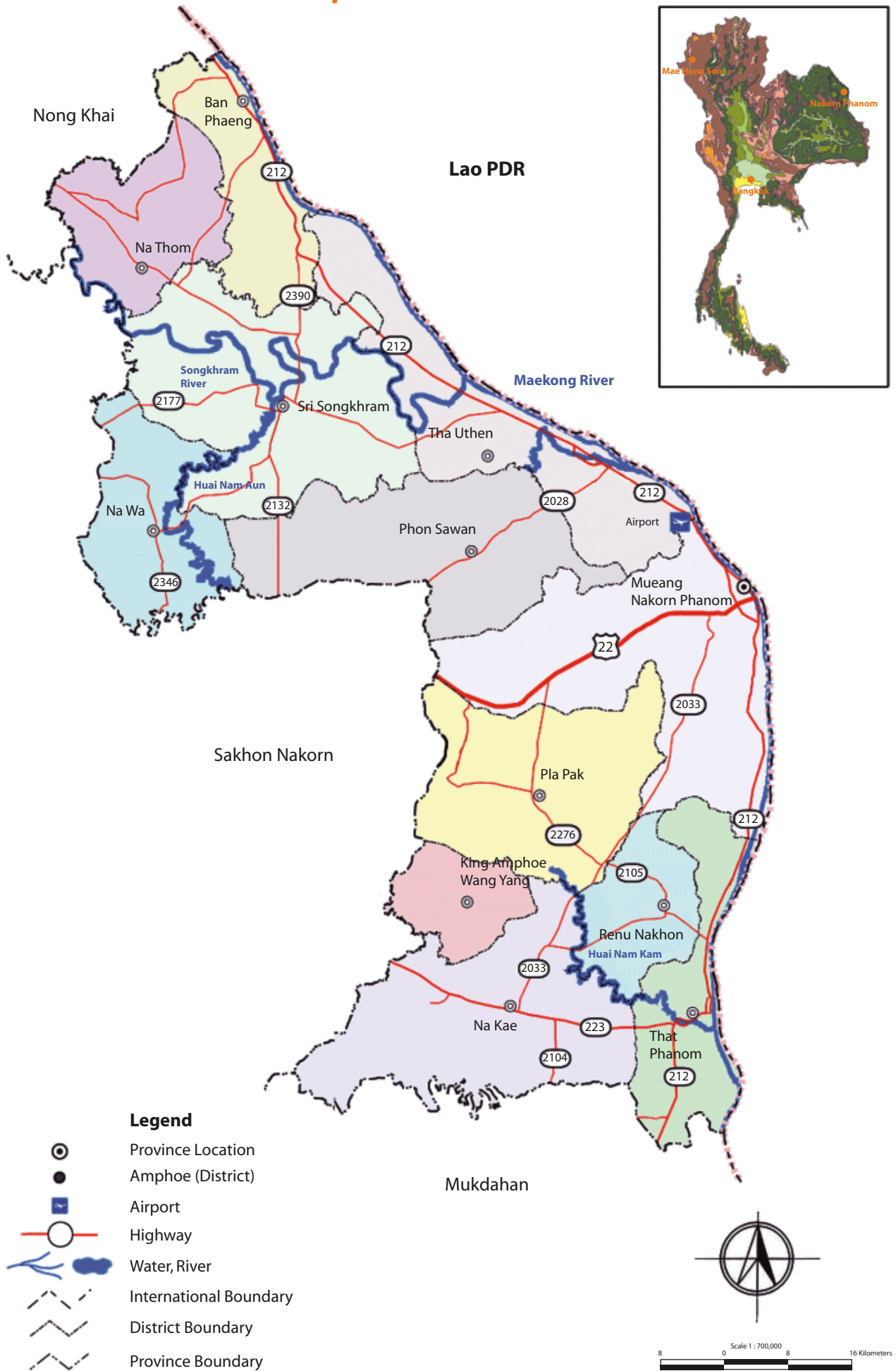
Tables

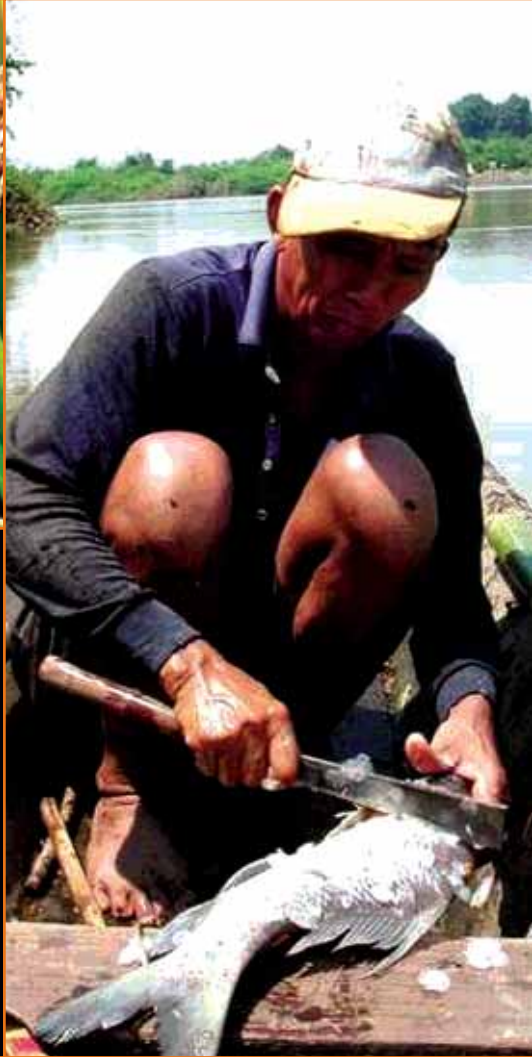
Table 2.1	MDG Assessment in Nakorn Phanom	10
Table 2.2	Universal MDGs, Thailand's MDGs ⁺ and Nakorn Phanom's MDGs*	14

Acronyms

ACMECS	Ayeyawady-Chao Phraya-Maekong Economic Cooperation Strategy
ASEAN	Association of Southeast Asian Nations
ACD	Asia Cooperation Dialogue
AIDS	acquired immune deficiency syndrome
BOD	Biochemical Oxygen Demand
CFC	chlorofluorocarbon
DO	Dissolved Oxygen
DOPA	Department of Provincial Administration
DOTS	directly observed treatment short course
GMS	Greater Maekong Sub-region
GPP	Gross Provincial Product
HIV	human immunodeficiency virus
IMR	infant mortality rate
IUCN	International Union for Conservation of Nature and Natural Resources
LGO	Local Government Organization
MDG	Millennium Development Goals
MDGR	Millennium Development Goals Report
MMR	maternal mortality ratio
MOE	Ministry of Education
MOPH	Ministry of Public Health
NGO	non-governmental organization
NESDB	National Economic and Social Development Board
NSO	National Statistics Office
OBEC	Office of the Basic Education Commission
OTOP	One Tambon One Product
PAO	Provincial Administration Organization
pH	Potential of Hydrogen
TAO	Tambon Administration Organization
TB	tuberculosis
TCB	Total Coliform Bacteria
TEI	Thailand Environment Institute
U5MR	under-five mortality ratio
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund

Map of Nakorn Phanom





Introduction

Background to this initiative

In September 2000, Thailand joined other members of the international community in pledging their support for the Millennium Declaration, which set out a global agenda for human development from which the Millennium Development Goals (MDGs) emerged. As Thailand is expected to achieve most, if not all, of the MDGs well in advance of 2015, the Kingdom formulated a set of targets and indicators that went well beyond those agreed on at the international level, under the specific concept named Millennium Development Goals Plus (MDG⁺).

In spite of the Kingdom's achievements, some major challenges remain in areas where there are persistent disparities among regions and groups, including marginalized and vulnerable groups. Policies and resources are needed to tackle poverty and below-average health conditions in the North-east, the remote highland areas of the North, and the three predominantly Muslim southernmost provinces—areas that are lagging behind the rest of the country. As a next step in operationalizing the MDGs, it is necessary to try to find a way to localize them to the subnational level. Shifting the focus to the local level is considered critical, since working only with a national focus on achieving the aggregate MDG targets does not take account of the specific local dimension challenges. There is the inherent danger that even if the targets are achieved nationally, the inequalities within a nation, across people and places, could still persist.

The MDG context

The formulation and implementation of the provincial MDGs are guided by the frameworks established at the global and national levels, but specifically tailored to the conditions, context and priorities that make Nakorn Phanom unique. These guiding frameworks are summarized below:

Globally:

Under the United Nations Millennium Declaration, the fundamental value of people-centred development and the reduction of global development inequalities are to be pursued under the principles of: freedom, equality, solidarity, tolerance, respect for nature and shared responsibility. These principles are to be pursued through the eight time-bound goals, 18 targets and 48 indicators.

Nationally:

Building on the achievement of reaching most of the global MDGs, Thailand introduced the concept of MDG⁺, a set of tailor-made and ambitious development targets going well beyond the international MDG targets. This recognizes Thailand's past success in extending the coverage of social services so that the national challenge is to upgrade quality. Through its own formulation process, Thailand had adapted a number of the global targets and indicators to better reflect its own conditions and the more ambitious programme. Through

Box 1.1 Global MDGs

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

Box 1.2 Sufficiency Economy Philosophy

Sufficiency Economy represents the Royal philosophy of lifestyle to be followed by people of all walks of life at various levels – family, community, state – in realizing Thailand's development and administration in accordance with the middle way. The realization of this philosophy will ensure needed balance and self-preparedness for immediate and extensive changes – material, socio-economic, environmental and cultural – imposed by the outside world. Thus, decision making and implementation of the various activities are assured of adequacy by a certain level of knowledge and virtues.

Sufficiency should concurrently represent the following three characteristics:

- **Adequacy**, representing a state of 'not too little' and 'not too much,' in which one does not inflict any burden on oneself or on others where production and consumption are adequate.
- **Reasoning**, which means one's decisions are based on the level of adequacy, taking into consideration related and relevant factors, as well as expected results from such action.
- **Self-immunity**, which is self-preparedness for addressing various impacts and changes that are taking place, based on the possibility of the various situations' occurrence in the immediate and far future.

Source: <http://www.chaipat.or.th> and <http://www.sufficiencyeconomy.org>

the national MDGR, Thailand expressed its commitment to meet its obligations to the international community (MDG 8) as well as to its own citizens (MDGs⁺ 1 to 7).

Under these frameworks, Provincial Working Groups were established and worked with both the global and national MDGRs and the associated targets and indicators to pursue the spirit, fundamental values and overall intent of the MDGs. Within its own MDG formulation efforts, Nakorn Phanom has focused its attention also on Goals 1–7 as well as addressing Goal 8 (global partnership for development), which recognizes its geographic location and ongoing cooperation at the local level in neighbouring countries. In addition to these values, the province also sought to observe the philosophy of 'Sufficiency Economy,' bestowed by His Majesty the King on his subjects. 'Sufficiency Economy' is a philosophy that stresses the middle path as the overriding principle for appropriate conduct and way of life for the entire populace (see Box 1.2). It applies to conduct and way of life at individual, family, and community levels. The philosophy is consistent with a balanced development strategy that seeks to reduce vulnerability to shocks and excesses that may arise as a result of globalization.

Preparing the MDGR at the provincial level

For several reasons, Nakorn Phanom Province agreed to be the second pilot area (Mae Hong Son province in the north produced the first MDGR in 2005) for implementing the MDG process at the subnational level. Like Mae Hong Son, Nakorn Phanom is one of the country's poorest provinces, lagging behind the rest of the country in many developmental areas. Under direction of the Provincial Governor, the province established four working groups to implement this task. The working groups consisted of key stakeholders, including representatives from various provincial government offices, as well as representatives from the private sector, civil society and non-governmental organizations in the province. The Thailand Environment Institute (TEI) was engaged to provide key inputs and support the process, as well as to strengthen the capacity of the provincial officers in development planning and strategy formulation consistent with the MDGs.

The implementation and management of the project activities were guided by four principles:

- Highlighting partnership and participation: appointment of four cross-sectoral and representational working committees to be in charge of (1) poverty, (2) education and gender equality, (3) sanitation, and (4) environment;

- Integration of activities and MDG results into the provincial development plan: was considered key to attaining and sustaining the aforementioned goals and related strategies at the levels of the province, line agencies and local government;
- Capacity-building of key personnel: was ensured through the operational process and the implementation of additional activities, with special focus on provincial officers that typically undertake the responsibility of provincial development strategies, planning and monitoring; and
- Strategy management: was introduced to ensure that good strategies were not only formulated for achieving the MDGs, but that increased efficiency was also attained to integrate those strategies at various levels and effectively apply those strategies into action.

Along with the results gained from the previous work undertaken in Mae Hong Son, the resulting lessons learned, documentation of the MDGR process, and associated capacity-building approaches in Nakorn Phanom are expected to further contribute to replication of the process in other provinces in the Kingdom. The resulting Provincial MDGR is also expected to have important consequences for local authorities in the province. The output highlights a number of specific issues that not only have local impact, but also require local actions. The report offers a means for bringing about cooperation between these local authorities and the province, as well as providing guidance on the issues and potential strategies that local authorities could further pursue.

Nakorn Phanom development context

Nakorn Phanom, situated in the north-east region of Thailand, is 735 kms from Bangkok, and covers an area of 5,559.12 sq. kms. It is separated from the province of Khammouan, Lao PDR by the Maekong River. The topography is mostly plains, with hills and low highlands in the North and with low highlands and plains in the South.

Population and society:

According to the Department of Provincial Administration (DOPA), in December 2006 Nakorn Phanom had a population of 693,594, of which 95 percent were Buddhist and the remaining 5 percent were Christian. Nakorn Phanom's races are diverse, consisting of seven tribal groups: Thai, Lao, Phu Thai, Yow, Sow, Saek and Kaloeng. There are also two separate races, Chinese and Vietnamese, who arrived in the region after civil wars in their respective countries. This racial diversity, however, does not generate inter-racial conflicts between races and tribal groups, each of which possesses and practices its own traditions and cultures. The diverse population shares one main tradition: on the last day of Buddhist Lent, lamp-lit boats are floated, which attract local tourists from all areas in this region.

Economy:

In 2004 the gross provincial product (GPP) at that year's price was 20,933 million Baht. The sector producing the highest income for the province was agriculture (34.1 percent), followed by wholesale, retail and auto repair activities (16.5 percent). With a GPP of 34,806 Baht, it was ranked 60th out of 75 provinces. However, in that year Nakorn Phanom saw an economic growth of 24.6 percent in the agricultural sector as a result of promoting the growth of Hom Mali rice and rubber trees. Outside the agricultural sector, the economic growth was 8.5 percent. This has induced many farmers to turn to growing more rubber trees. Moreover, Nakorn Phanom has been one of the provinces in which the labour force tends to migrate to work in Bangkok and even overseas.

Natural resources:

Several areas along the Maekong River and its tributaries are wetlands offering a high degree of bio-diversity. These areas have become a main food and herbal medicine source for nearby communities, also helping to generate incomes for many in the poorer segment of society. There is a high degree of erosion along the banks of all these rivers due to floodwaters during the rainy season and changes in water flows resulting from dam construction and river encroachment. Nakorn Phanom's forestlands at present cover only 23 percent of the provincial area. The intact forestlands are mostly located in the higher areas, next to the Mukdahan province. This land belongs to the Phu Phan Range, which is also a main water source for the whole area.

Provincial development potential:

Strengths

- Located in the middle of the Indochina region
- Natural and cultural landscapes
- Source of quality Hom Mali rice production
- A very fertile wetland for fishery resources
- Racial diversity with harmonious social conditions
- Adequate greenery and public parks

Weaknesses

- A population with low income
- Work force inadequacy
- Lack of higher education
- Low environmental awareness
- Lack of coverage in the communication network development
- Lack of medical personnel

Opportunities

- State policies on free trade and trade promotion within the Indochina region
- Thailand as 'World's Kitchen' promotion policy
- Tourism linkages with neighbouring provinces and Thailand's neighbouring countries

Threats

- Lack of provincial and inter-provincial communication structure systems and lack of effective interconnection systems with neighbouring countries
- Lack of external investment in the industrial sector
- Existing rules and regulations unfavourable for border trade
- Influence from communications and changes in local cultures
- Lack of support from related state agencies in promoting tourism

Provincial development strategies:

Extracted from the existing Provincial Development Plan, indicators, targets and resultant development strategies were based on two factors: assessment of the area's potential, and consistency with national development policies and the Royal philosophy of 'Sufficiency Economy' (see Box 1.2). Apart from these, consideration has also been based on the development strategies of the provincial cluster, which includes those provinces exhibiting specific and inter-connected characteristics, and provinces with problems that have been grouped together in order to coordinate and share resources through articulating compatible provincial development strategies.

Nakorn Phanom belongs to the 'Group of the Upper North-eastern Provinces', or 'Sanok group', consisting of Sakhon Nakorn, Nakorn Phanom, Mukdahan and Kalasin provinces. This group has 'Trade and Tour Bridge to Indochina and Beyond' as its development vision for 2005, and its main strategy covers four development areas: human resources, tourism, border trade, and agriculture and industry.

Nakorn Phanom's development vision is 'A Liveable Area and Indochina Country Relationship' with eight main strategic development areas:

- 1) Addressing local people's socio-economic problems;
- 2) Liveable area promotion;
- 3) Effective natural resource and environment management;
- 4) Human resources development;
- 5) International border economic and trade development;
- 6) Promotion and development of the Board of Investment, the industrial parks, small-medium enterprises and One Tambon One Product (OTOP);
- 7) Tourism development; and
- 8) Agricultural development.

Future development trend:

Nakorn Phanom has benefited from mega projects such as the Burma-Lao Corridor Project that was initiated in accordance with the ACMECS and the Third Thai-Lao Friendship Bridge, which will connect Nakorn Phanom with the province of Khammouan in Lao PDR. Thanks to these, Nakorn Phanom can more effectively connect with other neighbouring countries. These initiatives have induced international resource development as well as raw material and labour exchanges, thus reducing distances and investment capital needed for international merchandise transportation while also generating trade, investment and tourism cooperation.

Nakorn Phanom has to be well prepared to proactively undertake human development in order to facilitate other emerging socio-economic development initiatives. This is needed in order to take full advantage of Nakorn Phanom University, which opened its doors in 2005 and has the potential to generate comprehensive research works and development. Ultimately, Nakorn Phanom University has the potential to help upgrade labour skills to meet the demand created in trade and investment by the development of the planned Nakorn Phanom Indochina Goods Exposition Trade, Investment and Tourism Information Center, a facility which will compile and provide database services, as well as exhibiting various regional merchandise

Additionally, the collaborative Maekong River Wetland Development Project promotes international conservation of bio-diversity in Thailand (Songkhram River wetlands), Lao PDR, Viet Nam and Cambodia. Nakorn Phanom's participation in this project will bring further research and development of bodies of knowledge on bio-diversity, thus encouraging learning and environmental awareness and opening of new opportunities for pursuing wetland area management.



Achieving the MDGs in Nakorn Phanom

The existing development situation and trends in Nakorn Phanom were scored against both the global MDGs and Thailand's MDG+ frameworks at five levels of ranking: already

achieved, highly likely to achieve, likely to achieve, some potential to achieve, and no potential to achieve (See Box 2.1).

Box 2.1 Evaluation Levels and Conditions

- **Already achieved** Significantly more progress achieved than the stated goals/targets; or had achieved the goals/targets before the stated timeframe.
- **Highly likely to achieve** Expected to achieve the goals within the proposed timeframe.
- **Likely to achieve** While the current situation is lower than the stated goals, the trend reflects an improving situation with the implementation of existing strategies that will likely result in the achievement of the stated goals/targets.
- **Some potential to achieve** The current situation is lower than the stated goals, but it is still possible to achieve the target if specific goal-related strategies are implemented.
- **No potential to achieve** The current situation is much lower than the goals with several challenges and limitations preventing the province from achieving the targets.

Achieving the MDGs in Nakorn Phanom

From the analysis, Nakorn Phanom found that the province had either already achieved, or is likely to achieve, the global MDGs and has already achieved some of Thailand's MDG+ goals and targets. The remaining key challenges under the national MDG+ are in working towards poverty reduction targets and achieving universal secondary education. The conclusion of the assessment is summarized in Figure 2.1 and in Table 2.1.

MDGs already achieved:

The province has already achieved four global MDG targets:

- 1) Halving the proportion of the population living with hunger;
- 2) Eliminating gender disparity in primary and secondary education;
- 3) Halting and reversing the incidence of malaria; and

- 4) Halving the proportion of the population with no access to safe drinking water and basic sanitation.

Nakorn Phanom has already achieved two national MDG+ targets:

- 1) Reduction of the infant mortality rate (IMR); and
- 2) Halting and reversing the incidence rate for malaria.

Highly likely to achieve:

It is highly likely that the province will achieve five global MDG targets:

- 1) If it maintains current trends, the proportion of people living in extreme poverty will be halved from 1990 levels by 2015;
- 2) If the current rates are maintained, Nakorn Phanom will be able to provide universal primary education by 2015;
- 3) Have halted and begun to reverse the spread of HIV/AIDS;

- 4) Have halted and begun to reverse the incidence of tuberculosis; and
- 5) Eliminate gender disparity at all levels of education.

It is highly likely that the province will achieve a reduction of HIV prevalence among reproductive adults in line with the national MDG+ target.

