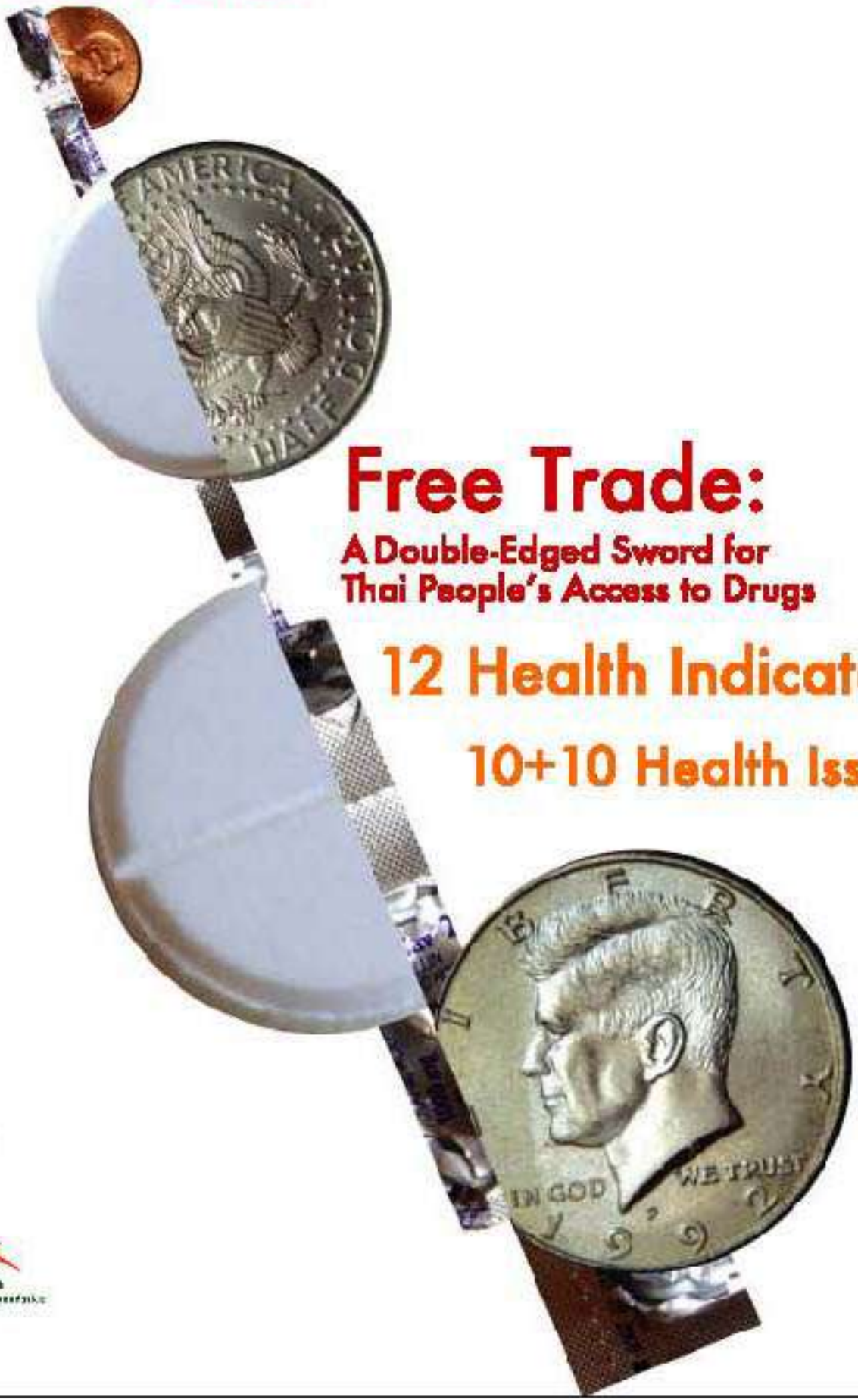
Thai Health 2005



Free Trade:

A Double-Edged Sword for Thai People's Access to Drugs

12 Health Indicators

10+10 Health Issues

Institute for Population and Social Research Mahidol University
Thai Health Promotion Foundation