Likely to achieve:

Nakorn Phanom is likely to achieve one global MDG target and three national MDG+ targets. Respectively, the global MDG target includes integration of the principles of sustainable development applied to natural resources and environment management practices. The national MDG+ targets are:

- 1) The trends indicate that it is likely that, by 2006, the province will have reduced the prevalence of HIV among reproductive adults;
- 2) Increase the share of renewable energy to 8 percent of the primary commercial energy by 2011; and

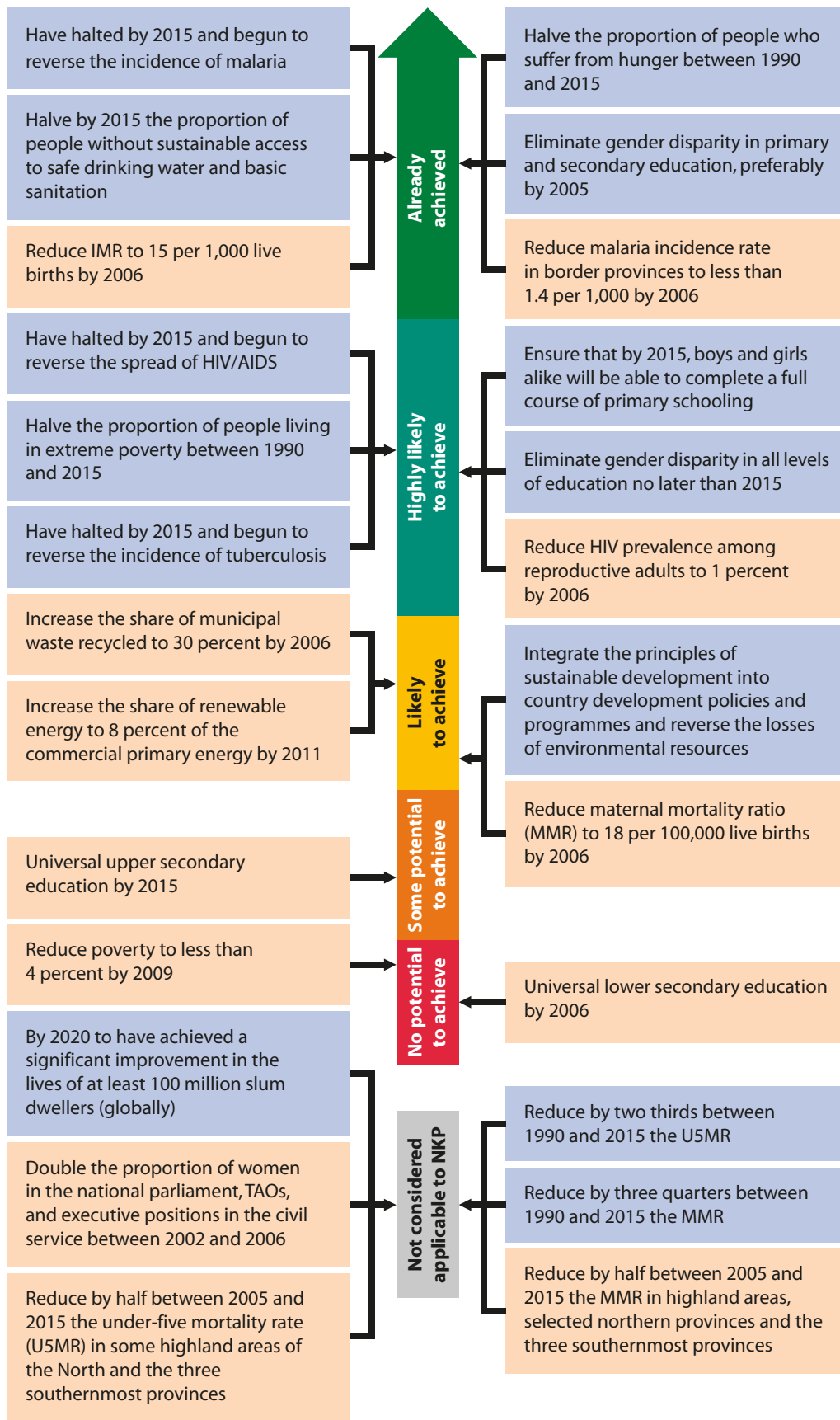
- 3) Increase the share of recycled municipal waste to 30 percent by 2006.

Some potential to achieve:

There are no global MDG targets that fall into this category for Nakorn Phanom. However, there is one national MDG+ target that the province has some potential to achieve: universal upper secondary education by 2015.

The process of identifying and subsequent 'scoring' of Nakorn Phanom's potential vis-à-vis both the global and national MDGs has had the positive impact of raising awareness of a number of non-economic development issues, which gives a framework for working towards specific time-bound targets on social and health aspects. The process has also reflected the need for additional and more reliable data as a basis for further action. Table 2.1 gives a more detailed overview of Nakorn Phanom's potential in relation to both the global and national MDGs and related targets. Additionally, some targets were not considered applicable to, and could not be assessed in, Nakorn Phanom.

Figure 2.1 Achieving the MDGs in Nakorn Phanom



Global MDG Thailand MDG+

Table 2.1 MDG Assessment in Nakorn Phanom

Target		Scorecard	Remarks
1	MDG: Halve the proportion of people living in extreme poverty between 1990 and 2015	Highly likely to achieve	The proportion of poor people decreased from in 1992 to 32.27% by 2004, representing almost a 50% reduction. Coupled with clear provincial poverty reduction policies and emerging opportunities (e.g. educational opportunities like the establishment of the Nakorn Phanom tertiary education facility and technical and skill expansion – and economic developments such as expansion of areas for growing Hom Mali Rice and rubber trees, increasing water reservoirs, and construction of the Third Thai-Lao Friendship Bridge), these trends have equipped the province with more opportunities to create additional income potential for its population.
	MDG ⁺ : Reduce poverty to less than 4 percent by 2009	No potential to achieve	While the province was almost able to halve the proportion of people living in extreme poverty, it is unlikely that it will be able to reduce this from 32.27% in 2004 to less than 4% by 2009.
2	MDG: Halve the proportion of people who suffer from hunger between 1990 and 2015	Already achieved	The proportion of the population with incomes lower than the food poverty line tended to decrease from 23.08% in 1992 to 9.07% in 2004. The rate of the underweight children under five years old also tended to decrease as confirmed by the 2005 rate of 6.40%.
3	MDG: Ensure that by 2015 boys and girls alike will be able to complete a full course of primary schooling	Highly likely to achieve	The net and gross enrolment ratios in primary education, including the retention and literacy rate, were high and tended to increase and be very close to the stated goal.
	MDG ⁺ : Universal lower secondary education by 2006	No potential to achieve	Though the net and gross enrolment ratios in lower secondary education tended to increase, they were regarded as far from the stated national goals and are thus not possible to achieve by 2006.
	MDG ⁺ : Universal upper secondary education by 2015	Some potential to achieve	The net and gross enrolment ratios in upper secondary education tended to increase, and while they are currently regarded as far from the stated goals, implementation of the ministry of education's policies offers some potential to achieve the goals by 2015.
4	MDG: Eliminate gender disparity in primary and secondary education by 2005 and in all levels of education by 2015	Already achieved (primary and secondary) Highly likely to achieve (tertiary)	In primary and secondary schools, male and female students had a similar ratio. At higher education levels, male students were better represented than female. Additionally, Nakorn Phanom University is expected to provide more educational opportunities to females.
	MDG ⁺ : Double the proportion of women in the national parliament, TAOs and executive positions in the civil service between 2002 and 2006	<i>Not considered applicable to Nakorn Phanom</i>	There was minimal representation on the national level with a total of only 7 parliamentary seats in the province. Executive positions in the civil service are not under provincial authority to assign.

Table 2.1 MDG Assessment in Nakorn Phanom (continued)

Target		Scorecard	Remarks
5	MDG: Reduce the U5MR by two-thirds between 1990 and 2015	Not considered applicable to Nakorn Phanom	Data is insufficient for assessment due to lack of information in the initial years (1990); however, based on the available information from 1996, it was found that the U5MR was low, with a decreasing trend.
	MDG ⁺ : Reduce IMR to 15 per 1,000 live births by 2006	Already achieved	The IMR is already lower than the stated goal; in 2005 the rate was 2.72 to 1,000 live births.
	MDG ⁺ : Reduce by half between 2005 and 2015 the U5MR in some highland areas of the North and the three southernmost provinces	Not considered applicable to Nakorn Phanom	Nakorn Phanom is not a target province.
6	MDG: Reduce the MMR by three quarters between 1990 and 2015	Not considered applicable to Nakorn Phanom	Data is insufficient for assessment due to lack of information in the initial years (1990); however, based on the available information of 1998-2005, it was found that the MMR could not be properly assessed.
	MDG ⁺ : Reduce the MMR to 18 per 100,000 live births by 2006	Highly likely to achieve	MMR for 1998–2002 tended to decrease: in 2004 it was 24.72 to 100,000 live births (2 mothers had died); in 2005, no mother had died, resulting in a rate of '0'. However, effective measures are needed to ensure the continued low MMR.
	MDG ⁺ : Reduce by half between 2005 and 2015 the MMR in highland areas of the North and the three southernmost provinces	Not considered applicable to Nakorn Phanom	Nakorn Phanom is not a target province.
7	MDG: Have halted by 2015 and begun to reverse the spread of HIV/AIDS	Highly likely to achieve	According to the 2001–2004 data, the prevalence among pregnant women was rather low and tended to be stable. In 2005 it was 0.5%.
	MDG ⁺ : Reduce HIV prevalence among reproductive adults to 1 percent by 2006	Highly likely to achieve	The prevalence rate among the reproductive population was in the range of 2.8–0 showing a tendency to decrease. Data for 2005 showed a rate equal to 0.2%.
8	MDG: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	Already achieved (malaria) Highly likely to achieve (tuberculosis)	The incidence of malaria was low and has decreased by more than half, from 3.27 per 1,000 population in 1990 to 0.01 in 2004; even though it slightly increased to 0.87 per 1,000 population in 2005, it was still lower than the Ministry of Public Health (MOPH) target. Regarding tuberculosis, the rate tended to decrease overall, with a slight increase in the year 2004 followed by a decrease in 2005 (possibly due to a linkage with HIV/AIDS); during the period, however, incidence of heart disease tended to increase.
	MDG ⁺ : Reduce malaria incidence in 30 border provinces to less than 1.4 per 1,000 by 2006	Already achieved	The malaria incidence rate was low, tending to further decrease (even though in 2005 the rate slightly increased to 0.87 per 1,000 population).

Table 2.1 MDG Assessment in Nakorn Phanom (continued)

Target		Scorecard	Remarks
9	MDG: Integrate the principles of sustainable development into country development policies and programmes and reverse the losses of natural and environmental resources	Likely to achieve	The data on various natural resources and the environment highlighted the good situation in the province in terms of forestlands, conservation areas, air quality and water quality in the rivers. However, the provincial energy utilization tended to increase along with access to renewable energy. Waste issues received more attention from all sectors regarding prevention and resolution of related problems.
	MDG ⁺ : Increase the share of renewable energy to 8% of the primary commercial energy by 2011	Likely to achieve	The proportion of Nakorn Phanom's utilization of renewable energy has increased from 0.26% in 2000 to 1.04% in 2004. The fact that Nakorn Phanom has been selected as a pilot province in the project, called 'Study on the formulation of the integrated provincial energy strategy framework', will serve as a significant opportunity to develop and promote utilization of renewable energy.
	MDG ⁺ : Increase the share of municipal waste recycled to 30% by 2006	Likely to achieve	While data at 2003 showed waste recycled in urban areas at 15.88%, later questionnaires have indicated that various local governments in Nakorn Phanom have paid more attention to proper waste disposal methods and have been encouraging more recycling of waste products. At present, the Office of Environment Region 9 and the Office of the Provincial Natural Resources and Environment have established policies on encouraging various local governments to group together to jointly establish common waste disposal centres and focus on recycling.
10	MDG: Halve during 1990–2015 the proportion of the population with access to safe drinking water and basic sanitation	Already achieved	The proportion of households accessing safe drinking water increased from 50.4% in 1990 to 80.4% by 2000. The number of households with access to basic sanitation increased from 88.0% in 1990 to 98.0% in 2000.
11	MDG: By 2020 to have achieved a significant improvement in the lives of at least 100 million slum dwellers globally	Not considered applicable to Nakorn Phanom	Nakorn Phanom does not have any slum communities.

Table 2.1 MDG Assessment in Nakorn Phanom (continued)

Target		Scorecard	Remarks
12 – 18	MDG: Provision of assistance and cooperation with developing countries in terms of trade, debt alleviation, job creation for youth, access to necessary drugs and technologies and communication, concentrating on developing countries, small island groups, and land locked countries	A clear and continual process	Acknowledging the need for international development cooperation, Nakorn Phanom has formulated a provincial development vision called 'A Liveable Area Closely Linked with Indochina'. Provincial development strategies are in place that address international and border trade development. Additionally, the initiation of the Burma-Lao Route and the Third Thai-Lao Friendship Bridge will generate further cooperation in terms of trade, investment and tourism. The establishment of Nakorn Phanom University and Aviation College will increase opportunities for tertiary education services in the Maekong Subregion. In terms of health, there will be a development of networks to keep surveillance on disease at the local level along the Thai-Lao border, with more collaboration in preventing and containing contagious diseases, prevention and rehabilitation of drug addiction, control of importing and exporting of health products, and promotion of the use of medicinal herbs.

Remark: Levels of achievement are rated according to five categories: already achieved, highly likely to achieve, likely to achieve, some potential to achieve, and no potential to achieve

MDGs of Nakorn Phanom

In assessing the development results of the province, the Working Group of Nakorn Phanom has considered the goals, targets and indicators of the global MDGs and MDGs⁺ of Thailand. Those targets and indicators that have been adjusted and supplemented corresponding to the condition of Nakorn Phanom are called 'Nakorn Phanom MDG' or 'MDG Star' (MDG*), which were defined based on the concept that global MDG targets would be kept unchanged while MDG⁺ Thailand targets were reassessed.

However, indicators from global MDG and MDG⁺ Thailand targets were adjusted and some indicators were added corresponding to the situation of Nakorn Phanom. MDG⁺ targets were adjusted in terms of target amounts and/or target years as follows: poverty reduction; hunger and nutritional conditions; retention at the lower and upper secondary education levels; the proportion of women in local government; health of newborns; major diseases; sustainable development; and upgrading the quality of life in urban communities. Moreover, some indicators of the global MDGs and Thailand MDGs⁺ were deleted, adjusted and added in order to reflect the situation in Nakorn Phanom. These are presented in Table 2.2.

Table 2.2 Universal MDGs, Thailand's MDGs⁺ and Nakorn Phanom's MDGs*

Issue	Target		Indicator
Goal 1 Poverty	MDG	Halve the proportion of people living in extreme poverty between 1990 and 2015	<ul style="list-style-type: none"> ■ Proportion of the population below provincial poverty line ■ Poverty gap ■ Share of poorest quintile in individual household income
	MDG ⁺	Reduce poverty to less than 4% by 2009	<ul style="list-style-type: none"> ■ Poverty severity
	MDG*	Reduce the proportion of rural households with incomes less than 20,000 Baht per head per year to lower than 4% by 2009	<ul style="list-style-type: none"> ■ Proportion of (urban and rural) households with income less than 20,000 Baht per head per year ■ Unemployment rate ■ The growth in gross provincial agricultural product ■ The growth rate of deposits to community funds ■ The average income in the province (urban and rural)
Hunger and nutritional conditions	MDG	Halve the proportion of people who suffer from hunger between 1990 and 2015	<ul style="list-style-type: none"> ■ Proportion of the population below provincial food poverty line ■ Prevalence of underweight children under five years old (From 2004 the prevalence of underweight children 0–5 years is applied instead)
	MDG ⁺	–	<ul style="list-style-type: none"> ■ Prevalence of micro-nutrient deficiency (iodine and iron) among school-aged children
	MDG*	Reduce the malnutrition conditions of pre-school and school-aged children so as to follow the standard criteria by 2009	<ul style="list-style-type: none"> ■ Proportion of primary and secondary education children with growth rates non-complying with the referenced criteria (weight to age criteria, height to age criteria, weight to height criteria)
Goal 2 Education	MDG	Ensure that by 2015 boys and girls alike will be able to complete a full course of primary schooling	<ul style="list-style-type: none"> ■ Net and gross enrolment ratio in primary education ■ Retention rate in the primary education level ■ Literacy rate of the population 15 to 24 years of age
	MDG ⁺	Universal lower secondary education by 2006 Universal upper secondary education by 2015	<ul style="list-style-type: none"> ■ Net and gross enrolment ratio in the lower and the upper secondary education ■ Retention rate in the lower and the upper secondary education ■ National test scores of primary, lower and upper secondary students
	MDG*	Reduce the dropout rate of lower and upper secondary levels to 2.41% by 2009	<ul style="list-style-type: none"> ■ Dropout rate of primary, lower and upper secondary students ■ Average learning achievement of students (primary, lower and upper secondary student) ■ Proportion of schools with teacher-student ratio failing the teacher manpower criteria ■ Proportion of secondary schools with computers, computer learning courses, and school internet services in place.

Table 2.2 Universal MDGs, Thailand's MDGs+ and Nakorn Phanom's MDGs* (continued)

Issue	Target		Indicator
Goal 3 Gender equality	MDG	Eliminate gender disparity in primary and secondary education by 2005 and in all levels of education no later than 2015	<ul style="list-style-type: none"> ■ Ratio of girls to boys in primary, secondary and tertiary education ■ Ratio of literate women to men of 15- to 24-year-olds ■ Proportion of women in waged employment in non-agricultural sector
	MDG+	Double the proportion of women in the national parliament, TAOs, and executive positions in the civil service during 2002–2006	<ul style="list-style-type: none"> ■ Ratio of girls to boys in selected fields in tertiary education ■ Ratio of literate women to men over 40 years of age
	MDG*	Increase the proportion of women in local governments to 10% by 2009	<ul style="list-style-type: none"> ■ Proportion of women in local government (high-ranking executives and members of local councils)
Goal 4 Child health	MDG	Reduce by two-thirds between 1990 and 2015 the U5MR	<ul style="list-style-type: none"> ■ U5MR ■ IMR (per 1,000 live births) ■ Proportion of 1-year-old children immunized against measles
	MDG+	Reduce IMR to 15 per 1,000 live births by 2006	
	MDG*	Reduce the rate of newborns with weight less than 2,500 grams to less than 7% by 2009	<ul style="list-style-type: none"> ■ Prenatal mortality rate ■ Low birth weight rate (less than 2,500 grams) ■ Birth asphyxia rate
Goal 5 Pregnant mother's health	MDG	Reduce by three quarters between 1990 and 2015 the MMR	<ul style="list-style-type: none"> ■ MMR ■ Proportion of baby deliveries attended by skilled health personnel
	MDG+	Reduce MMR to 18 per 100,000 live births by 2006	
	MDG*	Reduce MMR to 18 per 100,000 live births by 2009	<ul style="list-style-type: none"> ■ Rate of pregnant women attending standard antenatal care
Goal 6 HIV/AIDS	MDG	Have halted and begun to reverse the spread of AIDS by 2015	<ul style="list-style-type: none"> ■ HIV prevalence among pregnant women ■ Rates of constant condom use of secondary school male students ■ The number of children impacted by AIDS
	MDG+	Reduce HIV prevalence among reproductive adults to 1% by 2006	<ul style="list-style-type: none"> ■ HIV prevalence among reproductive adults (conscript)

Table 2.2 Universal MDGs, Thailand's MDGs+ and Nakorn Phanom's MDGs* (continued)

Issue	Target		Indicator
Malaria and other major diseases	MDG	Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	<ul style="list-style-type: none"> ■ Incidence rates and death rates associated with malaria ■ Prevalence rates and death rates associated with tuberculosis (TB) ■ Proportion of TB cases cured under directly observed treatment short course (DOTS)
	MDG+	Reduce malaria incidence in 30 border provinces to less than 1.4 per 1,000 by 2006	<ul style="list-style-type: none"> ■ Prevalence rates and death rates associated with heart disease
	MDG*	Increase the full recovery of phlegm-positive TB patients to more than 85% by 2009	<ul style="list-style-type: none"> ■ Incidence rates and death rates associated with hemorrhagic fever
Goal 7 Environmental management	MDG	Integrate the principles of sustainable development into country policies and programmes and reverse the losses of environmental resources	<ul style="list-style-type: none"> ■ Proportion of forestlands to the provincial area ■ Ratio of area protected to maintain biological diversity to Thailand's area ■ Rate of energy use per 1,000 baht of GPP ■ Proportion of households using solid fuel-like wood and charcoal
	MDG+	Increase the share of renewable energy to 8% of the commercial primary energy by 2011 Increase the share of municipal waste recycled to 30% by 2006	<ul style="list-style-type: none"> ■ Share of renewable energy in primary commercial energy ■ Water quality, potential of hydrogen, dissolved oxygen, biochemical oxygen demand and total coliforms bacteria values of main and minor rivers ■ Proportion of waste recycled
	MDG*	Increase the ratio of area protected to maintain biological diversity to the provincial area by 10% during 2005–2009 Improve saline soil (with salt traces of more than 1%) by more than 60% of the whole area by 2009	<ul style="list-style-type: none"> ■ Proportion of community forests to provincial area ■ Proportion of local governments with sanitary waste disposal systems ■ Proportion of local governments promoting waste management in accordance with the 3Rs principle: Reduce, Re-use, and Recycle ■ Proportion of embankment lengths to prevent bank erosion of the Maekong River in Nakorn Phanom ■ Proportion of improved saline soils (with salt traces of more than 1%)
Safe drinking water and basic sanitation	MDG	Halve the proportion of the population with no access to safe drinking water and basic sanitation during 1990–2015	<ul style="list-style-type: none"> ■ Proportion of households with access to safe drinking water (urban and rural) ■ Proportion of households with access to basic sanitation (urban and rural)
	MDG*	People of all households can access safe drinking water and basic sanitation by 2009	
Secure tenure	MDG	By 2020 to have achieved a significant improvement in the lives of at least 100 million slum dwellers (globally)	<ul style="list-style-type: none"> ■ Proportion of households with access to secure tenure (owned, leased or rented)
	MDG*	Upgrade the life quality of the population in urban communities by 2009	<ul style="list-style-type: none"> ■ Proportion of public parks to the population in urban communities

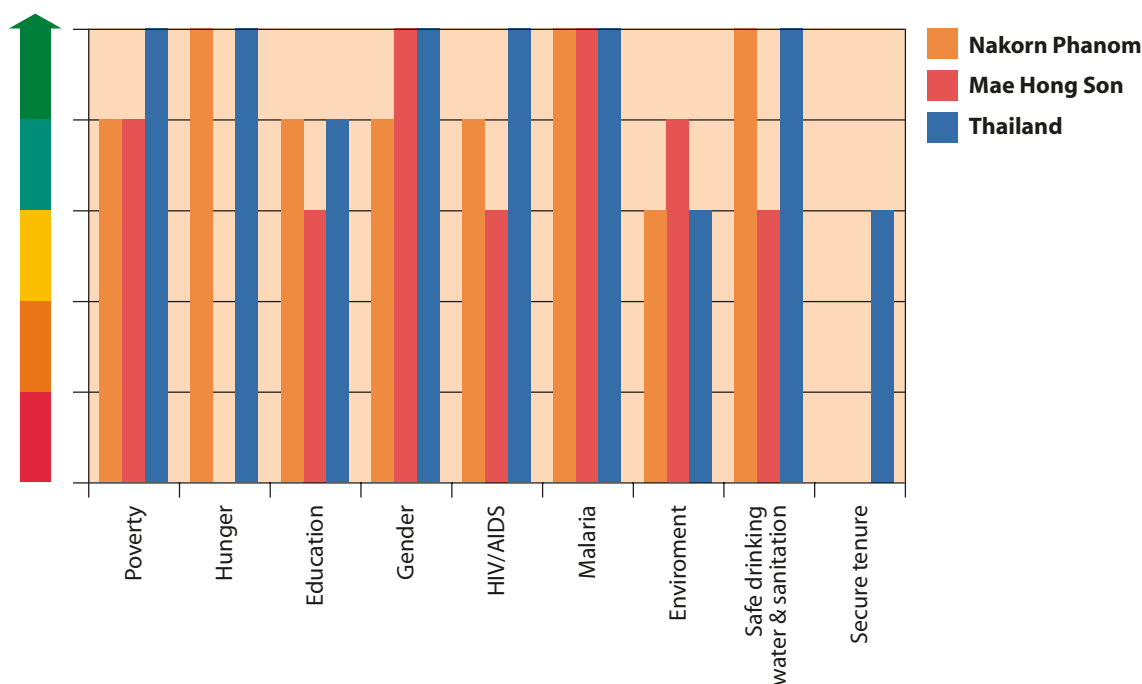
Comparison of the assessment results of MDGs in pilot provinces

In comparing the results of Nakorn Phanom's development assessment with that of Mae Hong Son (the first pilot province undertaking a provincial assessment of MDGs), it is found that Nakorn Phanom is typically more advanced than Mae Hong Son in terms of provision of universal primary education, slowing and reducing of the spread of AIDS, and access to safe drinking water and basic sanitation; it is, however, comparatively less advanced than Mae Hong Son in gender equality, natural resource and environment management.¹ When compared with the national MDGs, Nakorn Phanom generally lags behind the national average in most areas reflective of the overall north-eastern development situation.² The following figure presents a comparison of Nakorn Phanom to both the Mae Hong Son and national situation vis-à-vis MDG assessment.

Based on the assessment of the MDGRs in the two pilot provinces of Thailand, it is found that natural resource and environment management in the two provinces is typically more advanced than that of the national average. It was also found that the two provinces do not have any slum communities: thus no assessment was conducted regarding Target 11, which indicates another development area potentially higher than that of the Thailand average (see Figure 2.2).

Apart from this, the MDG assessment highlighted additional facts regarding the reduction of, or the slowing in, the spread of HIV/AIDS prevalence, as well as access to safe drinking water and basic sanitation. However, the report also shows the broad differences between the national and provincial levels. The subject provinces have typically achieved less than the national level regarding the MDGs, especially in Mae Hong Son, which highlights challenges for "human development, and development gap reduction" that are priority targets of the MDGs.

Figure 2.2 MDG assessment of Nakorn Phanom, Mae Hong Son and Thailand



Remark: Some of the goals cannot be assessed and cannot be applied in this context

¹ Mae Hong Son Provincial Millennium Development Goals Report 2005.

² Thailand Millennium Development Goals Report 2004.



Report on Nakorn Phanom's MDGs 1–7

GOAL 1: Eradicate extreme poverty and hunger

MDG Target 1 Halve the proportion of people living in extreme poverty between 1990 and 2015

MDG+ Reduce poverty to less than 4 percent by 2009

Nakorn Phanom Scorecard

**Highly likely to achieve the MDG target
No potential to achieve the MDG+ target**

Indicator	1998	1999	2000	2001	2002	2003	2004
Proportion of population below the provincial poverty line (%)	61.10	41.14	35.19	36.32	52.44	38.88	32.27

Data Rating

Data quality, reliability	Data continuity
★★★★	★★★★★

See Annex IV for definitions of the data rating scale

Nakorn Phanom's MDG Target

Target	Indicators
Reduce the proportion of rural households with incomes less than 20,000 Baht per head per year to lower than 4% by 2009	<ul style="list-style-type: none"> ■ Proportion of households with income less than 20,000 Baht per head per year ■ Unemployment rate ■ The growth of the gross provincial agricultural product ■ The growth rate of deposits to the community funds ■ Average income of the population within the province

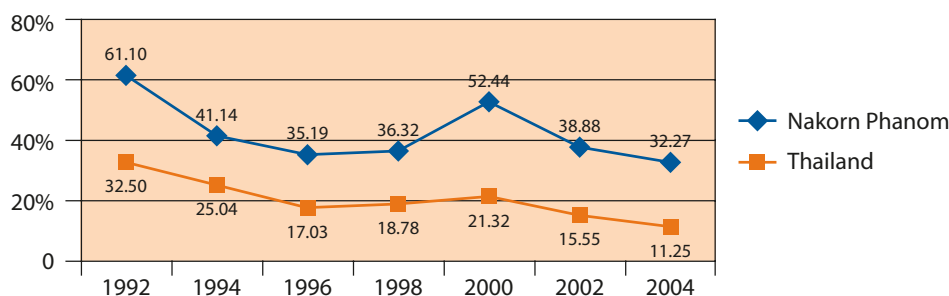
The poverty situation

When considering Nakorn Phanom's poverty trend, using the proportion of population below the provincial poverty line, it was found that the rate was declining in parallel with the overall trend of the proportion of population below the national poverty line.³ In 1992 Nakorn Phanom's poorer segment of the population was 61.10 percent and decreased to 36.32 percent by 1998. However, from 1998 to 2000 it increased to 52.44 percent, likely reflective of the overall national situation resulting from the 1997 economic crisis (see Figure 3.1). By the year 2004, the proportion of the poorer segment of Nakorn Phanom's population had declined to

32.27 percent and, if the trend continues, it is expected that Nakorn Phanom will be able to achieve the universal MDGs in the near future.

When compared to the national situation and the national MDG⁺, the proportion of the poor segment of the population in the province tends to remain significantly high. In light of this, it would be difficult for the province to attain the national goal within the given timeframe. When comparing the rural-urban poverty characteristics, it was found that in 2004 the rural areas had a poverty incidence of 35.01 percent, which is double the urban rate of 16.93 percent.

Figure 3.1 Proportion of population below poverty line



Source: NESDB

When analysing the situation using the Basic Minimum Needs Survey conducted by the Nakorn Phanom Provincial Community Development Office, it was found that Nakorn Phanom's rural households with incomes less than 20,000 Baht per head per year dramatically decreased from 76.93 percent in 2002 to 7.7 percent by 2005. This corresponded with the proportion of the poor with incomes lower than the poverty line.

Taking into consideration Nakorn Phanom's poverty gap and poverty severity, it was found that the trend declined between 1992 and 2004, with fluctuations occurring in accordance with the proportion of the poor. That is, in 1992 (1) the poverty gap and (2) the poverty severity

rate were 24.00 and 11.15 respectively, with the trend initially decreasing and subsequently increasing only in 2000, with rates of 16.46 and 6.55 respectively. According to the latest data from 2004, it was found that these two rates had decreased to 9.47 and 3.92. This information indicated that, to a certain extent, Nakorn Phanom has potential to solve the problem and could thus begin to address the gap in the number of persons below the poverty line. However, Nakorn Phanom's income distribution, based on the share of poorest quintile in individual household income (20 percent of the poorest people), tended to be unchanged. This is reflected in the data where the 1994 share was 7.2 percent and that of 2004 was 7.3 percent.

³ The evaluation of Thailand's poverty situation was conducted by the NESDB. This report was based on the poverty line newly adjusted to ensure that it covered the basic needs consistent with current lifestyles.

The poverty monitoring, normally used at the macro level – national and regional – and poverty line-based, has never been used for any official evaluation of poverty at the provincial level. This is due to the limitations of sampling groups. However, based on the available data, the NESDB has managed to evaluate the provincial poverty, and found that Nakorn Phanom's poverty line value has always been lower than that of Thailand. According to the latest data, in 2004 Nakorn Phanom's poverty line value was 1,069 Baht per head per month while that of Thailand was 1,242 per head per month.

The Provincial MDG Working Group offered the opinion that the data was not indicative of the real situation and could not reflect all dimensions of the province's situation and, accordingly, added some additional indicators: (1) the proportion of households with income less than 20,000 Baht per head per year, (2) unemployment rates, (3) the growth rate of the gross provincial agricultural product, (4) the growth rate of the community fund's deposits and (5) the provincial population's average income to serve as complementary data for the subsequent monitoring of Nakorn Phanom's poverty situation.

Challenges

Nakorn Phanom is likely to achieve the universal MDG poverty target. While the trend is improving, several constraints prevent the province from achieving Thailand's MDG+ within the proposed timeframe, reflecting its ongoing status as one of the poorest provinces in the country. Although Nakorn Phanom has prioritized poverty reduction policies and strategies by placing emphasis on agricultural product development like Hom Mali rice, rubber trees, and fish (e.g. pla pho) for export promotion, as well as international trade promotion that has brought about a higher economic expansion, it was found that the poorer segment of the population did not fully benefit from these policies. This necessitates revision of measures to enable the adequate redistribution of benefits to the poor.

Nakorn Phanom has several initiatives and opportunities to address the poverty issue: (1) it is a pilot province in formulating a community action plan to address poverty issues; (2) the university offers educational development potential; and (3) the ongoing development of a communication system to connect the Maekong River Basin Subregion which would leverage and increase the trade and tourism values.

Extreme poverty eradication strategies

Even though Nakorn Phanom cannot yet achieve Thailand's MDG+ as scheduled by 2009, it still continues to earnestly implement the extreme poverty and hunger eradication strategy that has been its development goal since 2005. Under this initiative, it has a target to increase rural households' income to more than 20,000 Baht per head per year.

In order for the eradication of extreme poverty to be achieved at the stated target, the province is required to have coordination and collaboration in place from all involved agencies and organizations. Through this approach, the province can systematically implement activities that strengthen capacity of the poor so that opportunities to fairly access necessary resources are opened, while also strengthening capacity to acquire the necessary knowledge for addressing related problems in a sustainable manner.

Nakorn Phanom's strategies for poverty eradication involve the following approaches and development guidelines:

- **Develop databases on the poor** to track household level poverty and make use of modern information technology to ensure accuracy, coverage, clarity, coherence and linkages among all agencies involved. The resulting initiatives will attempt to solve problems like household debt and inaccessibility to capital, as well as resolving land ownership issues that can be carried out properly, systematically, and without any duplication of work. Apart from this, mobile poverty eradication units will be in place to be notified of updated information on problems that require on-the-spot responses.
- **Upgrade learning processes and strengthening the involved communities** through: the creation of learning processes which ensure that the communities better understand the need for jointly addressing their common problems; the development of learning centres in the communities; promoting alternative occupations; supporting lifestyles in accordance with the sufficiency economy's principles; developing labour skills; promoting non-formal education; upgrading village funds into community banks; upgrading the participatory and integrated community plans into development plans for localities and related agencies; developing the potential of leaders and civic groups; and supporting research that is consistent with the current application of appropriate technologies by the communities.

- **Increase manufacturing and trading capacities** with the improvement of manufacturing infrastructure; reduction of investment capital needs; and creation of value added, by promoting the application of modern technology in producing and developing the agricultural sector comprehensively and extensively through the upgrade of the quality of agricultural and industrial goods. This initiative will also include the promotion of the OTOP programme to pursue quality assurance and 'brand' recognition, creating incentives in border investment and trades, strengthening relationships with
- neighbouring countries, promoting group organization, developing entrepreneurship skills for businesses and community-based organizations, as well as developing communication and logistic networks to ensure safety and accessibility.
- **Upgrade quality of life and access to public services** through developing educational, health and vocational funds; increasing welfare funds for the underprivileged and the aged; developing quality of public services to ensure efficiency, coverage and accessibility; and developing standards and coverage of infrastructure.

MDG Target 2 Halve the proportion of people who suffer from hunger between 1990 and 2015

MDG+ –

Nakorn Phanom Scorecard

Already achieved the MDG target

Indicator	1992	1994	1996	1998	2000	2002	2004	2005
Proportion of population below provincial food poverty line (%)	23.08	10.41	5.21	5.01	15.25	15.00	9.07	
Prevalence of underweight children under five years old (%)			13.47	8.14	7.9	7.2	6.51*	6.40*

* Since year 2004, the prevalence of underweight children 0–5 years is applied instead.

Data Rating

Data quality, reliability	Data continuity
★★★★	★★★★★

See Annex IV for definitions of the data rating scale.

Nakorn Phanom's MDG Target

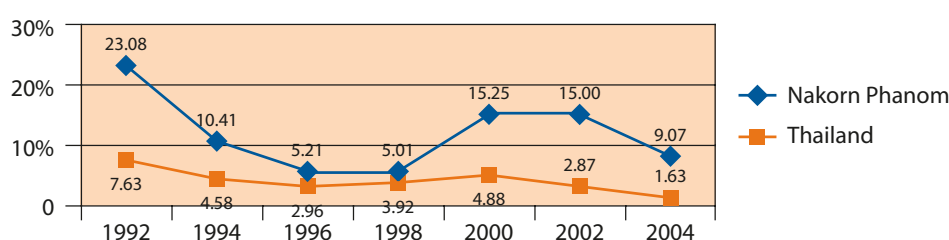
Target	Indicators
Reduce malnutrition among babies and school-aged children so as to achieve the standard criteria by 2009	<ul style="list-style-type: none"> Proportion of primary and secondary school children with growth rates non-compliant with the referenced criteria (weight to age, height to age, weight to height)

The hunger situation

Assessing the situation of hunger in Nakorn Phanom is based on the proportion of the population below the provincial food poverty line.⁴ The assessment found that the situation tended to decrease during 1992–1998, but markedly increased in 2000 (after the 1997 economic crisis), and decreased once more in 2002 as the overall economic situation stabilized.

According to the latest data, from 2004, the proportion of the population below the provincial food poverty line was 9.07 percent, decreasing by more than half from 23.08 percent in 1992. This has enabled Nakorn Phanom to achieve the global MDG earlier than scheduled. However, that proportion has always been high when compared with that of the whole of Thailand, and continues to remain so (see Figure 3.2). In the case of Nakorn Phanom, this could mean that the situation based on adequate income for food expenditure does not always reflect the real nutritional situation.

Figure 3.2 Proportion of the population with income lower than Thailand's and Nakorn Phanom's food poverty line (1992–2004)



Sources: NESDB

Regarding other nutritional aspects, it was found that the prevalence of underweight children under five years old continually decreased. In 1995 it was 14.69 percent and had decreased to 6.40 percent by 2005.⁵ The prevalence rate of 6.69 percent in 2005 is already lower than the goal set under the 9th Plan of the Ministry of Public Health (MOPH), which designated that it was not to exceed 7 percent.

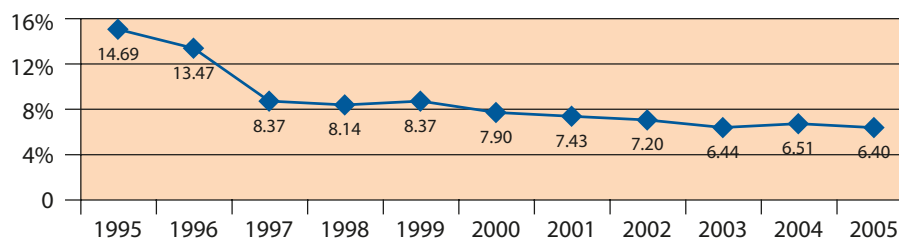
In terms of the intake of necessary nutritional substances deemed complete and adequate for bodily needs for school-aged children, it was found that there were no problems in Nakorn Phanom related to iodine deficiency where the

rate was below the target of the 9th plan of the MOPH, which stipulated that it not be in excess of 5 percent. Since 1997 the rate has tended to continually decrease to 1.42 in 2005. In terms of anaemia due to iron deficiency in school-aged children, it was found that the rate also decreased. During the period 1995–2004 the rate was higher than the target of the 9th plan of the MOPH, which required that it not exceed 10 percent, but, based on the latest information of 2005, the rate for the province had fallen below the set criteria to 6.39 percent. However, there must be continual surveillance on this issue.

⁴ The people with income below the food poverty line are those people with inadequate income to provide food for their own consumption of standard minimum energy, as indicated by the health department and calculated by the NESDB. This is the same set of data with the proportion of population below the poverty line. In 2004, Nakorn Phanom's food poverty line was 598 Baht per head per month while that of the North-east and Thailand was 604 and 632 Baht per head per month, respectively.

⁵ In the 2004 fiscal year the Department of Health, MOPH extended the age ranges of children who were to be weighed to 0–72 months (less than 6 years of age) and adjusted the weight reference criteria and height for the assessment of the child growth conditions. In accordance with that, the indicator was changed to "The rate of children aged 0–5 years of ages with weight less than the base weight" from then on.

Figure 3.3 Proportion of underweight children (under 5 years old)



Sources: Nakorn Phanom Health Office

Challenges

Nakorn Phanom's proportion of the population with income below the food poverty line tended to decrease and the province could attain the universal MDG. However, it was found that the proportion was still much higher than that of Thailand. Taking into consideration the current economic growth, Nakorn Phanom faces problems related to changes in consumption behaviour for its citizens, much like in other similar societies. It is thus a priority to promote and ensure that local people practise correct consumption behaviours appropriate for their age group, especially for school-aged children, where improper practices can adversely affect their development in later years.

Strategies promoting good nutrition

Nakorn Phanom has already achieved the universal MDG in halving the population experiencing hunger, and the ratio of underweight children under five years of age has continued to decrease. However, there appeared to be issues of iron deficiency and malnutrition in school-aged children. Based on analysis, it appears that Nakorn Phanom's malnutrition conditions are not related to lack of food, but rather are related to inappropriate knowledge regarding consumption, social conditions and lifestyles. Owing to these aspects, targets have been set to achieve a reduction in the malnutrition conditions of pre-school and school-aged children by 2005.

In its nutritional development, the province focused on a promotional campaign to ensure that youth in particular and people in general are enjoying good nutritional practices. This is pursued through providing people with knowledge and understanding on healthy consumption practices.

The approaches and development guidelines for these strategies are as follows:

- **Provide knowledge and understanding on good consumption practices**, targeting parents of children in high-risk groups. This strategy requires ongoing public relations and provision of knowledge to encourage appropriate consumption behaviour, as well as providing school teachers with knowledge and understanding to ensure integration of adequate nutritional knowledge into school syllabi and curricula.
- **Upgrading food quality in educational institutions** by extending and developing the school lunch and milk programmes to cover all children; ensuring a standard quality so that children are able to receive adequate and full nutrition, and are inculcated with the proper value of drinking milk every day from their infancy; improving the overall quality of food; focusing on the sanitary management of the educational institutions' canteens; coordinating with local government organizations and the community to ensure their active participation in controlling the quality and cleanliness of food sales in school; and utilizing this coordination to provide knowledge and create entrepreneurs' commitment to maintaining food quality in educational institutions.
- **Enhance child development centres' quality and standards** through focusing on improving the quality and standards of existing facilities; encouraging local government organizations to continually participate in the facilities' administration and management; strengthening the personnel's knowledge of nutrition and sanitary management; and monitoring and evaluating them effectively.

GOAL 2: Achieve universal primary education

MDG Target 3 Ensure that, by 2015, boys and girls alike will be able to complete a full course of primary schooling

MDG⁺ Universal lower secondary education by 2006; and Universal upper secondary education by 2015

Nakorn Phanom Scorecard

Highly likely to achieve the MDG target
No potential to achieve the MDG⁺ target in lower secondary education
Some potential to achieve the MDG⁺ target in upper secondary education

Indicator	1995	1997	1999	2001	2003	2005
Net enrolment ratio in primary education (%)	92.08	89.41	73.28	87.27	90.75*	86.74*
Gross enrolment ratio in primary education (%)	109.64	106.05	99.58	99.69	98.88	96.44
Net enrolment ratio in lower secondary education (%)		58.45	51.39	67.12	61.07	71.26
Gross enrolment ratio in lower secondary education (%)	70.08	81.80	87.39	88.00	86.92	91.83
Net enrolment ratio in upper secondary education (%)		26.93	34.46	31.57	51.53	38.32
Gross enrolment ratio in upper secondary education (%)	25.80	37.36	46.65	50.60	54.82	52.80

* No data from school under Office of Royal Thai Police

Data Rating

Data quality, reliability	Data continuity
★ ★ ★	★ ★ ★ ★

See Annex IV for definitions of the data rating scale

Nakorn Phanom's MDG Target

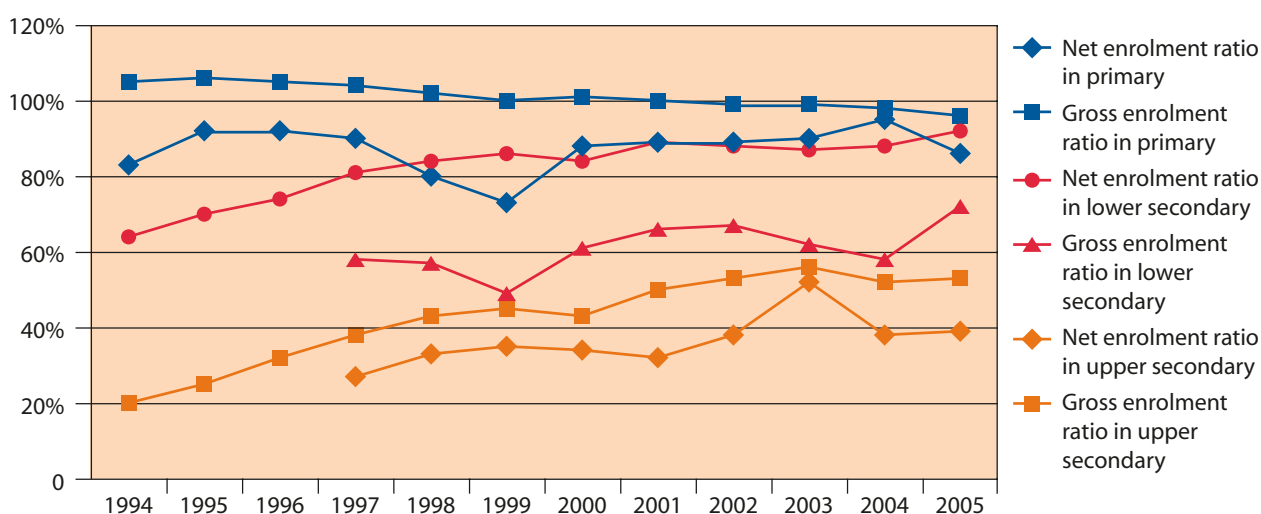
Target	Indicators
Reduce the dropout rate of lower and upper secondary levels to 2.41% by 2009	<ul style="list-style-type: none"> ■ The dropout rates of primary, lower and upper secondary students ■ The average learning achievement of pupils and students (primary, lower secondary and upper secondary) ■ The proportion of schools with a teacher-pupil proportion failing the manpower criteria ■ The proportion of secondary schools with computers, computer courses and school internet services in place

The educational situation

Nakorn Phanom provides education services from kindergarten up to the university level. It was found that primary education has almost achieved the global MDG target. This finding is based on the net pupil-to-school-aged-population ratio since 1994 that has been above 85 percent; according to the latest data from 2005 the ratio was 86.74 percent.⁶ Taking this into consideration together with the gross pupil-to-school-aged population ratio (which tended to decrease), the levels were higher than

95 percent. For the period 1994–2000 the rate was higher than 100 percent as a consequence of 5 percent of the population not having Thai nationality (i.e. non-registered population). This population typically comprised Vietnamese refugees fleeing wars, and, because of this, a certain number of pupils did not possess the 13-digit identity card causing official figures to be higher (above 100 percent) than the real situation. According to the latest 2005 figures, the gross pupil-to-school-aged-population ratio for primary school was 96.44 percent.