ThaiHealth

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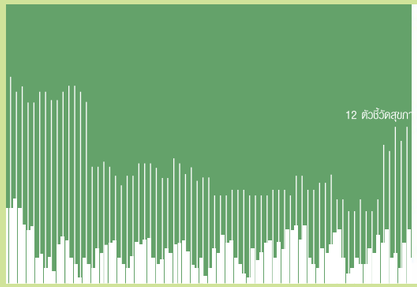
Thai Health



2005

Institute for Population and Social Research Mahidol University
Thai Health Promotion Foundation

Preface

The Thai Health Report is the second in an annual series. The first volume, published last year, was called Thai Health Report 2003, and this one is called Thai Health Report 2005. The reader may wonder what happened to the year 2004.

We have decided that each year's report should be named after that year, to avoid confusion, and to prevent people from thinking that the report is out-of-date from the day it is published. The Thai Health Report 2003 should be regarded as covering both 2003 and 2004.

This report, like the first one, has three parts.

The first part, Twelve Health Indicators, has 12 sections. Six of these sections look at physical health: deaths, illnesses, disability, pregnancy and birth, cancer, nutrition. One section looks at mental health. Two sections look at particular populations: adolescents and elderly people. The final three sections discuss social health: poverty, environment, and human security.

The second part, Ten Plus Ten Health Issues, discusses some recent events and their effect on health. This part uses a new format: it looks at ten notable issues for the year, and then briefly summarizes ten additional issues. It also looks back at the ten notable issues from the previous report, and describes any recent developments.

The Ten Notable Issues

The Tsunami
Fire in the South
The Dilemma of the Bird Flu Epidemic
Rape and Thai Society
Sugar in Children's Milk and Snacks
Will Thai Traditional Medicine Fall into the Hands of Foreigners?
Pornography and Teenage Sex
Teenage Violence
Hazardous Waste
Thai kids in the 'legal' traps of vices

The ten issues that are briefly summarized are genetically modified organisms (GMOs), the Thirty Baht Scheme, obesity, police torture, foreign objects in food, the effect of industry on health and environment, the International Aids Conference, accidents among children, the green tea craze, and trafficking.

The ten plus ten issues were chosen after consulting 1,386 ordinary people, scientists, and health workers.

The third part of the report examines this year's Special Issue: Free Trade in Medicines.

This issue will have long-lasting consequences for Thai society, as medicines are important to all of us. The report discusses the meaning of the Free Trade Agreement (FTA) and its likely impact on our lives. How will it affect the way that Thai people use medicines? Pharmaceuticals are a complex topic, involving matters such as production, regulation, and copyright. We need to know a great deal more if we want to become self-reliant in the future.

After last year's edition of the Thai Health Report was published, we received many comments from readers. Most readers said that the report was valuable, particularly for school students, university students, and their instructors, who used it for teaching and presentations. All ten thousand copies of the report were distributed.

This year, a CD version of the report has also been produced. Additional electronic copies (in English or Thai) can be downloaded from the website www.thaihealth.or.th.

The comments we have received have encouraged us to continue producing issues of the Thai Health Report, each year better than the last.

We hope only that the report is a valuable source of data. But if it also encourages people to take an interest in their own health, that would be even better.