Figure 3.4 Enrolment ratio in Nakorn Phanom schools



Sources: Calculated from Ministry of Education (MOE) and Department of Provincial Administration (DOPA) data

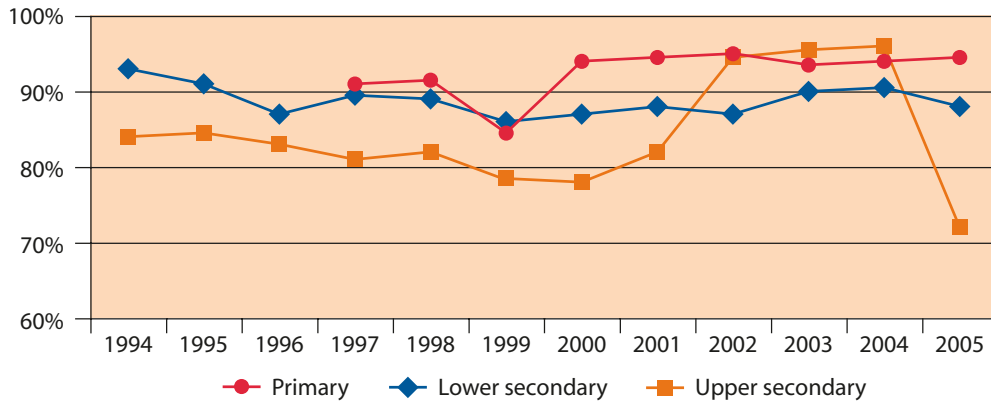
For Nakorn Phanom's secondary education, it was found that progress was less than that of the primary level. At the secondary level, the (1) net and (2) gross pupil-to-school-aged-population ratios tended to increase. According to the latest information from 2005, the rates were 71.26 percent and 91.83 percent, respectively. While improving, these rates were still far from Thailand's MDG+ targets which are likely not achievable within 2006. The upper secondary level, which had less progress than the lower secondary level, was likely to achieve the MDG+ target as the net and gross pupil-to-school-aged-population ratio of the upper secondary level tended to continually increase. According to the latest data of 2005, the rate was 38.32 percent and 52.80 percent, respectively. Even though they were still far from the target, the trend indicates that they will likely achieve the target by 2015 if they are sufficiently supported by related agencies.

At the primary level, the retention rates were rather high, at more than 90 percent in 2005. This illustrated that students enrolling in the primary levels had higher opportunities to graduate. In the lower secondary level, the retention rates were rather high, being more than 90 percent in 2003–2004. After that, they tended to decrease, becoming 87.86 percent in 2005. Moreover, in the upper secondary level, it was found that the retention rates were rather high, being more than 90 percent in 2002–2004. After that, they tended to decrease, becoming 72.08 percent in 2005.⁷ This indicates that there were fewer opportunities for pupils to receive lower and upper secondary education. Because of that, Nakorn Phanom had to take measures to address these problems. So as to keep continual surveillance on pupils' dropout rates, Nakorn Phanom should have an added indicator in place for the monitoring process.

⁶ Excluded the six schools under Office of Royal Thai Police that have 444 pupils of non-classified age.

⁷ Excluded the colleges under Office of the Vocational Education Commission.

Figure 3.5 Retention rates in primary and secondary school



Sources: Calculated from MOE

In terms of the literacy rate for 15–24-year olds, based on the 2000 census and housing data, it was found that this population had 99 percent literacy, increasing slightly from 98.89 percent in 1990.⁸ This is higher than that of Thailand as a whole, which was 98.00 percent in 2000. This indicates that part of Nakorn Phanom’s population has also obtained educational services from non-formal education.

Assessment of Nakorn Phanom’s educational quality was based on pupils’ scores in Thai language, English, mathematics and sciences.⁹ It was found that at the primary level, all subjects’ average scores tended to decrease for the period 1996–2003 and tended to increase in 2004, when their average scores were 45.98, 40.51, 43.73 and 43.86 percent respectively, and the results indicate capacity to pass the evaluation level criteria identified by expert teams as higher than the average scores of the national level in every subject.¹⁰ At the lower secondary level, all averaged subject scores tended to decrease in the period 1997–2003. In 2004 the averaged scores were 41.07, 35.13, 37.29 and 39.02 percent respectively. Those of English, mathematics and sciences were higher than those documented for 2003. Trends regarding the study of Thai language were decreasing, while all subjects’ average scores passed the evaluation criteria and were higher than the national average scores. For the upper secondary level, which had test data for 1997 and 2003, it was found that the trend was going

down for Thai language and sciences. In 2003 the average subject scores for Thai language, English, mathematics and sciences were 39.04, 34.01, 29.42 and 39.67 percent respectively, and could pass the evaluation criteria with average scores lower than those of the national level.

Nakorn Phanom’s working group in charge of monitoring the education-based MDG results recognized the significance of the increase in the educational quality. Accordingly, they stipulated that an indicator be added for the proportion of schools with the teacher-to-pupil ratio not passing the teacher manpower criteria and that the average learning achievement results by pupils of the primary, lower secondary, and upper secondary levels be included in the measurement of educational quality for monitoring subsequent sessions.¹¹ In 2005, the rates were 7.60, 26.98, and 22.22 percent for primary, lower secondary, and upper secondary levels respectively, reflecting a shortage of teachers, especially in remote areas. The 2005 average learning achievement results illustrate that most of Nakorn Phanom’s pupils should be capable in terms of mathematics and English.

In accordance with the global MDGs, Thailand has recognized the need for developing Thai society into a knowledge-based community. Owing to this, there should be monitoring of the development of youth’s information technology skills. To date, provincial data does not exist on the IT literacy rate of 15- to 24-year-olds. Owing

⁸ Based on the 2000 definition of the National Statistics Office (NSO), literacy represents capability to read and write of a person aged from 6 years. Literacy involves any language and means one can read and write some simple texts. If one can read but cannot write, one will be regarded as illiterate.

⁹ Based on the assessment accomplished by the utilization of central test forms of the Office of the Basic Education Commission (OBEC).

¹⁰ Based on the result of the 2004 assessment accomplished by the utilization of central test forms of the OBEC (<http://www.bet.obec.go.th>).

¹¹ Based on the teacher manpower rate, it is stipulated that the teacher to pupil rate of each school should be 1:25.

to this, Nakorn Phanom stipulated that this requires identifying the proportion of secondary schools with computers, computer science courses and internet services. In 2005, it was found that 99.32 percent of schools had computer sets; however most of them had only 1–5 computers per school, which was considered insufficient. Only 69.59 percent of secondary schools offered computer courses. Further, only 84.46 percent of these schools had internet services. Based on this information, Nakorn Phanom had to recognize the need for further development of school information systems even for remote and small schools.

Challenges

Nakorn Phanom's primary education was highly likely to achieve the global MGD targets while the lower and the upper secondary levels were still far from the national MDG+ targets. Because of this condition, Nakorn Phanom had to pursue educational promotion measures at the primary level and to define immediate measures for the promotion of secondary education to ensure attainment of the goals. Further, it had to develop standardized data collection systems for all educational aspects, involving all key agencies, to ensure accuracy in assessing the current situations.

The results of assessment by the central test forms of OBEC and the average learning accomplishment results of pupils illustrated that Nakorn Phanom's pupils reduced their scores in English and mathematics for all levels of education. This was partially attributed to teacher quality, which could adversely affect the educational quality. Teacher inadequacy, in comparison to the number of pupils, could overwhelm teacher capacities. Additionally, the inaccessibility of updated information technologies, already recognized as significant for the upgrading of the educational quality in Nakorn Phanom, would accordingly reduce pupils' opportunities to move to schools in the provinces.

Educational development strategies

In order to further develop its educational services, Nakorn Phanom has to augment inter-agency coordination to drive the educational development both systematically and in the same direction as highlighted educational services, especially at the secondary level. The province also has to solve the pupil dropout rate and upgrade its educational standards.

Nakorn Phanom currently provides pre-school up to university education levels through various agencies and thus there needs to be coordination among the various agencies in achieving a systematic and uniform educational system. Moreover, measures should be undertaken for all educational services, especially at the secondary level, that attempt to address the dropout rates and standardization of educational quality.

Strategies for Nakorn Phanom's development of its educational services involve the following approaches and development guidelines:

- **Ensure equality and increased opportunities to access basic education** by identifying each school's specific service areas and conducting census of all pupils in all schools to form and launch proactive activities and campaigns to promote parents' recognition of the value of higher education. Additional measures include: surveillance of dropout rates; referral system development; providing various forms of social welfare to help reduce pupils' costs; providing special forms of education for the handicapped and the underprivileged; developing extra-curricular material into a variety of learning forms; as well as creating enabling atmospheres for participation of all sectors in providing education that is consistent with each community's circumstances.

- **Upgrade learning quality** through developing measurement and assessment system standards, including improvement of teaching patterns and methodologies for Thai, English and other foreign languages; promoting application of information technologies in learning and teaching; developing school networks towards joint development of learning and teaching and common resource application; promoting short-course curricula and vocational skills which can assist pupils in making a living; as well as developing learning sources (both formal and informal) with participation from communities, private bodies and localities.
- **Increase capacity of teachers and educational personnel** through increasing teacher manpower and personnel structures to ensure suitability, attitudinal changes and teacher vocational capacity based on learning achievements, and promotion of disciplines, virtues and ethics of teachers and educational personnel. Strengthened personnel should provide support for teachers' networks in line with provincial needs, while also supporting development of coaching, mentoring, monitoring and reporting systems for courses offered by various agencies.
- **Promoting cooperation among the various agencies involved in education provision** through coordinated development, standardized systems for educational data, formulating an integrated provincial educational strategic development plan, joint planning for advancing educational development that is coherent and moving in the same direction, and encouraging participation from local government organizations and communities in supervising and providing efficient education.
- **Upgrade university education standards** through the immediate improvement of the structure: specifically, encouraging all sectors to participate in the administration and management of organizations providing education; developing learning centres involving technical and specific skill enhancement sectors; providing support for researches compatible with the development of localities; and pressing for universities to act as centres for providing technical and capacity-building support to local government organizations.

GOAL 3: Promote gender equality and empower women

MDG Target 4 Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015

MDG+ Double the proportion of women in the national parliament, Tambon Administration Organizations, and executive positions in the civil service by 2006

Nakorn Phanom Scorecard

**Already achieved the MDG target in primary and secondary education
Highly likely to achieve the MDG target in tertiary education
The MDG+ targets are not considered applicable to the Provincial level**

Indicator	1993	1995	1997	1999	2001	2003	2005
Ratio of girls to boys in primary education	0.97	0.95	0.96	0.96	0.97	0.96	0.96*
Ratio of girls to boys in secondary education	1.05	1.01	1.01	1.03	1.06	1.08	1.04
Ratio of girls to boys in tertiary education	0.95	1.04	1.04	1.07	1.04	0.69**	0.76**

* No data from school under Office of Royal Thai Police

** No data from Boromrajchonani College of Nursing, Nakorn Phanom and Mahachulalongkorn Universities

Data Rating

Data quality, reliability	Data continuity
★ ★ ★ ★	★ ★ ★ ★ ★

See Annex IV for definitions of the data rating scale

Nakorn Phanom's MDG Target

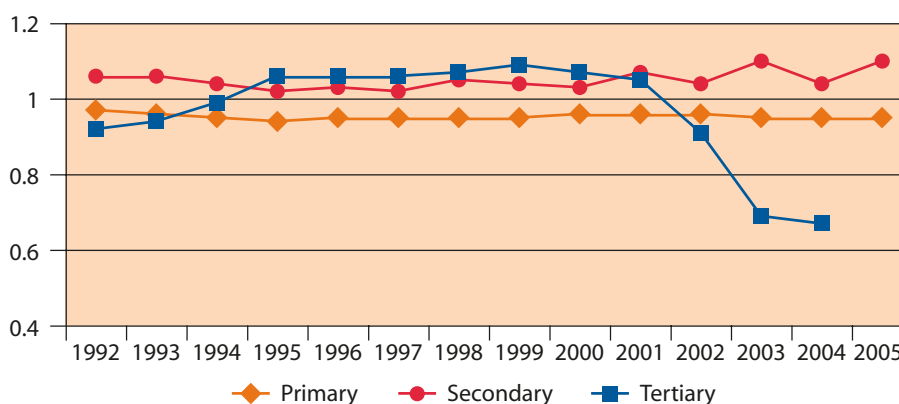
Target	Indicators
Increase the proportion of women in local governments to 10% by 2009	■ Share of women in local governments (high-ranking executives and members of local councils)

The gender equality situation

In terms of gender parity in the education system, it was found that girls and boys appeared to have comparable access to educational opportunities. However, to fully achieve the MDG target related to gender equality at the primary and secondary levels, the following aspects need to be taken under consideration. At the primary education level, it was found that a smaller number of girls were attending school and that the girl-to-boy ratio for the period 1992–2005 was in the range of 0.95–0.98 and tended to be stable. At the

secondary education level, the girl-to-boy ratio was slightly higher: in 1992–2005, the range was 1.03–1.08. By the university level, gender equality was likely to achieve the global MDG target. More girls had opportunities during the period 1992–2001, while a lower number had opportunities during the period 2002–2004. However, in 2005 the girl-to-boy ratio attending university was 0.76.¹² This was believed to be the result of the offering of subjects deemed unfavourable for girl enrolment; this is also combined with the lack of data on students attending schools or universities in other provinces as a means for comparison.

Figure 3.6 Ratio of girls to boys in primary, secondary and tertiary education



Sources: Calculated from MOE data

Moreover, in some university faculties it was found that females in Nakorn Phanom had less access than males to the faculties of political science, public administration, law, and industrial techniques. In 2005, the female-to-male ratio was 0.78, 0.53, and 0.75 respectively for these faculties. The rate has tended to increase, where the interest of female students in administration and politics increased. In the faculty of industrial techniques, women had much less access than men, reflected in the rate of 0.02 in 2004.

In terms of literacy rates, it was found that for 15- to 24-year-olds, Nakorn Phanom's female literacy rate was equal to that of men. In 1990 and 2000, female-to-male literacy rates were equal at 1 and were consistent with the overall situation in Thailand. For the age ranges 40 years and up, Nakorn Phanom female literacy was

slightly less than men. In 1990 and 2000, the female-to-male literacy rates were 0.94, being slightly higher than that of Thailand.

In terms of occupations, it was found that during 2001–2004, fewer women in Nakorn Phanom worked in the non-agricultural sector than men. The share of women in non-agricultural waged employment changed dramatically in that period, to the point where the trend could not be projected.¹³ When compared to the whole country for the year 2000, it was found that Nakorn Phanom's rate was lower, at 46.1 percent. During the years 2001 to 2004, Nakorn Phanom's rates were 31.7, 38.6, 31.6, and 34.1 percent respectively for each of the four years.

¹² Excluding Boromrajchonani College of Nursing, Nakorn Phanom and Mahachulalongkorn Universities.

¹³ Based on data from the surveys on the population's employment by the NSO, there was no report on the provincial level. The data for 2001 and the subsequent years were thus only those obtained from this central office.

In conducting the assessment in terms of women's roles in politics, Nakorn Phanom stipulated the addition of an indicator for women's representation in Local Government Organizations (LGOs) as local council members and senior executives.¹⁴ Based on the available information, it was found that women in Nakorn Phanom were more politically active, and the proportion of women in LGOs increased from 6.50 percent in 2001 to 8.42 percent in 2005.

Challenges

In Nakorn Phanom there were no obstacles for achieving equal opportunities for girls and boys to access primary and secondary education, but, at the university level, it was found that women's opportunities were less than men. Owing to this, Nakorn Phanom needs to implement promotional measures to achieve the MDG by 2015. In terms of occupational equality, women in Nakorn Phanom had fewer opportunities to work in the non-agriculture sector than men and had a lower share when compared to the whole country. This resulted in lower incomes and less recognition. Moreover, women in Nakorn Phanom also had fewer political roles. Because of this, more opportunities should be made available for them to work in the non-agricultural sector after graduating from each educational level. Additionally, their potential and roles should be strengthened and recognized in society at large. The province should put emphasis on promoting and strengthening women's roles in politics.

Strategies for promoting gender parity and the role of women

The emphasis for Nakorn Phanom to promote greater gender equality has been focused on supporting increased opportunities for women

in paid employment with higher income, and on raising awareness to ensure that women's capacity and roles are more widely acceptance in society at all levels.

Strategies for promoting gender equality and women's roles involve the following approaches and development guidelines:

- **Developing potential and increased opportunities for women in higher paid employment.** The starting point will target changing parents' attitudes towards women's access to higher education; increasing channels of access to various sources of information; supporting women to access non-formal education; facilitating women's access to public services; promoting women's conviction in their own value and self-confidence; adjusting men's attitude towards women; and creating new societal values that promote the role of women in all aspects. Such strategies will take into account each local community's specific culture, skill and vocational development, and will ensure women's access to local employment opportunities.
- **Ensure a greater role for women's participation in decision-making in local development:** This strategy will encourage women's roles in both communal and social organization leadership by providing training for women who are to enter political arenas and to increase their capacity to effectively carry out their political activities. This will be supported by campaigns that target state agencies, local governments, local political groups, the private sector, and involved communities to recognize the significance of and the need to provide support for women's participation in the decision-making process.

¹⁴ Local council membership represents provincial administration organization (PAO) councils, municipal councils and all Tambon administration organization (TAO) councils. Senior executive positions represent PAO presidents and vice presidents, municipal presidents and vice presidents, TAO presidents and vice presidents, TAO executive presidents and vice executive presidents, and all local council presidents and vice presidents.

GOAL 4: Reduce child mortality

MDG Target 5 Reduce the under-five mortality ratio (U5MR) by two thirds, between 1990 and 2015

MDG⁺ Reduce infant mortality rate (IMR) to 15 per 1,000 live births by 2006; and Reduce by half, between 2005 and 2015, the U5MR in highland areas, selected northern provinces and the three southernmost provinces.

Nakorn Phanom Scorecard

**Could not be assessed for the MDG target
Already achieved MDG⁺ target #1
Not considered applicable to Nakorn Phanom for MDG⁺ target #2**

Indicator	1995	1997	1999	2001	2003	2005
U5MR (per 1,000 live births)	11.90	10.92	14.06	12.36	5.74	7.55
IMR (per 1,000 live births)	6.15	5.86	9.86	5.91	2.47	2.72

Data Rating

Data quality, reliability	Data continuity
★ ★ ★ ★ ★	★ ★ ★ ★ ★

See Annex IV for definitions of the data rating scale

Nakorn Phanom's MDG Target

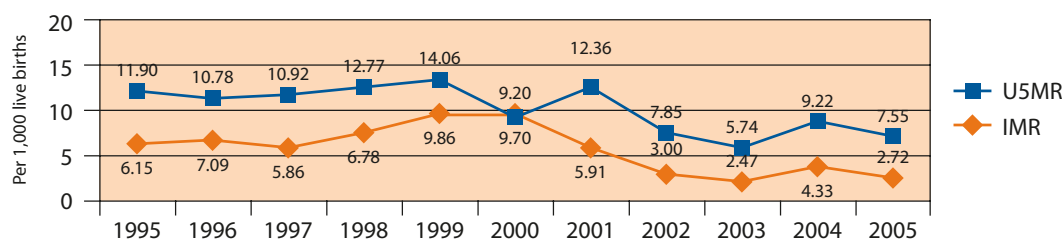
Target	Indicators
Reduce the rate of newborns with weight less than 2,500 grams to less than 7% by 2009	<ul style="list-style-type: none"> ■ Perinatal mortality rate ■ Low birth weight rate (less than 2,500 grams) ■ Birth asphyxia rate

The child mortality situation

The situation of child health in Nakorn Phanom cannot be considered applicable in comparison to the global MDG target. The cause for this is that the U5MR was low and there were no time-series data for 1990, which was to be the base year. However, based on the 1995–2005 data, it was found that the U5MR in Nakorn Phanom tended to decrease from 11.90 per

1,000 live births in 1995 to 7.55 in 2005. In comparison to the MDG+ target assessment, the IMR of Nakorn Phanom tended to also decrease. In 1995 the IMR was equal to 6.15 per 1,000 live births and decreased to 2.72 in 2005. This rate reflects achievement of the MDG+. It also means that health provision, as well as the efforts to promote maternal and infant health, had improved.

Figure 3.7 Under-five mortality rate and infant mortality rate



Sources: Nakorn Phanom Provincial Health Office

In terms of major disease prevention for children, it was found that the proportion of 1-year-old children immunized against measles in Nakorn Phanom was high and tended to increase. In 1997 it was 85.74 percent and increased to 99.13 percent in 2005. This success is attributed to the goal of the 9th plan of the MOPH, which designated that it should be more than 90 percent. This was the result of the continuous promotion of measles vaccination from 1984.

In order to monitor child health, the Provincial MDG Working Group added another three indicators: perinatal mortality rate, low birth weight and birth asphyxia rate. All these were significant problems in Nakorn Phanom and should be kept under surveillance. The perinatal mortality rate for 2000–2004 was higher than the goal of the 9th health plan of the MOPH, which stipulated that it should not exceed 9 per 1,000 births. According to the latest data of 2005, the perinatal mortality rate was 7.63 per 1,000 births, which is less than the goal of the 9th health plan of the MOPH. The trend of low birth weight decreased, but was still higher than the goal of the 9th health plan of the MOPH, which stipulated that it should not exceed 7 percent (in 2005 it was 9.10 percent). The birth asphyxia rate increased in 2004 to 32.14 per 1,000 live births – higher than the goal of the 9th plan of the MOPH, which stipulated that it should not exceed 30 to 1,000 live births – even though the rate decreased to 23.27 per 1,000 live births in 2005.

Challenges

In spite of the low U5MR and the province's ability to achieve the MDG+ in several areas – such as reduction of the IMR to a level lower than 15 per 1,000 live births and the proportion of 1-year-old children with measles vaccination being as high as 99 percent – Nakorn Phanom still has problems in the achieving the perinatal mortality rate, low birth weight and birth asphyxia rate. Because of this, more stress should be placed on the care for expectant mothers during their pregnancy through child delivery. The province should ensure expectant women are provided with adequate knowledge and care, as well as accessibility to qualified nursing facilities and health personnel.

In Nakorn Phanom, issues of child mortality and maternal health are closely linked. As such, while each component is separately discussed regarding situation and challenges, the resulting strategic themes and approaches will be jointly presented at the end of Goal 5 – Maternal Health.

GOAL 5: Improve maternal health

MDG Target 6 Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio (MMR)

MDG⁺ Reduce MMR to 18 per 100,000 live births by 2006;
and
Reduce by half, between 2005 and 2015, the MMR in highland areas, selected northern provinces and the three southernmost provinces

Nakorn Phanom Scorecard

Could not be fully assessed for the global MDG target
Some potential to achieve MDG⁺ target #1
Not considered applicable to Nakorn Phanom for MDG⁺ target #2

Indicator	1995	1997	1999	2001	2003	2005
MMR (per 100,000 live births)	29.72	48.77	41.25	11.34	24.2	0

Data Rating

Data quality, reliability	Data continuity
★ ★ ★ ★ ★	★ ★ ★ ★ ★

See Annex IV for definitions of the data rating scale

Nakorn Phanom's MDG Target

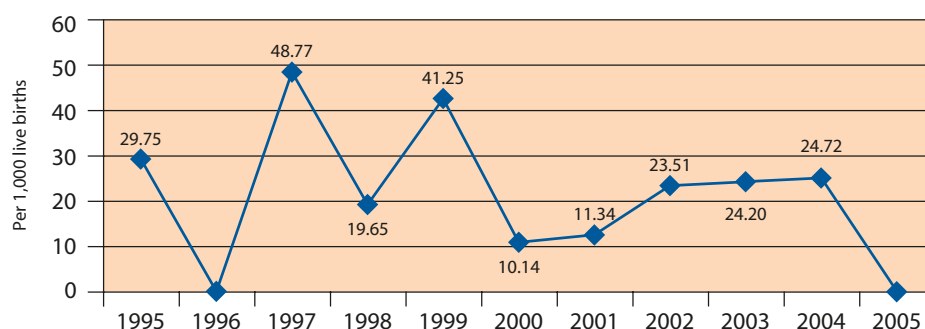
Target	Indicators
Reduce MMR to 18 per 100,000 live births by 2009	<ul style="list-style-type: none"> Rate of pregnant women attending standard antenatal care

The maternal health situation

The MDG target related to maternal health could not be applied to Nakorn Phanom. This is due to the unavailability of provincial information on MMR in 1990, which is to serve as the base year. However, based on data available from 1995, it was found that in Nakorn Phanom, the MMR fluctuated widely each year (see Figure 3.8). This is due to the fact that in Nakorn Phanom the number of live births was only in the range of 8,000–10,000 annually. Under this small number of births, a single maternal death could greatly

affect the ratio. To date, in Nakorn Phanom the highest maternal death rate occurred in 1997, with 5 cases, amounting to 24.72 per 100,000 live births. In 2005, the latest year of reporting, there were no maternal deaths reported. While this represents the attainment of Thailand's MDG⁺, which requires that the maternal death rate not exceed 18 per 100,000 live births, it also means that Nakorn Phanom will still have to maintain a MMR that does not exceed 1 case per year. This requires very concrete measures and continued budgetary commitment.

Figure 3.8 Maternal mortality rate



Sources: Nakorn Phanom Provincial Health Office

The proportion of births attended by skilled health personnel in Nakorn Phanom has increased over time. In 1997 the proportion was 97.1 percent and increased to 99.47 percent in 2004, which exceeded the goal of the 9th health plan of MOPH, stipulating that it should be more than 90 percent. The pregnancy care services and the births attended by skilled health personnel, as well as improved nutritional conditions, positively impacted both maternal and child health.

In assessing the development result on maternal health, the Provincial MDG Working Group added an indicator for the rate of pregnant women attending standard antenatal care required by the national criteria. This is because in 2005 Nakorn Phanom had a rate equal to 67.58 percent, which was lower than the goal set under 9th health plan of MOPH, stipulating that the rate should be higher than 90 percent. This underlines the fact that Nakorn Phanom has to continue to highlight prenatal care as a priority.

The maternal health challenges

While maternal mortality does not exist for 2005, it is believed that the province still has effective measures in place to reduce maternal mortality by reducing their risk during child delivery. This risk reduction relates to providing more prenatal care and surveillance by health personnel (e.g. adequate number of health personnel and more accessibility to health care clinics and personnel). In this regard, it was found that Nakorn Phanom tended to have the rate of pregnant women attending standard antenatal care lower than the criteria stipulated by MOPH. This can be regarded as a risk factor that can impact and heighten the MMR. It is therefore necessary to provide pregnant women with relevant knowledge and understanding and easy access to medical doctors who can attend to their health requirements.

The child and maternal health strategic themes and approaches

Strategies for addressing the challenges under Goals 4 and 5 are closely linked in the case of Nakorn Phanom. The province has therefore emphasized a goal of child health development that requires the reduction of the child mortality rate. This is based on the findings that the low birth weight rate and the birth asphyxia rate were still high and mostly related to issues of maternal health during pregnancy and postnatal care. Owing to this, priority should be placed on maternal pre- and postnatal care.

Public health strategies for child development and maternal health are:

- **Launch campaigns to ensure that pregnant women can access maternal care services as required** by providing information and understanding for mothers and family members so that they recognize and understand the need for such care. This requires a proactive approach on the part of

health care personnel combined with adequate facilities. Target groups include both mothers and youth of at least secondary education level to acquire adequate knowledge on sex education and in pursuing proper health care once pregnant.

- **Develop capacity of health care personnel** so that professional skills and expertise of medical doctors attached to district health clinics are further developed and practised; so that other health personnel are more capable of providing needed assistance to pregnant women in emergency cases before they can reach a qualified medical doctor; and so that village health care volunteers have adequate knowledge and understanding for providing appropriate advice for pregnant women and their family.
- **Upgrade service quality standards of district health clinics** to ensure confidence of the people at large in accessing their medical services and to reduce the burden upon provincial level health clinics.

GOAL 6: Combat HIV/AIDS, malaria and other diseases

MDG Target 7 Have halted by 2015 and begun to reverse the spread of HIV/AIDS

MDG+ Reduce HIV prevalence among reproductive adults to 1% by 2006

Nakorn Phanom Scorecard

Likely to achieve the MDG target
Likely to achieve the MDG+ target

Indicator	1997	1998	1999	2000	2001	2002	2003	2004	2005
HIV prevalence among pregnant women (%)				0.2	0.6	0.6	0.6	0.6	0.5
HIV prevalence among reproductive adults (conscript) (%)									
– shift 1 (May)	1.1	0.0	0.0	1.5	0.5	0.3	0.2	0.7	0.2
– shift 2 (November)	0.7		0.0	0.8	0.3	0.0	1.1	0.3	

Data Rating

Data quality, reliability	Data continuity
★★★★	★★★★

See Annex IV for definitions of the data rating scale

Nakorn Phanom's MDG Target

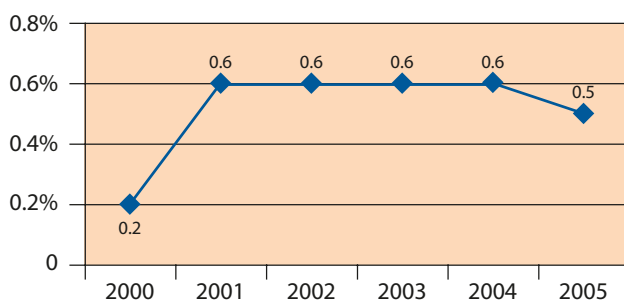
Target	Indicators
–	–

The HIV/AIDS situation

Assessing Nakorn Phanom's HIV/AIDS situation, it was found that the AIDS patient rate tended to decrease: in 2001 there were 47.8 per 100,000 population, which further decreased to 4.6 per 100,000 population in 2005. Most of the HIV/AIDS patients were 20–39 years old and employed as general labourers. The risk factors for contraction tended to be sex related, accounting for 89.57 percent. Based on Nakorn Phanom's contracting rates, it was found that the rate for pregnant women in 2000 was 0.2

percent.¹⁵ As this was the first survey year, the rate might be affected by deviations in the data. Since then, surveys were conducted on an ongoing basis over the following years and it was found that pregnant women's HIV/AIDS contracting rates tended to be stable at 0.6 percent for the years 2001–2004 and decreased slightly to 0.5 percent in 2005. Based on data for only five years, it could not be clearly forecasted if the future trend would drastically change. Because of this, assessment against the MDG was conducted at a level of likeliness to achieve the target.

Figure 3.9 HIV prevalence among pregnant women

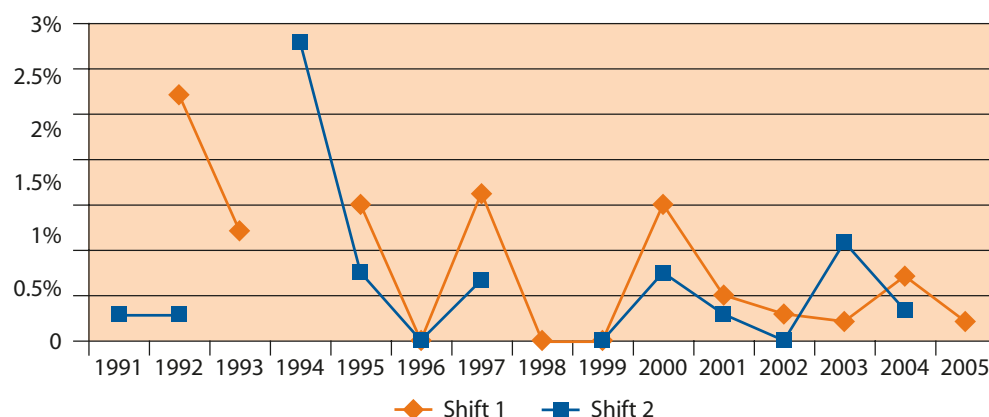


Sources: Nakorn Phanom Provincial Health Office

In terms of the monitoring the spread of AIDS among Nakorn Phanom's reproductive population, analysis was based on the HIV/AIDS contraction rate for Thai male conscripts.¹⁶ Each year's survey was divided into two shifts, and it was found that the trend was generally going down, in spite of some fluctuations. In 1995–2000, the changes of values were in the

range of 0–1.5 percent, while in 2001–2004, the changes were in the range of 0–1.1 percent. In 2005, the rate was equal to 0.2 percent, which was close to the target of the MDG+ that stipulated that it not be in excess of 1 percent; this enabled Nakorn Phanom's AIDS control to be close to the target of the MDG+.

Figure 3.10 HIV prevalence among Nakorn Phanom's conscripts



Sources: The Military Medical Science Research Institute, Department of the Army Medical Science.

¹⁵ From surveys in project: Reduction of the HIV Spread from Mothers to Children, which started to collect data in 2000 and stored data in the database systems.

¹⁶ Surveys, conducted by the Military Medical Sciences Research Institute, Department of the Army Medical Science, in which all conscripts would be blood-tested and data are separated into those of each province. Shift 1 is conducted in May and Shift 2 in November of each year.

In terms of preventing transmission among youngsters, surveys were based on the rate of condom use by secondary school male students.¹⁷ Condom use increased in cases of intercourse with commercial sex workers and with male partners from 4.38 percent in 2000 to 8.70 percent in 2005. In cases of intercourse with girlfriends and other women, the trend decreased. In 2005, groups having sex with girlfriends had a condom use rate 31.70 percent; groups having sex with commercial sex workers had a condom use rate equal to 73.90 percent; groups having sex with other women had a condom use rate equal to 50.00 percent; and groups having sex with male partners had a condom use rate equal to 83.33 percent. Based on this data, it was determined that Nakorn Phanom's youngsters exhibited high risk behaviour towards contracting HIV, as condom use was lower than the goal of MOPH which stipulated that the rate should not be less than 50 percent in all cases.

Challenges

Even though the slowing and reduction of the spread of AIDS in Nakorn Phanom showed progress and will likely result in the achievement of both the MDG and the MDG+ targets, Nakorn Phanom must highlight the need for monitoring the spread of HIV among pregnant

women and the reproductive population, as a result of the fact that the HIV prevalence rate is only slightly below the target with the trend not yet stabilized. Additionally, based on the rate of consistent condom use among secondary school male students, it was found that the rate was below the Department of Disease Control's goal, which states that it should not be less than 50 percent – especially in groups having intercourse with girlfriends and other women, and that trend was actually decreasing. This indicated that youth and the general public of Nakorn Phanom were lacking knowledge and understanding in the prevention of AIDS. This required immediate and more proactive measures, such as budgetary allocation and training to provide appropriate knowledge and understanding to health personnel for supporting implementation of various measures on a continual basis.

While the issues of HIV/AIDS, malaria and other diseases have different root causes, they are seen as requiring similar strategic thrusts to combat effectively. As such, while each component will be separately discussed regarding situation and challenges, the resulting strategic themes and approaches will be jointly presented.

¹⁷ Conducted with questionnaires applied with Matayomsuksa 5 (grade 11) male students in secondary schools in June of every year by the Nakorn Phanom Provincial Health Office

MDG Target 8 Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases

MDG⁺ Reduce malaria incidence in 30 border provinces to less than 1.4 per 1,000 by 2006

Nakorn Phanom Scorecard

Already achieved for the MDG target in malaria
Some potential to achieve for the MDG target in tuberculosis (TB)
Already achieved MDG⁺ target

Indicator	1997	1998	1999	2000	2001	2002	2003	2004	2005
Incidence rates associated with malaria (per 1,000 population)	0.59	0.33	0.21	0.17	0.12	0.02	0.04	0.01	0.87
Death rates associated with malaria (per 1,000 population)	0.003	0.003	0	0	0	0	0	0	0
Prevalence rates associated with TB (per 1,000 population)		19.13	32.44	33.40	36.21	31.68	32.99	39.00	35.26
Death rates associated with TB (per 1,000 population)		3.4	3.4	4.5	9.69	3.05	2.77	0.57	
Prevalence rates associated with heart disease (per 1,000 population)*			73.23	63.51	89.63	87.53	116.69	34.49	45.09*
Death rates associated with heart disease (per 1,000 population)*			99.84	115.44	57.24	56.71	62.53	30.72	4.62*

* Data on death rates associated with heart disease for 1999–2004 were collected from death certificates which could not provide the exact death symptoms to which heart disease belonged. As of 2005, the provincial health office is collecting such data in accordance with exact symptom groups.

Data Rating

Data quality, reliability	Data continuity
★★★★	★★★★

See Annex IV for definitions of the data rating scale

Nakorn Phanom's MDG Target

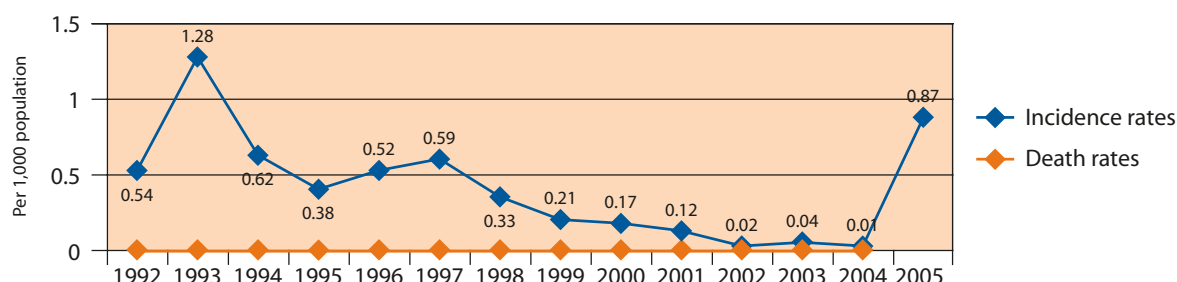
Target	Indicators
Increase the full recovery of phlegm-positive TB patients to more than 85% by 2009	■ Incidence and death rates associated with hemorrhagic fever

Malarial and major disease situation

Nakorn Phanom has achieved the MDG and MDG+ target based on the malaria incident rate, which saw the trend going down during the years 1990–2004. In 2005, the incidence rate

increased to 0.87 per 1,000 population, which was lower than the MDG+ target. Taking into consideration malaria-related death rates, it was found that the rate tended to be low. In 2002–2005 there were no malaria-related deaths. It can thus be concluded that malaria was not a significant disease for the province.

Figure 3.11 Incidence and death rates associated with malaria



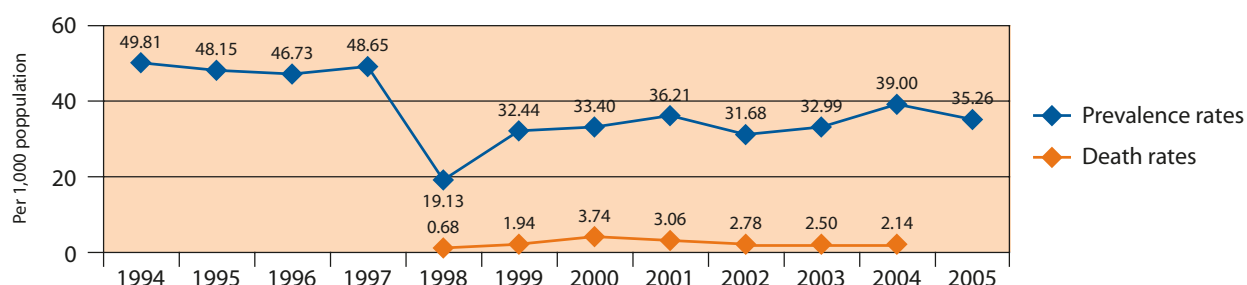
Sources: Nakorn Phanom Provincial Health Office

Nakorn Phanom is highly likely to achieve the MDG target in preventing and reducing incidence of TB.¹⁸ When considering TB prevalence rates, it was found that during 1994–1998 the trend declined, but increased during 1999–2004. The 2005 rate was 35.26 per 100,000 population – lower than the goal of the 9th MOPH plan, stipulating that the rate should not be in excess of 70 per 100,000 population. For the death rate, it was also found that during 1998–2000 the trend increased, while during 2001–2004 the trend decreased, falling to 2.14 per 100,000 population in 2004.

(DOTS), which represents a new kind of medical treatment, supervised or monitored by medical personnel or other authorized persons, to ensure that medicines are taken punctually and continually. The DOTS success rate for Nakorn Phanom’s TB patients tended to increase and was higher than the goal of the 9th health plan of the MOPH, which required that the success rate not be less than 85 percent in 2000. After that, the changes fluctuated in the ranges of 84–86 percent in 2001–2004, and in 2005 the rate equalled 87.30 percent. In accordance with that, Nakorn Phanom’s health MDG working group has stipulated its target: “Increase the full recovery of phlegm+ TB patients to more than 85 percent in 2009.”

Apart from this, in order to treat TB patients, Thailand introduced a new treatment method: Directly Observed Treatment Short Course

Figure 3.12 Prevalence and death rates associated with tuberculosis



Sources: Nakorn Phanom Provincial Health Office

¹⁸ Source: The Nakorn Phanom Provincial Health Office: The reduction of TB-related death has been achieved, but TB-generating AIDS has become threatening once more. Based on the latest reports on the situation of AIDS patients and those with symptomatic diseases in Thailand (30 June 2004), it was found that the opportunistic infection sickness rate of the first 5 serious diseases so far reported found in Mycobacterium Tuberculosis, Pulmonary or extrapulmonary: 70,251 cases (25.7%), followed by Pneumocystis carinii: 51,028 cases (18.7%), Cryptococcosis: 40,090 cases (14.7%), Candidiasis, trachea, bronchi or lung: 12,585 cases (4.6%) and Pneumonia recurrent (Bacteria) more than once in a year: 8,924 cases (3.3%), respectively (www.aidssthai.org). Nakorn Phanom found the rate of TB patients with AIDS was 15.2% in April 2005.

Regarding heart disease in Nakorn Phanom, it was found that in 2001–2004 the rate tended to increase each year. For 2001 it was 73.23 per 100,000 population, increasing to 196.34 per 100,000 population by 2004. The heart disease-based death rate tended to decrease: in 2001 it was 99.84 per 100,000 population, and it fell to 10.84 per 100,000 population in 2004. This death rate was based on data obtained from death certificates that did not separate causes of death according to type of heart disease symptoms. Starting in 2005, the Nakorn Phanom Provincial Health Office has begun to collect data classified in accordance with each kind of heart disease symptom, focusing on heart and coronary diseases, for which the prevalence rate was 45.09 per 100,000 population and the death rate was 4.62 per 100,000 population.

As for other major contagious diseases like hemorrhagic fever, it was found that its spread was extensive and equal to 486.80 per 100,000 population in 1998. Subsequently, the incidence rate decreased to 25.08 per 100,000 population during 2000–2003. In 2005, the latest year, it decreased to 17.63 per 100,000 population with most of the patients being in the range of 10–13 years of age. However, in terms of death rates, it was found that the trend tended to increase. In 2004, the rate was 1.09 percent and higher than the goal of the 9th health plan of the MOPH, stipulating that the rate be not less than 0.15 percent.

Challenges

The control of malaria in Nakorn Phanom has achieved the MDG and the MDG+ targets, but, as Nakorn Phanom is a border province and international migration is very active, there must be continual surveillance with a need to develop effective inter-country data exchanges. In terms of TB, the prevalence rate has increased slightly and the TB-related death rate has tended to decrease. There is the need to develop effective and continual application of DOTS. Moreover, Nakorn Phanom has seen an increasing trend in the number of heart disease patients, as well as that of hemorrhagic fever cases, to which priority should be given.

Strategies to prevent AIDS, malaria and other major diseases

Nakorn Phanom has advanced and is close to the universal MDG and Thailand's MDG+ for preventing AIDS. So, there needs to be

continuous surveillance of risk groups, especially youth, where the trend is currently categorized as high-risk behaviour. For prevention of other communicable diseases, focus should be on establishing health care networks, surveillance in areas of high-risk and during seasons susceptible to spreading, and the increase of efficiency in caring for patients.