The research team
April 2005

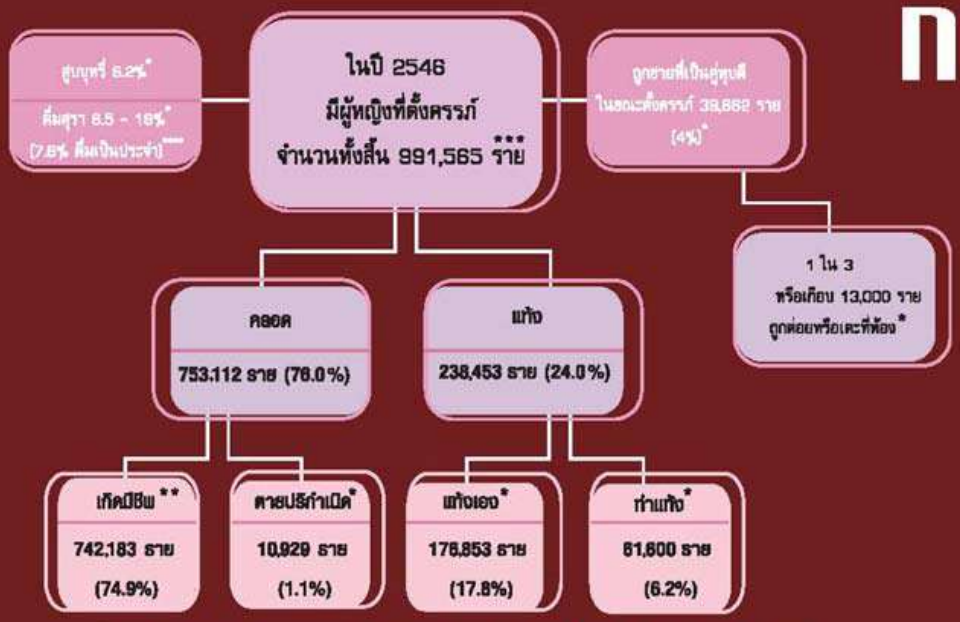
Contents

12 Health Indicators

10+10 Health Issues

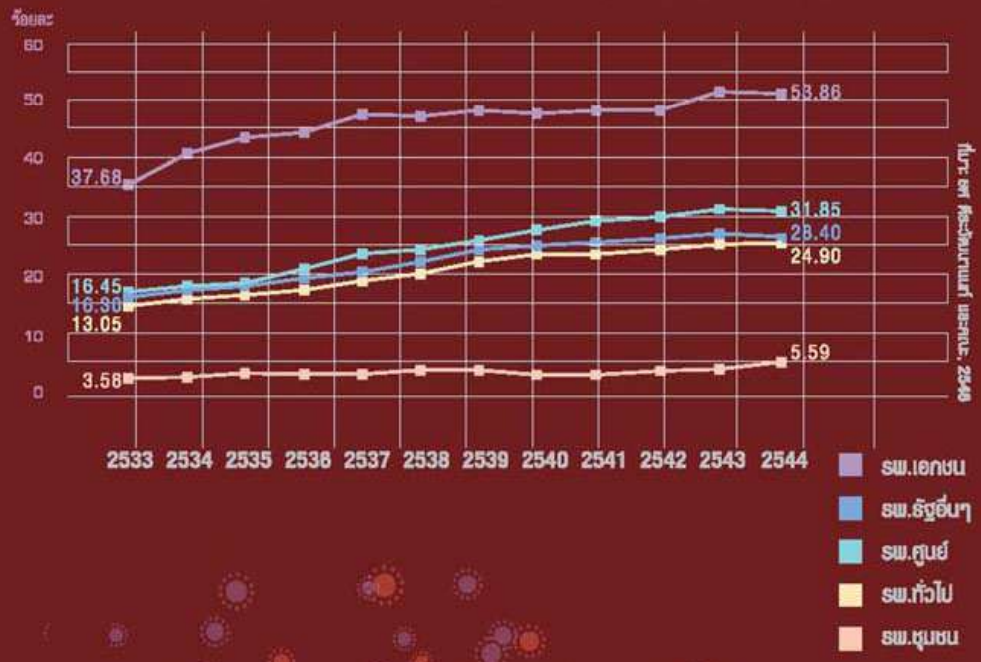
Appendix

การตั้งครรภ์



ที่มา: *กฤติยา อาชวนิจกุลและคณะ 2546 (จากการสำรวจครัวเรือนหญิงอายุ 15-49 จำนวน 2,861 ราย)
**จำนวนการเกิดมีชีพ จากสถิติสาธารณสุข 2546
***ร้อยละของหญิงตั้งครรภ์ ในปี 2546 คำนวณย้อนกลับโดยใช้ฐานข้อมูลจากจำนวนการเกิดมีชีพปี 2546
ใช้ความชุกของผลการคลอดแต่ละประเภทจาก กฤติยา อาชวนิจกุลและคณะ 2546
****รายงานการสำรวจพฤติกรรมการสูบบุหรี่และการดื่มสุราของประชากร 2544