Strategies for preventing AIDS, malaria and other major diseases are:

- **Focus on prevention of HIV/AIDS among youth groups** requires collaboration with educational institutions in fostering knowledge and understanding on safe-sex practices, and in preventing HIV/AIDS contraction. As for other high-risk groups (such as labourers and alien workers along border areas), there must be proactive approaches to providing knowledge, as well as provision of necessary budgets and training sessions to create knowledge and understanding among healthcare personnel to support the various measures and activities that have to be continuously promoted.
- **Ensure participation in partnerships and networks involved in health care of local people**, making use of preventive health measures, promoting and highlighting attitudinal changes associated with risks related to heart diseases, as well as creating necessary health partnership mechanisms in developing good health for people of all walks of life.
- **Identify geographic areas of risk and seasons of high risk** by establishing new and more effective containment measures for contagious diseases along border areas. Other actions should focus on ensuring that health service systems are in keeping with current situations and that the encouragement and monitoring of various agencies' actions are carried out as stated in the border area health cooperation agreement, which demonstrates new measures and highlights real actions.
- **Increase efficiency in caring for and referring patients** in provincial, district and local health clinics; increase the needed number of personnel to meet the patients' needs; further develop the patient referral system; and develop capacity of health care supervisors.

GOAL 7: Ensure environmental sustainability

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

MDG+ Increase the share of renewable energy to 8% of the commercial primary energy by 2011; and
Increase the share of municipal waste recycled to 30% by 2006

Nakorn Phanom MDG Scorecard

Likely to achieve the MDG target
Likely to achieve the MDG+ targets #1 and #2

Indicator	1990	1992	1994	1996	1998	2000	2002	2004	2005
Proportion of land areas covered by forest (%)	11.61	10.79	10.35	10.26	10.21	14.94	14.94	23.98	23.98
Ratio of area protected to maintain biological diversity to surface area (%)	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30
Energy use per 1,000 Baht GPP at 1998 price (kg of oil equivalent)						7.05	6.98	6.36	
Proportion of population using solid fuel (i.e., fuel wood, charcoal) (%)	93.3						75.8		
Proportion of waste recycled* (%)								15.88 (2003)	

* in municipal area only

Data Rating

Data quality, reliability	Data continuity
★★★★	★★

See Annex IV for definitions of the data rating scale

Nakorn Phanom's MDG Targets

Target	Indicators
<ul style="list-style-type: none"> ■ Increase the proportion of conservation areas for bio-diversity in the provincial area by 10% during 2005–2009 ■ Improve saline soil (with salt traces of more than 1%) by more than 60% of the whole area by 2009 	<ul style="list-style-type: none"> ■ Proportion of community forests to provincial area ■ Proportion of local governments with sanitary waste disposal ■ Proportion of local governments promoting waste management in accordance with the 3R principle: Reduce, Reuse, and Recycle ■ Proportion of embankment lengths to prevent bank erosion of the Maekong River in Nakorn Phanom ■ Proportion of improved saline soil (with salt traces of more than 1%)

The environmental situation

Nakorn Phanom is likely to achieve the global MDG target for environmental management and is likely to achieve Thailand's MDG+ target for renewal energy and reuse of waste. However, there are some indicators that are not applicable to the case of Nakorn Phanom. Such inapplicable indicators include the carbon dioxide emission and consumption of ozone-depleting chlorofluorocarbons (CFCs). This is because the amount involved is minimal and there is no collection of related data in the province. Alternatively, Nakorn Phanom's added indicators include: (1) the proportion of community forest to the provincial area, (2) the proportion of local governments with sanitary waste disposal, (3) the proportion of local governments promoting waste management in accordance with the 3R principles: Reduce, Reuse, and Recycle, (4) the proportion of embankment length preventing erosion in the province along the Maekong River, and (5) the proportion of saline soil being improved

Various environmental issues that can be clarified are as follows:

Forest Resources

The proportion of forestland to provincial area during 1990–1999 tended to slightly decrease from 11.61 percent to 10.21 percent. In 2000 the proportion increased significantly, to 14.94 percent, resulting from technical changes in satellite photography from a scale of 1:250,000 to a scale of 1:50,000 which gave more detail. In 2004 the forest proportion was adjusted to 23.98 percent reflecting the efficiency of the provincial forestry policies.

The province has added an indicator on community forests, which represents community participation in natural resource management. It was found that the community forests tended to increase over time. In 2005 the

proportion was 0.73 percent of the total provincial area. The Nakorn Phanom Provincial Natural Resource and Environment Office has regularly provided support for community forest development in accordance with the Royally Initiated Forest Action Plan: 2005–2008, and is accelerating the clarification of forestland boundaries.

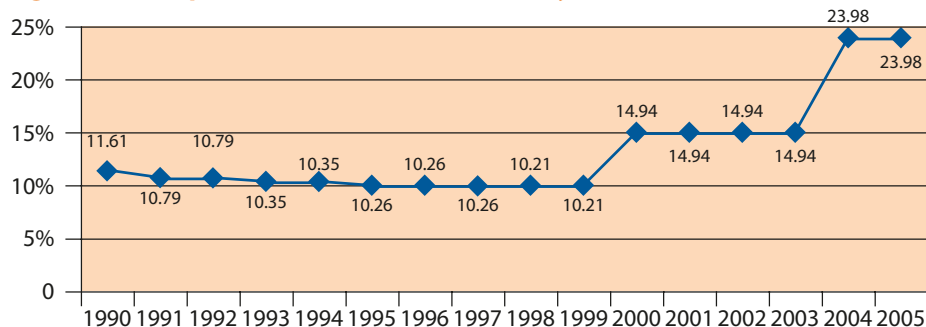
Bio-diversity

Nakorn Phanom's upper area is part of the lower Songkram River basin, comprising wetlands with a high degree of bio-diversity. It is regarded as a significant area for bio-diversity protection initiatives. As an example, surveys show that there are 1,245 freshwater fish varieties. Even though it was estimated that it has a large wetland area of approximately 550,000 rai, no agency has really conducted surveys and clearly demarcated the area. Because of this, the area cannot yet be truly determined or integrated with the province's other area for bio-diversity conservation, the Phu Pha Yon National Park. This has resulted in the proportion of areas for bio-diversity conservation to the whole provincial areas remaining equal to 2.31 percent from 1990 through today.

Energy

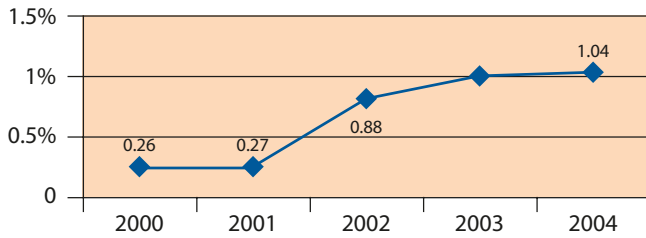
Nakorn Phanom's development of renewable energy was likely to achieve the MDG+ target. Based on the share of renewable energy in commercial primary energy, it was found that the trend was increasing slightly from 0.26 percent in 2000 to 1.04 percent in 2004. Although this was far from the target, its share is much higher than that of the whole country. Because of this, Nakorn Phanom has been chosen as a pilot province for implementing the Project "Study for the Formulation of the Integrated Provincial Energy Framework." This is its main opportunity to leverage the promotion for more renewable energy use.

Figure 3.13 Proportion of land areas covered by forest



Sources: 1990–2004, Thailand Forest Statistics, Royal Forest Department

Figure 3.14 Proportion of renewable energy to primary commercialized energy



Sources: The Office of Regional Energy 7

Efficient energy use for maximum economic benefits is measured from the energy use per 1,000 Baht of gross provincial product, at 1990 prices. It was found that Nakorn Phanom's rate tended to decrease from 7.05 kilograms oil equivalent in 2000 to 6.36 kilograms oil equivalent in 2004. This rate was much lower than the whole country, representing more efficient energy use in Nakorn Phanom.

Air quality

The province has not collected data on air quality related to the carbon dioxide emission and the consumption of ozone-depleting CFCs, and there are no reports on associated environmental impacts. Most of the carbon dioxide emissions are from households that use firewood and charcoal for cooking. Based on the data from census and housing surveys, it was found that the proportion of households using wood and charcoal as fuel tended to decrease from 93.3 percent in 1990 to 75.8 percent in 2000, representing a likely decrease of the discharge rate of CO₂ from households.

Water quality

Nakorn Phanom has three water quality monitoring stations: two are in the Songkram River and one is in the Oon River. The results of recent inspection indicated that pH values were of a standard level. Dissolved oxygen and biochemical oxygen demand were 4.3–8.0 mg/l and 0.6–1.8 mg/l respectively, while the total coliforms bacteria value was less than 5,000 MPN/100 ml. This level of quality was classified into the Category 2–3 water resource standard, which is for conservation, fishing, agriculture, water sports and consumption, all of which required the need for pre-consumption quality improvement.

Solid waste

The data on solid waste recycling in Nakorn Phanom were collected by the Pollution Control Department in 2003, but only in the municipal areas. Those data showed that the

waste production was 69.12 tons per day and that 15.88 percent of this is recycled. However, from surveys of local governments, it was found that the Pollution Control Department recognizes the need for proper waste treatment and for waste recycling. Other than this, 52.88 percent of waste is disposed of through proper sanitary processes, and 35.57 percent is under the promotion of 3Rs: Reduce, Reuse, and Recycle. Apart from this, the Region 9 Natural Resource and Environment Office and the Nakorn Phanom Provincial Natural Resource and Environment Office have stated policies which make provisions for the promotion of local government's grouping together to construct common waste treatment centres and maximize waste reuse. It was also found that Nakorn Phanom has a large number of scrap shops – enough to support the reused materials.

Challenges

Nakorn Phanom's challenges include the need for increased approaches in natural resource and environmental management. This is due to the fact that its ecosystem is interconnected with Thailand's neighbouring countries, requiring international cooperation for sustainable management to reduce cross-border impacts. This is especially problematic on the MaeKong River's ecosystems, which still lack a systematic management cooperation mechanism. Also lacking are an at-source water development system, which would impact the mid- and the end-of-river ecosystems. In those areas, the specific problems are river bank erosion and destruction of wetlands, like Pa Bung Pa Thaam, which serve as an economic source for community fishing during the wet season and as a communal cultural resource. The determination of the Pa Bung Pa Thaam Area as a wetland area at the international level can very well serve as a key mechanism for its conservation under the study. Moreover, areas with salinity cover more than 20,000 rai and are in need of continued cooperation to address the problem.

Environmental management strategies

Even though Nakorn Phanom's environmental management situation is likely to achieve the global MDG, Nakorn Phanom still has to place high priority on specific ecosystem management, like addressing saline soils, managing wetlands and Maekong River ecosystems monitoring to maintain bio-diversity, coordinating systematic water resource management, preventing and addressing pollution resulting from urban expansion, and pursuing participative approaches by local-based agencies to promote natural resource and environmental administration and management in a sustainable manner.

Strategies for Nakorn Phanom's environmental management involve the following approaches and development guidelines:

- **Develop environment management networks** through increased efficiency in managing and developing volunteers' participation so that it corresponds with local conditions; extending natural resource and environmental management networks – state, local governments, youth and communities – so that they can be easily reached; continuing to improve systems of environment surveillance, reporting, monitoring and supervision; developing natural disaster early warning systems; integrating the learning process of students and youths; ensuring that all sectors take an active part in related actions.
- **Develop participatory forest and wetland management** through promotion of local community involvement in forest and wetland management. At this level, participatory action can be achieved through community forestry, commercial forests, and rehabilitation activity campaigns during important occasions. Continued enforcement, and the creation of launch centres at provincial and district levels, should be accomplished to ensure protection and sustainability of forest and wetland bio-diversity.
- **Increase soil fertility and develop appropriate land use systems** by improving saline soils and reducing the spread of salinity, promoting environment-friendly production methods, and promoting actions that can ensure that involved communities have agreements in place related to appropriate land use.
- **Create systematic water resource administration and management** through the development of natural and surface water sources, maintaining water storage levels, and integrating participatory water basin management plans. In order to effectively integrate these plans, action must be taken to develop administration and management mechanisms, including improvement of infrastructure to ensure compatibility with ecosystem conservation and maintenance approaches – such as surface and deep well water management.
- **Pollution prevention and management** involves the promotion of local people's participation in properly disposing of and reusing waste; providing support for communities and entrepreneurs to undertake primary treatment of waste water before discharging it into natural water sources; developing central water treatment plants; reducing chemicals in agricultural applications; campaigning to ensure the correct and proper usage of chemicals; and promoting and pressuring local governments to deal with waste through sanitary methods.

MDG Target 10 Halve the proportion of people without sustainable access to safe drinking water and basic sanitation by 2015

MDG+ –

Nakorn Phanom Scorecard

Already achieved the MDG target

Indicator	1990	2000	MDG Target, 2015
Proportion of provincial households with sustainable access to water source (%)	50.4	80.4	75.2
Proportion of urban households with sustainable access to water source (%)	93.4	88.7	96.7
Proportion of rural households with sustainable access to water source (%)	47.5	79.1	73.6
Proportion of provincial households with sustainable access to improved sanitation (%)	88.0	98.0	94.0
Proportion of urban households with sustainable access to improved sanitation (%)	98.7	98.3	99.4
Proportion of rural households with sustainable access to improved sanitation (%)	87.3	98.0	93.6

Data Rating

Data quality, reliability	Data continuity
★★★★★	★★

See Annex IV for definitions of the data rating scale

Nakorn Phanom's MDG Target

Target	Indicators
People of all households can access potable water and sanitary toilets by 2009	–

The water and sanitation situation

Nakorn Phanom's main potable water source comes from rainwater (36.8 percent in 2000). If the urban area is looked at separately from the rural, the safe drinking water source for urban areas is bottled water (36.2 percent). In rural areas, the safe drinking water source is rain water (40.2 percent). From the Population and Housing Census, the proportion of households with access to safe drinking water in Nakorn Phanom tended to increase from 50.4 percent in 1990 to 80.4 percent in 2000. The proportion of rural households with access to safe drinking water was 79.1 percent, which is less than in urban areas, where the proportion was 88.7 percent.

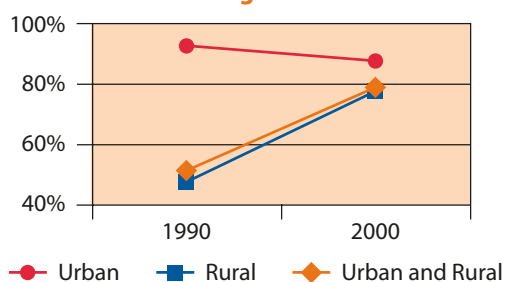
The proportion of households with access to improved sanitation in Nakorn Phanom also tended to increase. In 1990 it was 88.0 percent, and it became 98.0 percent by 2000. In rural areas, the proportion increased from 87.3 percent in 1990 to 98.0 percent in 2000. In

municipal areas, it changed from 98.7 percent to 98.3 percent in the same time period. Sanitary toilets had the highest use proportion. That is, septic tank toilets have been most favoured in urban and rural areas: 88.3 percent and 96.5 percent in 2000, respectively. Based on this situation, Nakorn Phanom has managed to achieve the MDGs in reducing the proportion of the population with no access to safe drinking water or improved sanitation.

Challenges

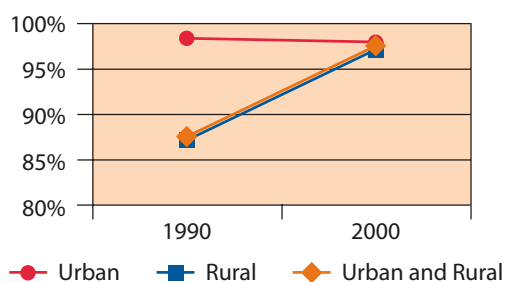
Even though access to safe drinking water and improved sanitation in Nakorn Phanom has not been a major problem, it was found that all households were still not covered. Nakorn Phanom has to recognize the need for further development in order to ensure that all households can access safe drinking water and improved sanitation, thus upgrading the quality of life of the people on an equal basis.

Figure 3.15 Proportion of households with access to safe drinking water



Sources: NSO

Figure 3.16 Proportion of households with access to improved sanitation



Sources: NSO

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

MDG+ -

Nakorn Phanom MDG Scorecard

This MDG target is not applicable to Nakorn Phanom

Indicator	1990	2000
Proportion of urban households with secure tenure (%)	81.3	84.6
Proportion of rural households with secure tenure (%)	96.8	94.8
Proportion of provincial households with secure tenure (%)	95.6	93.4

Data Rating

Data quality, reliability	Data continuity
★★★★★	★★

See Annex IV for definitions of the data rating scale

Nakorn Phanom's MDG Target

Target	Indicators
Upgrade the life quality of the population in urban communities by 2009	■ Proportion of public parks to the population in urban communities

The secure tenure situation

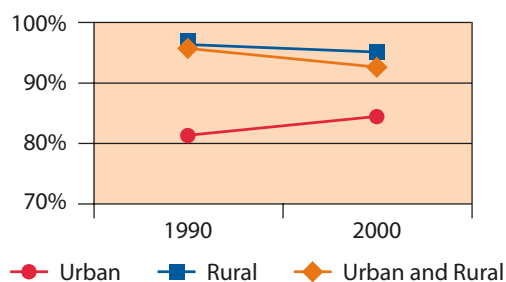
Nakorn Phanom has highlighted the development and improvement of low-income communities in urban areas, including the development of leisure and recreational parks and landscapes. To date there are no slum communities.

The MDG related to addressing slum communities is thus not appropriate for Nakorn Phanom. However, the proportion of households with secure housing in Nakorn Phanom did tend to decrease. This follows similar patterns for the whole of Thailand (in 1990 it was 86.3 percent and in 2000 it was 81.50 percent). For Nakorn Phanom, in 1990 it was 95.6 percent and in 2002 it was 93.4 percent. This proportion is higher than that of the whole country. If the urban areas are

analysed separately from rural areas, one finds that in 2000, urban households saw secure housing increase slightly. In 1990 it was 81.3 percent, increasing up to 84.6 percent by the year 2000. This was a little less than in rural areas, where the proportion was 96.8 percent in 1990 and decreased to 94.8 percent in 2000.

In terms of upgrading the quality of life, the Provincial MDG Working Group accepted that Nakorn Phanom's urban communities would expand significantly in the near future, and, owing to this, might face problems of congestion resulting in a lower quality of life. The committee has thus added an indicator on the proportion of public park areas in relation to the population in urban areas for the next phase's monitoring.

Figure 3.17 Proportion of households with secure tenure



Sources: NSO

Challenges

To date Nakorn Phanom has not seen a high expansion of its urban areas. However, urbanization will soon represent a challenge – especially in light of the pending development in the trade and business systems and communication networks, as well as the construction of a university in the near future. All of these factors will attract rural labor and resources into urban areas of the province. Because of these factors, Nakorn Phanom requires an urban development action plan, comprising land-use planning that is appropriate and consistent with the community lifestyle. This will ensure good quality of life, as well as life and property security and safety.

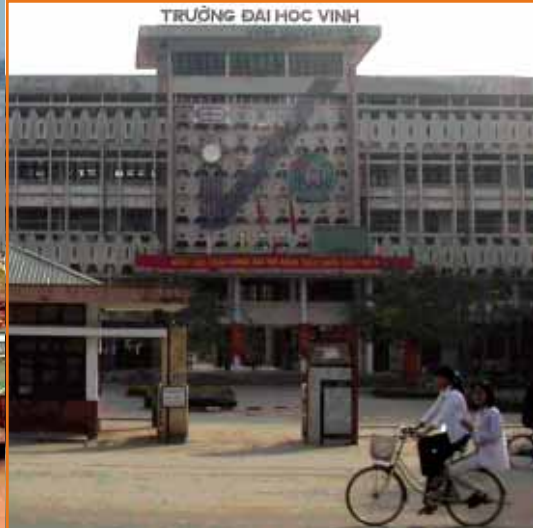
Strategies for upgrading local people's quality of life

Nakorn Phanom wants to see every household's quality of life further improved through local governments' participation in pursuing actions related to this goal.

Strategies for upgrading local people's quality of life involve the following approaches and development guidelines:

- **Improve the quality and extend the service areas of water supply systems** through promoting the development of bodies of technical knowledge among personnel and providing modern tools and equipments for responsible agencies; collecting local data and ensuring their accuracy, as needed for the planning of extending maximum service areas; and developing the village piped water services and quality on a continuous basis.

- **Raise awareness and upgrade local people's knowledge**, especially in rural areas that promote sanitary systems and use of safe drinking water and sanitary toilets, taking into account the cooperation of health personnel, local governments and community leaders.
- **Ensure tenure security** is available for all households in terms of ownership rights and housing conditions, focusing on urban areas where the land tenure proportion is still lower than in rural areas.
- **Develop recreational areas** in order to accommodate future urban growth while remaining compatible with local community lifestyles. For this purpose, all municipalities are encouraged to set aside adequate recreational areas in proportion to the growing population. They are also encouraged to promote local communities' learning about urban planning, to make available specific plans that are based on local people's participation and on practical enforcement.



Report on Nakorn Phanom's Contribution to MDG 8

National context¹⁹

Thailand is becoming an important contributor to the global partnership for development called for in MDG 8. Through its foreign policy of "forward engagement," Thailand is increasingly reaching out to other developing countries in support of human development and poverty reduction. In addition, Thailand continues to explore, with its partners, potential areas of cooperation, including trade and investment, tourism, human resource development, transport, and telecommunication. Thailand continues to open up its markets for imports from developing countries and promote foreign direct investment in countries in the region and beyond.

The 2005–2008 Public Administration Action Plan presents a clear plan to promote economic cooperation with neighbouring countries and Association of South-east Asian

Nations (ASEAN) through creating development partnerships with the global community; developing international assistance provision; providing for cultural ambassadors to create and strengthen international images and international relationships; conducting public relations on Thailand's guiding principles and data; developing mass media networks with neighbouring countries; and creating national committees to monitor and pressure for joint actions with neighbouring countries in order to increase trade, investment and tourism volumes with various countries. A number of major international cooperation frameworks have been in existence since 1994, many of which have an impact upon Nakorn Phanom's development. These frameworks include the Greater Maekong Sub-region (GMS) Project, the Ayeyawady-Chao Phraya-Maekong Economic Cooperation Strategy (ACMECS), the Asia Cooperation Dialogue (ACD), and the Cooperation on Energy Generation and Consumption.

Box 4.1 Millennium Development Goal 8

The eighth and final MDG – to develop a global partnership for development – calls on rich countries to relieve debt, increase aid, and give poor countries fair access to their markets and technology. In order to create necessary conditions for the achievement of the other seven goals in developing countries, rich nations must commit to increasing official development assistance; providing greater development assistance to social sectors, namely education, health, water and sanitation; further developing an open trading and financial system; dealing comprehensively with developing countries' debt problems; ensuring access to modern technology and affordable essential drugs for developing countries; and addressing the least developed countries' special needs, for example those of the landlocked and small island developing countries.