การผ่าคลอดตามประเภทโรงพยาบาล ปี 2533 - 2544



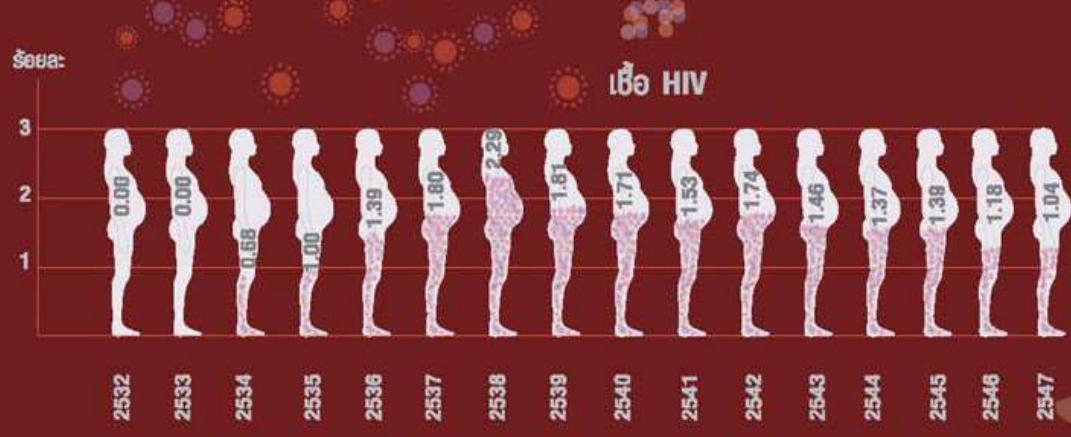
ที่มา: กลุ่มงานโรคเอดส์ วัณโรค และโรคติดต่อทางเพศสัมพันธ์ สำนักระบาดวิทยา 2547

ขณะที่จำนวนตัวเลขของคุณแม่ที่อยู่ในวัยรุ่นลดลงเพียงเล็กน้อย แต่จำนวนคุณแม่สูงวัย (อายุ 35 ปีขึ้นไป) กลับเพิ่มมากขึ้นเรื่อยๆ แน่นอนที่สุดว่าไม่ว่าจะเป็นการตั้งครรภ์ของคุณแม่วัยรุ่นหรือคุณแม่สูงวัยย่อมเสี่ยงต่อสุขภาพทั้งมารดาและทารกด้วยกันทั้งสิ้น

ดังนั้น การฝากครรภ์ไม่ว่าผู้เป็นแม่จะมีอายุเท่าใด จึงเป็นสิ่งสำคัญที่สุดเพื่อก้าวไปสู่เป้าหมายที่เรียกว่า 'ลูกเกิดรอด แม่ปลอดภัย' นอกจากนั้น สุขภาพของมารดาระหว่างตั้งครรภ์ก็เป็นสิ่งสำคัญ เพราะยังพบว่าทั้งภาวะโลหิตจาง การติดเชื้อเอ็ชไอวี การสูบบุหรี่ กินเหล้า และการทำร้ายร่างกายโดยคู่สมรสล้วนดูกคามการตั้งครรภ์ด้วยกันทั้งสิ้น อีกทั้งภาวะแท้ง ไม่ว่าจะแท้งเองหรือถูกทำให้แท้งก็ยังพบว่ามีอัตราที่สูงด้วยเช่นกัน แต่สิ่งที่น่าสนใจ สำหรับการตั้งครรภ์ของผู้หญิงไทยในปัจจุบันก็คือ แม้การผ่าคลอดจะมีความเสี่ยงสูงกว่าการคลอดแบบปกติ แต่กลับพบข้อเท็จจริง ที่ชี้ชัดว่าการผ่าคลอดมีแนวโน้มเพิ่มสูงขึ้นเรื่อยๆ และสูงกว่าเกณฑ์มาตรฐานขององค์การอนามัยโลกระบุเอาไว้ด้วยซ้ำไป

แน่นอนที่สุดว่าตัวเลขการผ่าคลอดที่เพิ่มสูงขึ้นอย่างน่าสนใจนั้นได้รับการยืนยันว่ากว่าครึ่งหนึ่งของคุณแม่ที่คลอดบุตรที่โรงพยาบาลเอกชนเป็นการผ่าคลอดหาใช่การคลอดบุตรด้วยวิธีปกติไม่