¹⁹ abstract from Thailand Millennium Development Goals Report 2004

Nakorn Phanom's contribution to MDG 8

Geographically, Nakorn Phanom is close to both Lao PDR and Viet Nam. Its eastern border is next to the Lao province of Khammouan, while its northern area is next to Borikhamxai province. It is only 149 kms from the border of Viet Nam, which can be reached through Khammouan via Highway No. 12. Nakorn Phanom has long-established local-based

relationships with both Lao PDR and Viet Nam, and as a result has seen their cooperation on continually addressing development aspects. Nakorn Phanom underlined the need to develop international cooperation with neighbouring countries, as recognized by its provincial development vision: 'A Liveable Area and Partnering with Indochina', under which major strategies identify the need to develop international and border trade.

The network connecting Thailand – Lao PDR – Viet Nam



Nakorn Phanom has benefited from Thailand's development policies, which highlight the creation of relationships and cooperation with neighbouring countries. As noted in Box 4.1, several cooperation frameworks and projects have been put forward for joint action with neighbouring countries. The 7 Provinces Within 3 Countries Cooperation Group is now in place, and will link Highway No. 8 with the Thai provinces (Nakorn Phanom, Sakhon Nakorn, and Nong Khai), the Lao PDR provinces (Khammouan

and Borikhamxai), and the Viet Nam provinces (Ha Tinh and Nghe An). All parties have agreed to jointly push for the implementation of this project's trade, investment, tourism, education, and cultural activities.

To date, Nakorn Phanom has initiated cooperation with Thailand's neighbouring countries of Lao PDR and Viet Nam on several MDG-related aspects, such as:

Poverty eradication: trade, investment and tourism

Supporting formal border trade with the province of Khammouan, Nakorn Phanom has four immigration stations – one permanent location in Muang district and three flexible sites elsewhere in the province. According to the Nakorn Phanom Commercial Affairs Office, the 2005 formal border trade value stood at 1,775 million Baht, a 120 percent increase when compared with the previous year. The agreement of the 7 Provinces Within 3 Countries Cooperation Group recognized the availability of data and information, and also acknowledged opportunities for training entrepreneurs, business negotiation, employment, and seasonal merchandise displays and sales during various Buddhist events and public holidays when taxes and excises are flexible.

There are cooperation agreements in relation to supporting and conducting public relations for tourism and personnel development to achieve mutual benefit. Each country's tourism development framework has been linked to promote Thai-Lao PDR-Viet Nam tourism initiatives, mostly operated by private businesses making use of Highway Nos. 8 and 9 in Lao PDR to transit between Thailand and Viet Nam. Statistics indicate that travel destinations are typically in either Thailand or Viet Nam – very few travellers visit or stop over in Lao PDR.

Nakorn Phanom Province also regularly organizes training in agricultural activities for government officers and farmers from Khammouan. This is complementary to the activities that extend rubber tree and maize production to Khammouan's farmers, which contribute to raising incomes for these people while also increasing agricultural produce in Nakorn Phanom's local markets.

It is expected that the Third Thai-Lao Bridge, linking Nakorn Phanom and Khammouan, with the Burma-Thai-Lao Highway and the development of Highway No. 12 will soon be started and rapidly completed. This infrastructure investment is expected to increase trade and tourism opportunities for these three countries, especially in relation to trade volume between Nakorn Phanom, Vinh and Quang Binh, which can further be linked with the ports of Ong-Ang and Danang, the main ports of Viet Nam.

Education and culture

Support exists for the promotion of personnel exchanges as an approach to capacity building. Nakorn Phanom has supported educational and training sessions for teachers from Khammouan Teachers' Training College related to construction practices, industrial machinery and office equipment applications. Recently, Viet Nam has initiated support to teach Vietnamese to people in Nakorn Phanom. The establishment of the Nakorn Phanom University is expected to further extend opportunities, providing university educational services within the GMS.

The 7 Provinces Within 3 Countries Cooperation Group has agreed to support the construction of the Three-country Cultural Centre in Borikhamxai, Lao PDR. The centre will highlight the ongoing exchange of arts and culture among these three countries during important annual festivals and meetings of high-ranking officials.

Nakorn Phanom annually stages longboat racing events with Khammouan, reflecting the close cultural linkages between these areas. There are also relationships at the local and district level, as seen between Nakorn Phanom's That Phanom District in Thailand and Khammouan's Nong Bok district and Sawannaket's Xaiyabury district in Lao PDR. During the annual festival worshipping the Great Pagoda of That Phanom District, the border immigration offices of the three districts temporarily opens the border so that local people from these districts can meet and worship the Lord Buddha's much revered relics in the Great Pagoda of That Phanom District.

Nakorn Phanom has been promoting relationships with Viet Nam through the development of a Thai-Vietnamese historical village called Najok, located in Nong Yart Subdistrict of Muang District. A museum cum monument has been constructed in memory of Viet Nam's former President Ho Chi Minh, who used to live on this site while forming his revolutionary army some 60 years ago. Najok Village will soon be twinned with Nghe An's Kim Lian Village, where the president was born.

Health

International relationships and cooperation regarding Thai-Lao health services has long been established under the border health policies which highlight preventing and containing contagious diseases. From 2003, cooperation themes have been enlarged to cover prevention of drug abuse, rehabilitation and treatment for drug addicts, control of health product imports and exports, promotion of herbal medicine uses, information and data exchanges, and health personnel development.

In terms of local cooperation between Nakorn Phanom and Khammouan, the Khammouan Health Section and Nakorn Phanom Provincial Health Office have cooperated through the Thai-Lao border disease surveillance network to set up systems for data and information exchanges, consumer protection, patient referral system development, and personnel development. Joint medical meetings are regularly held and hosted by turn in order to formulate joint annual action plans, as well as to monitor and evaluate sessions for related actions implemented by both parties.

Between 2002 and 2004, respectively 4,711, 4,237 and 5,390 out-patients came to Nakorn Phanom's health clinics from Lao PDR, while respectively 1,785, 1,335 and 1,285 in-patients came during the same period for health care and related services. Of those in-patients, the five main disease treatments were for 1) respiratory infections, 2) digestive track diseases and oral infections, 3) infectious and parasitic diseases, 4) accidents, and 5) reproduction and urinary tract infections.

In addition, there were some special joint action projects in preventing and addressing HIV/AIDS along the Thai-Lao border. These activities included capacity building for Lao workers in preventing and addressing HIV/AIDS and technical meetings related to bird flu epidemic and its related counteraction.

Natural resources and environment

Upper Nakorn Phanom, which forms part of the Songkram River Basin, was chosen as a pilot area for the Maekong River Basin Wetland Bio-diversity and Sustainable Use Programme. This is a joint cooperation between Lao PDR, Cambodia, Viet Nam and Thailand, concentrating on wetlands administration and management for bio-diversity conservation and the sustainable use and initiation of demonstration sites in the four countries. Several international experts are taking part in identifying this project's common policies and network development. At the local level, project implementation is under the responsibility of IUCN. In this project, pilot villages in Sri Songkhram's five subdistricts have been chosen in order to strengthen communities and local governments and to develop learning sources and good practices for participatory natural resource management among communities and stakeholders for sustainable benefits.

Nakorn Phanom and Khammouan are also committed to jointly preventing the erosion of the Maekong River's embankments – by controlling the dredging of underwater sand and gravel and monitoring natural resources and environments (especially those affecting the river's islands) – and preventing and addressing illegal trade in wildlife and forest products. For the latter endeavour, each country will monitor adverse actions within their own areas, in accordance with existing laws, to protect both countries' natural resources.

Nakorn Phanom has undertaken tangible cooperation practices with Thailand's neighbouring countries in terms of border security measures implemented by the

Nakorn Phanom – Khammouan Border Security Cooperation Committee. These measures have been in place since 1993 when Nakorn Phanom and Khammouan's provincial governors met to establish border inspection facilities to address immigration issues, control narcotics trade, and further strengthen the good relationships through meetings held and hosted by the two cities in turn. Training programmes for local people are annually organized, where people meet to identify ways and measures to reduce impact on national security and local order.

To improve interconnectivity between the three countries, there is need for additional mutual assistance to develop standardized communication networks, trade, and tourism development in each country to ensure mutual benefits, standardized regulations, improved monetary exchange systems, and the creation of a data system and information transformation that would further foster the existing good inter-relationships.

Future cooperation will focus more on aspects of border trade and tourism, resulting from pre-planned, joint projects that will strengthen interconnections and local communication systems. More resource exchanges are foreseen to take place at a larger scale. University education development at the local level will serve as an opportunity to further develop research works and to upgrade labour skills so as to increase manufacturing productivity and increase value added to goods and free markets in the GMS and the general Indochina region.



The Way Forward

Nakorn Phanom has either already achieved, or is highly likely to achieve, most of the universal MDGs. Nevertheless, the priority for Nakorn Phanom relates to aspects of careful environmental management. This is due to an increasing demand for resources resulting from population growth and changing consumption behaviours of the local people. These conditions are leading to unbalanced land use and resource consumption, which is especially problematic in tandem with severe pollution conditions.

The major challenge to Nakorn Phanom's ongoing development according to Thailand's MDG+ revolves around addressing poverty and achieving universal secondary education – both of which are being hindered by various factors. Effective responses to these issues must improve coordination among the diverse agencies that are involved in these sectors and work towards establishing an integrated database system with clear guidelines for joint operations.

Establishment of a standardized database system becomes critical, both to support the work of the participating agencies and to take a systematic approach to understanding the needs and distribution of the poor in the province. Standardization is necessary as there are several (potentially conflicting) methods currently being applied by various agencies to identify the needy and generate a required response – the NESDB's poverty line, the Basic Needs criteria by the Department of Community Development, and the Ministry of Interior data surveying those who have registered themselves with the National Anti-poverty Centre as poor and socially vulnerable. These different approaches have produced different numbers and distributions of the needy in the province, resulting in unnecessary confusion for those planning to address the needs of the target groups. With the strengthening of such integrated systems, the decision-making processes can also be strengthened and more effectively linked to a monitoring and evaluation process.

In order to achieve Nakorn Phanom's MDG*, strategic priorities will focus on:

- Increasing incomes for farmers and rural households;
- Development of community-based funds;
- Development of educational quality including support for secondary-level education in order to increase retention rates;
- Enhancement of the quality of health care services at district and subdistrict levels;
- Promoting local participation in conservation efforts for bio-diversity;
- Development of international cooperation in environmental management issues; and
- Collaboration with Thailand's neighbouring countries to provide border health services.

Integrating the MDGs into policies, strategies and operations

While Thailand has not specifically stated that it will pursue the MDG strategic development targets under its own national development framework, it can be seen that Thailand's current policies are highly consistent with the overall MDG framework as laid out in the Administrative Plan 2005–2008. Thus, this serves as an opportunity to drive Thailand's own development efforts towards integrating the MDG targets. Nakorn Phanom has been applying integrated provincial administration since 2003, like other provinces. National policies which conveyed the priority strategies within the provincial clusters have been incorporated within the subsequent formulation of provincial strategies and targets (e.g. increasing incomes and the anti-poverty drives). Regarding other developmental areas (i.e. educational reforms, health and environment promotion), most have already been contained within central-line agency policies and are being conveyed to their regional offices at the provincial level, but in line with provincial strategies.

In light of the national policies and its own assessment of provincial development issues, Nakorn Phanom will have to further review its current development strategies in order to integrate ways and means to address the challenges raised during the MDG assessment. Such a review will require reformulation and integration of specific strategies to ensure that provincial development meets local needs within the national framework. To increase effectiveness, these strategies must be integrated within the province's existing development plan, the contained provincial strategies, and the operational plans consistent with the budgetary allocation systems. Attention also needs to be placed upon the review and improvement of administrative and management mechanisms, as well as increasing capacities of various involved agencies to ensure attainment of the determined targets.

Database system development

The Provincial Statistics Office and the Provincial Operations Centre are the main agencies in Nakorn Phanom dealing with database systems. The Provincial Statistics Office collects data related to the scope of work undertaken by each agency in the province and produces the annual provincial statistics report. Additionally, it conducts its own surveys on social and economic situations and compiles other key statistical information that is not covered by other agencies. The Provincial Operations Centre collects and compiles data necessary for action planning, data related to results of performed operations, and reports on the various development indicators. Based on this database system management, it was found that the surveys on, and the collection of, data have basically been done in accordance with addressing central agency policies and data needs – not according to meeting provincial development planning needs under a decentralizing framework.

Therefore, to increase efficiency of its database system management, it is advisable that Nakorn Phanom actively pursue intra-agency coordination within the province, reduce redundancy of data collection systems, standardize data systems and operations, establish mechanisms for transferring data,

advise on necessary changes in agencies or personnel related to the various missions, maintain and promote close coordination with key central agencies, and identify agencies that are to be responsible for monitoring and evaluating the results of the provincial MDGs and for collecting and surveying data in accordance with the MDG framework.

Human resource development

In order to develop capacity of the personnel – those related to implementing the achievable targets of the MDGs and those monitoring the results – it is advisable to categorize them into three groups: (1) the administrative, (2) the intellectual and technical, and (3) the operational groups. Each group has different roles and functions. Recognizing the differentiated needs, personnel development approaches should assume different forms and content. However, it is also recognized that the personnel of each group must share the same understanding regarding development direction and goals for the province, be they the MDGs or overall provincial development goals. This differentiated, but coordinated, approach to capacity building is meant to ensure that personnel can determine appropriate policies and strategies and then efficiently translate them into practice.

Emphasis must also be placed on strengthening the personnel capability of LGOs and performance efficiency of LGOs. This recognizes that LGOs have significant responsibility for various aspects of development (both MDGs and overall). Based on the ongoing decentralization process, involving the transfer of responsibility from central agencies to the local level, a number of personnel, technical and budgetary constraints exist that must be addressed. Owing to these factors, LGOs need to be supported in terms of increasing their planning capacity so as to be able to make best use of the limited resources for development. LGOs should undertake effective coordination amongst themselves and other related agencies in order to increase efficiency of implementation activities, as well as to promote participation by communities in the local development planning and implementation process.

Support from external agencies

Support from external agencies is also indispensable to meet Nakorn Phanom's development needs and to help it achieve both the universal and national MDGs, as well as its own provincial MDGs. External agency support is especially needed in regards to pursuing Goal 8 for developing international cooperation with Thailand's neighbours, in terms of trade, investment, data and information exchanges, border passes and monetary exchange systems, tourism network development, trans-boundary environmental management, and development of communication networks that require clear policies and national support to ensure more effective local operations.

Moreover, participating national and international agencies should provide support for both the continual monitoring of results in line with the provincial MDGs and for the

establishment of experience exchange and learning networks. Such monitoring of the results in accordance with the MDG framework helps ensure that the provincial development proceeds as planned, and can thus offer guidance on the successes achieved and the challenges remaining for attaining the MDGs.

Going forward, Nakorn Phanom's strategic priorities must therefore focus on education development, and development of the provincial personnel to ensure that they are: knowledgeable and capable of support for the promotion of balanced production and consumption, ready to meet the regional development challenges and pursue attitudinal changes in line with the Sufficiency Economy philosophy, and ready to create cooperation with Thailand's neighbouring countries in providing support and assistance for one another so as to simultaneously attain the MDGs.

Nakorn Phanom

Provincial Working Groups

The four Nakorn Phanom Provincial Working Groups were designated as: Poverty, Education and Gender, Public Health, and Natural Resources and Environment. Appointment details are as follows:

Poverty Working Group

1) Deputy Governor of Nakorn Phanom Province	Chairman
2) Chief of Nakorn Phanom Provincial Office	Member
3) Chief of Nakorn Phanom Provincial Community Development Office	Member
4) Chief of Nakorn Phanom Provincial Industry Office	Member
5) Chief of Nakorn Phanom Provincial Labor Office	Member
6) Chief of Nakorn Phanom Provincial Labor Welfare Office	Member
7) Chief of Nakorn Phanom Provincial Agricultural and Cooperative Office	Member
8) Chief of Nakorn Phanom Provincial Agricultural Office	Member
9) Chief of Nakorn Phanom Provincial Agricultural Land Reform Office	Member
10) Chief of Nakorn Phanom Provincial Fishery Office	Member
11) Chief of Nakorn Phanom Provincial Statistical Office	Member
12) Director of Tourism Authority of Thailand, North-eastern Office Region 4	Member
13) Chief of Nakorn Phanom Provincial Chamber of Commerce	Member
14) Chief of Nakorn Phanom Provincial Administrative Organization	Member
15) Dr. Wanida Hongnee	Member
16) Mrs. Banyen Na Nongkai	Member
17) Clerk of Nakorn Phanom Province	Member

Coordinating Group

1) Mr. Somkiet Sisanet	Clerk of Nakorn Phanom Province, Nakorn Phanom Provincial Administration Office
2) Mr. Pongwit Khiwepo	Community Development Officer, Nakorn Phanom Community Development Office
3) Mrs. Wilaiwan Gayaphad	Nakorn Phanom Provincial Agriculture and Cooperative Officer, Nakorn Phanom Provincial Agriculture and Cooperative Office
4) Ms. Wannapa Champa	Policy and Plan Analyst, Nakorn Phanom Provincial Industry Office

Education and Gender Working Group

- | | |
|------------------------------------------------------------------------------------------|-------------|
| 1) Director of Nakorn Phanom Education Service Area Office 1 | Chairman |
| 2) Director of Nakorn Phanom Education Service Area Office 2 | Member |
| 3) President of Nakorn Phanom Ratchabhat University | Member |
| 4) Vice President of Nakorn Phanom Ramkhamhaeng University | Member |
| 5) Director of Nakorn Phanom Non-formal Education Center | Member |
| 6) Director of Nakorn Phanom Polytechnic College | Member |
| 7) Chief of Nakorn Phanom Provincial Social Development and Human Security Office | Member |
| 8) Chief of Nakorn Phanom Provincial Local Administration Office | Member |
| 9) Chief of Nakorn Phanom Provincial Statistical Office | Member |
| 10) Representative, Mayor of Nakorn Phanom Municipality | Member |
| 11) Director of Nakorn Phanom Election Commission Office | Member |
| 12) Mr. Prinya Thorasena, Vice-director of Nakorn Phanom Education Service Area Office 1 | Member |
| 13) Mr. Kritsada Thienteerapanya, Teacher, Nakorn Phanom Wittaya School | Member |
| 14) Representative, Nakorn Phanom Education Service Area Office 1 | Secretariat |

Coordinating Group

- | | |
|---------------------------------|--------------------------------------------------------------------------------|
| 1) Mr. Prinya Thorasena | Vice-director, Nakorn Phanom Education Service Area Office 1 |
| 2) Mr. Wasugree Sriprathumporn | Head of Policy and Plan Section, Nakorn Phanom Education Service Area Office 1 |
| 3) Mr. Kritsada Thienteerapanya | Teacher, Nakorn Phanom Wittaya School |

Public Health Working Group

- | | |
|--------------------------------------------------------------------------------------------------------------|-------------|
| 1) Chief of Nakorn Phanom Provincial Public Health Office | Chairman |
| 2) Director of Nakorn Phanom Hospital | Member |
| 3) Director of Nakorn Phanom Ratchanakarin Psychology Hospital | Member |
| 4) Representative, Nakorn Phanom Provincial Social Development and Human Security Office | Member |
| 5) Representative, Mayor of Nakorn Phanom Municipality | Member |
| 6) Mr. Worawut Inthanon | Member |
| 7) Public Health Officer responsible for Child and Maternal Health | Member |
| 8) Public Health Officer responsible for AIDS, Nakorn Phanom Provincial Public Health Office | Member |
| 9) Public Health Officer responsible for Communicable Disease, Nakorn Phanom Provincial Public Health Office | Member |
| 10) Head of Strategic Development Section, Nakorn Phanom Provincial Public Health Office | Secretariat |

Coordinating Group

- 1) Mr. Churat Kusakulrat Chief, Nakorn Phanom Provincial Public Health Office
- 2) Mr. Amphon Hong-ngam Director, Nakorn Phanom Hospital
- 3) Mr. Peera Ar-reerat Senior Medical Officer in Preventive Medicine, Nakorn Phanom Public Health Office
- 4) Ms. Pantipa Meetham Head of Strategic Development Section, Nakorn Phanom Provincial Public Health Office

Natural Resources and Environment Working Group

- 1) Chief of Nakorn Phanom Provincial Natural Resources and Environment Office Chairman
- 2) Chief of Nakorn Phanom Provincial Public Work and Town & Country Planning Office Member
- 3) Representative, Nakorn Phanom Provincial Agricultural Office Member
- 4) Representative, Nakorn Phanom Provincial Industry Office Member
- 5) Representative, Nakorn Phanom Provincial Local Administration Office Member
- 6) Representative, Nakorn Phanom Provincial Statistical Office Member
- 7) Representative, Nakorn Phanom Provincial Chamber of Commerce Member
- 8) Representative, Nakorn Phanom Provincial Administration Organizations Member
- 9) Representative, Nakorn Phanom Municipality Member
- 10) Dr. Karn Hongnee Member
- 11) President of Nakorn Phanom Environmental Conservation Club Member
- 12) Representative, Nakorn Phanom Provincial Natural Resources and Environment Office Secretariat

Coordinating Group

- 1) Mr. Chaoyong Thanarat Chief, Nakorn Phanom Provincial Natural Resources and Environment Office
- 2) Mr. Somsak Namwong Official, Nakorn Phanom Provincial Natural Resources and Environment Office (Forestry Administrative)
- 3) Mr. Apichai Rittikan Head of Forestry and Economic Forestry Management Section, Nakorn Phanom Provincial Natural Resources and Environment Office
- 4) Mr. Kriengsak Henklang Head of Ground Water Resources Section, Nakorn Phanom Provincial Natural Resources and Environment Office

The MDG Process, Personnel Capacity Building and Support for Provincial Development

The Nakorn Phanom Provincial MDG Working Group served as the main target group in providing support for personnel capacity building under the overall MDG process. Their role was to support the operation of the process under which four teams were appointed by the province (See details in Annex I). The content of the capacity-building process was determined in accordance with the needs of each target group, typically related to undertaking effective planning, administration and management forms, including promoting participatory approaches in planning and implementation.

In selecting the various forms of intervention, emphasis was placed on operational learning, related activities required to address the real needs and situation of participants, as well as opportunities for other stakeholders and interested persons to take part. The following presents an overview of the capacity-building inputs:

1. Operational Learning	Enhancing the working groups' knowledge and understanding for assessing and monitoring the results of the MDG process, including determining targets, indicators and strategies, as well as supporting information exchange among stakeholders
2. Operational Training	Increase capacity of resource persons to support the process of transferring data and contents pertinent to the MDGs, strategy administration principles, motivation techniques and participation process organization
3. Seminars	Provide support to the anti-poverty working group and involved provincial authorities, fostering better understanding and skills to facilitate exchange of opinions on the poverty assessment using the poverty-line approach
	Disseminating information on the MDGs and promoting exchange of opinions for how to integrate the MDGs into local development plans among local administrators and policy and planning personnel of provincial LGOs
4. Exchange of Experience	The two pilot provinces – Mae Hong Son and Nakorn Phanom – have come together to share their experiences gained and lessons learned during implementation of the MDG process to help further implementation and replication activities

In addition to helping strengthen personnel capacity, the MDG process also provided support for the provincial development activities in terms of helping determine related strategies, and the integration of a database system for the provincial agencies that will assist coordination of strategies, targets and indicators under the MDG framework into their own work, especially in areas of natural resource and health care services. Coupled with all these, Nakorn Phanom has greater certainty to achieve the MDGs, especially its MDG* on these topic areas.

Data Table on MDGs, Thailand's MDGs⁺ and Nakorn Phanom's MDGs*, 1990–2006

Poverty																
Indicator	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Proportion of population below poverty line (%) ^{1/}			61.10		41.14		35.19		36.32		52.44		38.88		32.27	
Poverty gap ratio ^{1/}			24.00		13.33		10.10		8.35	11.95	16.46	17.34	13.24		9.47	
Share of poorest quintile in individual household income (%) ^{2/}					7.2		6.7		7.5		10.3		6.6		7.3	
Poverty severity ^{1/}			11.15		5.95		3.81		2.72	4.13	6.55	8.29	5.83		3.92	
Proportion of rural households with income less than 20,000 Baht per head per year (%) ^{3/}																
– urban*																
– rural													76.93	36.98	12.79	7.7
Unemployment rate (%) ^{4/}					5.6	7.8	5.7	4.3	7.3	5.2	11.0	7.2	6.3	3.2	4.5	3.19
The growth of the gross provincial agricultural product (%) ^{5/}									+16.75	-12.32	+34.23	+10.94	-7.13	-2.30	+24.56	

Remark * Urban areas' data (municipal area) will be collected starting in 2006

Source: ^{1/} NESDB

^{2/} Report of the 1994-2004 Household Socio-Economic Survey, NSO

^{3/} Minimum Basic Needs Survey, Community Development Department

^{4/} The Report of Labor Force Survey of Nakorn Phanom, NSO

^{5/} Calculated from data from NESDB (www.nesdb.go.th/econsocial/macro/nad.htm)

Poverty (continued)

Indicator	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
The growth rate of deposits to the community funds (%) ^{1/}														+52.07	+46.47	+19.02
The average income of the population in the province (Baht per head per month) ^{2/}																
– urban													4,739			
– rural													1,495			

Source: ^{1/} Nakorn Phanom Provincial Community Development Office

^{2/} Poverty Mapping, NSO

Hunger and nutritional condition

Indicator	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Proportion of population below the provincial food poverty line (%) ^{1/}			23.08		10.41		5.21		5.01		15.25		15.00		9.07	
Prevalence of underweight children under five years old (%) ^{2/}						14.69	13.47	8.37	8.14	8.37	7.9	7.43	7.2	6.44	6.51*	6.4*
Prevalence of micro-nutrient deficiency among school-aged children (%) ^{2/}																
– iodine								3.08	2.74	2.16	2.29	1.83	2.45	1.84	1.41	1.42
– iron						18.79	26.73	12.74	19.2	18.30	19.19	14.38	14.07	13.13	13.13	6.39

Remark: * since year 2004, the prevalence of underweight children 0–5 years is applied instead

Source: ^{1/} NESDB

^{2/} Nakorn Phanom Provincial Public Health Office

Hunger and nutritional condition (continued)																
Indicator	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Proportion of primary and secondary education children with growth rates non-complying with the referenced criteria (%) ^{1/}																
■ Primary education																
– weight-to-age criteria												14.49	13.25	13.28	12.55	11.77
– height-to-age criteria												11.13	10.34	10.3	10.29	8.59
– weight-to-height criteria												8.50	8.87	8.96	7.65	8.61
■ Lower secondary education																
– weight-to-age criteria												10.8	14.84	9.93	6.40	8.23
– height-to-age criteria												9.9	11.99	9.02	7.26	5.58
– weight-to-height criteria												5.18	10.49	5.03	3.07	5.03
■ Upper secondary education																
– weight-to-age criteria												6.26		4.21	4.25	10.20
– height-to-age criteria												6.55		3.80	4.78	9.35
– weight-to-height criteria												4.25		2.37	2.17	4.17

Source: ^{1/} Nakorn Phanom Provincial Public Health Office

Education																
Indicator	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Net enrolment ratio in primary education (%) ^{1/}					85.46	92.08	92.15	89.41	81.65	73.28	88.89	87.27	86.44	90.75*	95.37*	86.74*
Gross enrolment ratio in primary education (%) ^{1/}					108.41	109.64	108.10	106.05	104.04	99.58	101.77	99.69	98.98	98.88	97.85	96.44*
Retention rate of primary education (%) ^{2/}								91.90	91.94	85.00	93.54	94.71	95.53	92.97	93.03	93.45*
Literacy rate of 15- to 24-year-olds (%) ^{3/}	98.89										99.00					
Net enrolment ratio in lower secondary education (%) ^{1/}								58.45	57.79	51.39	61.34	67.12	68.79	61.07	54.43	71.26
Gross enrolment ratio in lower secondary education (%) ^{1/}					64.89	70.08	74.02	81.80	83.95	87.39	85.08	88.00	86.05	86.92	88.46	91.83
Net enrolment ratio in upper secondary education (%) ^{1/}								26.93	33.05	34.46	34.21	31.57	38.40	51.53	37.53	38.32
Gross enrolment ratio in upper secondary education (%) ^{1/}					20.64	25.80	31.77	37.36	43.76	46.65	43.53	50.60	52.43	54.82	50.66	52.80
Retention rate of lower secondary education (%) ^{2/}					92.39	90.87	86.43	89.94	89.31	85.98	87.60	88.38	87.79	90.05	91.08	87.86
Retention rate of upper secondary education (%) ^{2/}					84.52	84.89	82.92	81.03	82.15	78.58	78.29	82.64	95.01	94.79	66.97	72.08**
Average test scores of primary students (%) ^{4/}																
– Thai							62.18					54.10	45.98	44.39	45.98	
– English							63.91					50.24	40.51	41.32	40.51	
– Mathematics							55.12					48.13	43.73	42.35	43.73	
– Science							57.38					–	43.86	42.32	43.86	

Remark: * No data from school under Office of Royal Thai Police

** No data from college under Office of Vocational Education Commission

Sources: ^{1/} Calculated from data from Office of Basic Education Council, MOE and DOPA

^{2/} Calculated from data from Office of Basic Education Council, MOE

^{3/} The 1993 and 2003 Population and Housing Census of Nakorn Phanom Province, NSO

^{4/} Bureau of Education Testing, Office of the Basic Education Commission, MOE

Education (continued)																
Indicator	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Average test scores of lower secondary students (%) ^{1/}																
– Thai								62.45				45.66	43.83	49.89	41.07	
– English								49.34				38.25	43.00	35.20	35.13	
– Mathematics								42.80				33.66	37.71	32.48	37.29	
– Science								45.30				–	–	35.23	39.02	
Average test scores of upper secondary students (%) ^{1/}																
– Thai								41.93				–	–	39.04	–	
– English								28.08				–	–	34.01	–	
– Mathematics								24.40				–	–	29.42	–	
– Science								32.93				–	–	39.67	–	
Drop-out rates of students (%) ^{2/}																
– primary education			0.61	0.44	1.48	1.44	0.70	0.47	0.66	0.58	1.03	0.71	0.42	0.38*	0.37*	
– lower secondary education			2.22	2.15	2.94	2.89	2.13	2.93	2.77	3.34	2.17	3.51	0.63	1.12	1.65	
– upper secondary education			1.49	1.43	2.22	1.79	2.29	2.13	1.89	2.32	2.28	2.63	0.59	1.07	2.78	
The average learning achievement of primary students (%) ^{3/}																
– Thai												2.57	2.65	2.63	2.65	2.78
– English												2.24	2.29	2.28	2.34	2.42
– Mathematics												2.43	2.34	2.37	2.44	2.61
– Science												2.68	2.70	2.67	2.66	2.77

Remark: * No data from school under Office of Royal Thai Police

Sources: ^{1/} Bureau of Education Testing, Office of the Basic Education Commission, MOE

^{2/} Calculated from data from Office of Basic Education Council, MOE

^{3/} Questionnaire survey from schools in Nakorn Phanom

Education (continued)

Indicator	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
The average learning achievement of lower secondary students (%) ^{1/}																
– Thai												2.25	2.26	2.32	2.24	2.42
– English												2.13	2.04	2.14	2.13	2.18
– Mathematics												1.83	1.84	1.81	1.93	1.96
– Science												2.13	2.09	2.13	2.11	2.22
The average learning achievement of upper secondary students (%) ^{1/}																
– Thai												2.53	2.51	2.48	2.52	2.68
– English												2.51	2.40	2.41	2.52	2.57
– Mathematics												2.05	2.00	2.03	2.07	2.33
– Science												2.37	2.35	2.52	2.32	2.59
Proportion of schools with teacher-student ratio failing the teacher manpower criteria (%) ^{1/}																
– primary education												9.66	9.88	10.11	11.03	7.60
– lower secondary education												20.93	20.93	20.93	25.58	26.98
– upper secondary education												36.96	26.09	24.44	24.44	22.22
Proportion of secondary schools with computers (%) ^{1/}													63.36	76.33	94.66	99.32
Proportion of secondary schools with computer learning courses (%) ^{1/}													48.09	67.94	88.55	69.59

Sources: ^{1/} Questionnaire survey from schools in Nakorn Phanom

Education (continued)																
Indicator	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Proportion of secondary schools with school internet services in place (%) ^{1/}													12.98	27.48	54.96	84.46

Sources: ^{1/} Questionnaire survey from schools in Nakorn Phanom

Gender equality and women's empowerment																
Indicator	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Ratio of girls to boys in primary education ^{1/}			0.98	0.97	0.96	0.95	0.96	0.96	0.96	0.96	0.97	0.97	0.97	0.96	0.96	0.96*
Ratio of girls to boys in secondary education ^{1/}			1.05	1.05	1.02	1.01	1.02	1.01	1.04	1.03	1.02	1.06	1.03	1.08	1.03	1.04**
Ratio of girls to boys in tertiary education ^{1/}			0.93	0.95	0.99	1.04	1.04	1.04	1.05	1.07	1.05	1.04	0.93	0.74	0.66	
Ratio of literate women to men of 15- to 24-year-olds ^{2/}	1.00										1.00					
Ratio of girls to boys in selected fields in tertiary education ^{1/}																
– political science														0.33	1.68	0.78
– public administration												0.53	1.03	0.73	0.38	0.53
– laws														0.63	0.44	0.75
– industrial techniques									0.80	0.10	0.04	0.02	0.02	0.02	0.02	
Share of women in waged employment in non-agricultural sector (%) ^{4/}												31.7	38.6	31.6	34.1	

Remark: * No data from school under Office of Royal Thai Police

** No data from Boromarajchonani College of Nursing, Nakorn Phanom

Sources: ^{1/} Calculated from data from Office of Basic Education Council, MOE

^{2/} Calculated from data from the 1993 and 2003 Population and Housing Census, NSO

^{3/} The Report of Labor Force Survey of Mae Hong Son (third trimester), NSO

^{4/} Questionnaire survey from local government authorities in Nakorn Phanom

^{5/} Questionnaire survey from schools in Nakorn Phanom

Gender equality and women's empowerment (continued)

Indicator	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Ratio of literate women to men over 40 years old ^{1/}	0.94										0.94					
Share of women in local government (high-ranking executives and members of local councils) (%) ^{2/}							14.58	6.68	6.70	6.81	6.78	6.50	6.49	6.56	6.52	8.42

Sources: ^{1/} Calculated from data from the 1993 and 2003 Population and Housing Census, NSO

^{2/} Questionnaire survey from local government authorities in Nakorn Phanom

Child and maternal health

Indicator	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Under-five mortality rate (per 1,000 live births)						11.90	10.78	10.92	12.77	14.06	9.70	12.36	7.85	5.74	9.22	7.55
Infant mortality rate (per 1,000 live births)						6.15	7.09	5.86	6.78	9.86	9.70	5.91	3.00	2.47	4.39	2.72
Proportion of 1-year-old children immunized against measles (%)								85.74	100.00	99.29	99.71	98.93	99.85	98.72	99.08	99.13
Perinatal mortality rate (per 1,000 total births)									7.84	7.72	13.53	9.13	11.28	10.81	10.42	7.63
Low birth weight rate (less than 2,500 grams) (%)								8.55	8.63	9.57	10.23	9.78	9.9	8.73	9.78	9.10
Birth asphyxia rate (per 1,000 live births)											29.23	29.36	26.92	27.96	32.14	23.27
Maternal mortality ratio (per 100,000 live births)					0	29.75	0	48.77	19.65	41.25	10.14	11.34	23.51	24.2	24.72	0
Proportion of births attended by skilled health personnel (%)								97.11	99.24	98.88	95.26	96.71	98.11	94.85	99.47	99.79
Rate of pregnant women attending standard of antenatal care (%)								75.43	85.53	100	81.24	86.99	90.08	92.09	82.33	67.58*

Remark: * Data collection was changed in 2005

Source: Nakorn Phanom Provincial Public Health Office

HIV/AIDS, malaria, tuberculosis and other diseases																
Indicator	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
HIV prevalence among pregnant women (%) ^{1/}											0.2	0.6	0.6	0.6	0.6	0.5
Rate of constant condom use of secondary school male student (%) ^{1/}																
– with girlfriend												20.00	20.00	16.67	11.11	31.7
– with commercial sex worker												33.33	25.00	33.33	42.85	73.9
– with other women												43.75	41.67	7.14	29.41	50.00
– with men												0	*	*	50.00	83.30
HIV prevalence among reproductive adults (conscript) (%) ^{2/}																
– Shift 1 (May)		–	2.2	1.2	–	1.5	0.0	1.1	0.0	0.0	1.5	0.5	0.3	0.2	0.7	0.2
– Shift 2 (November)		0.3	0.3	–	2.8	0.8	0.0	0.7	–	0.0	0.8	0.3	0.0	1.1	0.3	–
Incidence rates associated with malaria (per 1,000 population) ^{1/}	3.27	1.38	0.54	1.28	0.62	0.38	0.52	0.59	0.33	0.21	0.17	0.12	0.02	0.04	0.01	0.87
Death rates associated with malaria (per 1,000 population) ^{1/}		0.003	0.001	0.002	0.002	0	0	0.003	0.003	0	0	0	0	0	0	0
Prevalence rates associated with tuberculosis (per 100,000 population) ^{1/}			39.98	63.7	49.81	48.15	46.73	48.65	19.13	32.44	33.40	36.21	31.68	32.99	39.00	35.26
Death rates associated with tuberculosis (%) ^{1/}									0.68	1.94	3.74	3.06	2.78	2.50	2.14	
Proportion of tuberculosis cases cured under DOTS (%) ^{1/}				53.9	50.6	49.95	49.95	52.96	69.56	69.58	86.76	84.14	86.14	85.53	85.12	87.30

Remark: * No male student reported having had sex with man in the survey

Source: ^{1/} Nakorn Phanom Provincial Public Health Office

^{2/} The Military Medical Sciences Research Institute, Department of the Army Medical Science

HIV/AIDS, malaria, tuberculosis and other diseases (continued)

Indicator	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Prevalence rates associated with heart disease (per 100,000 population) ^{1/}										73.23	63.51	89.63	87.53	116.69	196.34	45.09*
Death rates associated with heart disease (per 100,000 population) ^{1/}										99.84	115.44	57.24	56.71	62.53	10.84	4.62*
Incidence rates associated with hemorrhagic fever (per 100,000 population) ^{1/}	133.3	214.7	50.8	200.2	342.3	94.49	79.14	47.02	486.8	25.08	0.42	35.49	94.02	139.96	25.51	17.63
Death rates associated hemorrhagic fever (%) ^{1/}	0.24	0.07	0	0.22	0.44	0	0	0.88	0.42	0	0	0.39	0.29	0.59	1.09	0

Remark: * Death rates associated with heart disease during 1999–2004 cannot identify cause of death. Nakorn Phanom Provincial Public Health Office started to identify cause of death in 2005.

Source: ^{1/} Nakorn Phanom Provincial Public Health Office

Environment

Indicator	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Proportion of land area covered by forest (%) ^{1/}	11.61	10.79	10.79	10.35	10.35	10.26	10.26	10.26	10.21	10.21	14.94	14.94	14.94	14.94	23.98	23.98
Ratio of area protected to maintain biological diversity to surface area (%) ^{2/}	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30	2.30
Energy use per 1,000 baht of GPP (kilograms oil equivalent) ^{3/}											7.05	6.87	6.98	7.47	6.36	
Proportion of population using solid fuel (% household) ^{4/}	93.3										75.8					
Share of renewable energy in commercial primary energy (%) ^{3/}											0.26	0.27	0.88	0.99	1.04	

Source: ^{1/} Royal Forestry Ministry

^{2/} Nakorn Phanom Provincial Natural Resources and Environment Office

^{3/} Ministry of Energy

^{4/} The 1990 and 2000 Population and Housing Census of Nakorn Phanom, NSO

Environment (continued)																
Indicator	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Water quality, pH, DO, BOD- and TCB values of main and minor rivers* ^{1/}																
– pH	SO 01									6.9/ 6.3	8.2/ 6.9	6.9	7.1/ 7.0	7.5/ 6.9	7.9/ 6.3	6.9/ 6.3
	SO 02									6.9/ 6.3	7.2/ 7.1	6.5	7.1/ 7.0	7.8/ 7.1	7.3/ 5.7	6.9/ 6.3
	ON 01									6.9/ 6.4	7.2/ 6.9	6.6	6.9/ 7.2	7.4/ 7.2	7.1/ 6.5	7.0/ 6.4
– DO (mg/L)	SO 01									5.1/ 5.2	8.8/ 6.3	5.0	5.2/ 4.7	8.0/ 6.5	7.4/ 5.17	4.8/ 4.3
	SO 02									5.2/ 6.0	7.1/ 7.6	4.3	5.4/ 6.6	7.2/ 7.8	7.4/ 4.80	5.2/ 5.0
	ON 01									5.2/ 5.3	6.8/ 6.2	4.8	5.2/ 6.8	4.7/ 8.5	5.6/ 4.10	5.0/ 5.3
– BOD (mg/L)	SO 01									0.7/ 1.0	2.5/ <0.6	1.2	0.7/ 0.8	1.2/ 1.7	<0.6/ 2.27	1.5/ 1.3
	SO 02									0.8/ 1.8	1.5/ 1.1	0.6	1.2/ 1.1	0.6/ 1.7	<0.6/ 1.30	1.0/ 1.3
	ON 01									1.4/ 3.1	1.3/ 1.4	0.9	1.8/ 1.0	0.8/ 2.6	<0.6/ 1.01	1.1/ 1.5
– TCB (MPN/100 ml)	SO 01									80/ 90	500/ 300	<2	230/ 260	800/ <2	<2/ 400	<2/ 0.04
	SO 02									220/ 220	500/ 130	140	5,000/ 170	400/ <2	<2/ <2	<2/ 0.04
	ON 01									700/ 800	3,000/ 170	40	500/ 2,200	260/ 400	<2/ 700	200/ 1,300
Proportion of waste recycled(%)** ^{2/}														15.88		
Proportion of community forests to provincial area (%) ^{3/}	0.07	0.09	0.13	0.15	0.16	0.18	0.20	0.21	0.22	0.23	0.26	0.37	0.57	0.68	0.70	0.73
Proportion of local governments with sanitary waste disposal (%) ^{4/}												40.38	42.30	46.15	52.88	52.88

Remark: * Two sampling periods per year, except the year 2001 was only one period (first period/second period)
SO 01 = Songkhram River/Baan Chai Buri, SO 02 = Songkhram River/Baan Pak Oon, NO 01 = Oon River/Baan Pak Oon
** 2003, data from municipal area only

Source: ^{1/} Office of Natural Resources and Environment Region 9
^{2/} Pollution Control Department
^{3/} Nakorn Phanom Provincial Natural Resources and Environment Office
^{4/} Nakorn Phanom Provincial Local Administration Office

Environment (continued)																
Indicator	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Proportion of local governments with the promotion for waste management in accordance with the 3R principle (%) ^{1/}												23.07	24.03	30.76	35.57	35.57
Proportion of embankment lengths to prevent bank erosion of the Maekong River in Nakorn Phanom's area (%) ^{2/}					2.28	3.23	4.47	7.25	8.33	8.85	9.39	10.34	10.79	11.34	11.54	11.65
Proportion of urban and rural household with sustainable access to improved water sources (%) ^{3/}																
– urban	93.4										88.7					
– rural	47.5										79.1					
– urban and rural	50.4										80.4					
Proportion of urban and rural household with access to improved sanitation (%) ^{3/}																
– urban	98.7										98.3					
– rural	87.3										98.0					
– urban and rural	88.0										98.0					
Proportion of households with access to secure tenure (owned, leased or rented) (%) ^{3/}																
– urban	81.30										84.60					
– rural	96.60										94.80					
– urban and rural	95.60										93.40					

Source: ^{1/} Nakorn Phanom Provincial Local Administration Office

^{2/} Nakorn Phanom Provincial Public Works and Town & Country Planning Office

^{3/} The 1990 and 2000 Population and Housing Census of Nakorn Phanom, NSO

Data Rating Scale

Data quality, reliability

★	Data not available.
★ ★	Data available, but not reliable.
★ ★ ★	Data largely available and reliable, but there may be some weakness, inconsistencies or confusion regarding definition, collection and verification methods.
★ ★ ★ ★	Data available and reliable, but there is only a small sampling size and/or some population groups may be excluded.
★ ★ ★ ★ ★	Data available, high reliability and comprehensive. Data collection and verification are clear and consistent.

Data continuity

★	Trend data not available.
★ ★	Trend data available, but at irregular intervals.
★ ★ ★	Trend data available, but based on different sources/ methodologies.
★ ★ ★ ★	Trend data largely available, but with unsystematic analysis that makes it difficult to gather and cumbersome to analyse.
★ ★ ★ ★ ★	Trend data readily available and continual.



United Nations Development Programme

12th Floor, UN Building, Rajadamnern Nok Avenue
Bangkok 10200 Thailand

Tel: (66-2) 288 1828

Fax: (66-2) 280 4294

E-mail: registry.th@undp.org

Web site: www.undp.or.th