อีกเรื่องหนึ่งที่คนไทยควรให้ความสนใจอย่างจริงจังคือความพยายามให้ผู้หญิงเลี้ยงลูกด้วยนมแม่หลังคลอดอย่างน้อย 4 เดือนขึ้นไป



จำนวนหญิงตั้งครรภ์ที่ติดเชื้อเอชไอวีในประเทศไทย ปี 2532 - 2546

ในปี 2546 มีผู้หญิงตั้งครรภ์เกือบ 1 ล้านคน ส่วนหนึ่งยังมีปัญหาที่ต้องได้รับการดูแล

แม้การสาธารณสุขของประเทศไทยจะก้าวไปข้างหน้าอย่างรวดเร็ว แต่ทว่าการตั้งครรภ์ของผู้หญิงไทย ยังน่าจับตามอง เมื่อพบว่ากว่าครึ่งหนึ่งของการคลอดบุตรที่โรงพยาบาลเอกชนใช้วิธีผ่าตัด และทำให้ประเทศไทยได้ชื่อว่ามีอัตราการผ่าคลอดสูงเกินกว่ามาตรฐานขององค์การอนามัยโลก

อายุของมารดาที่คลอดบุตรมีชีวิต ปี 2530 - 2546

มารดาอายุไม่เกิน 20 ปี

มารดาอายุ 35 ปี ขึ้นไป

ที่มา: สถิติสาธารณสุข 2530-2546

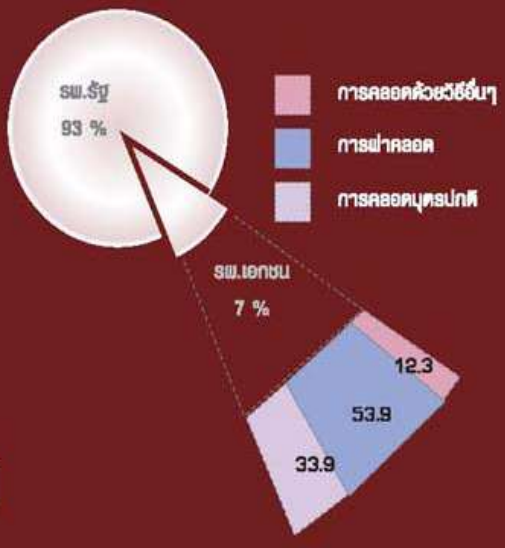
การเลี้ยงลูกด้วยนมแม่อย่างเดียวอย่างน้อย 4 เดือน

ปี 2536 - 2545

เป้าหมายของสาธารณสุข = ร้อยละ 30 ภายในปี 2546

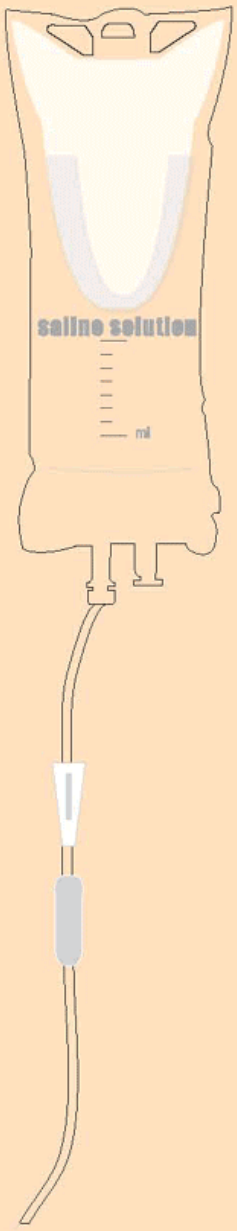
ที่มา: กรมอนามัย เฉพาะปี 2540 มาจากมหาวิทยาลัยมหิดล อ้างใน **จันตนาและคนอื่นๆ 2547
ตัวแทนของสำนักงานส่งเสริมสุขภาพ ใช้คำนิยามและวิธีการเก็บข้อมูลต่างจากกรมอนามัย

สถานที่คลอดบุตรของหญิงมีครรภ์ปี 2544



เด็กแรกเกิดที่น้ำหนักต่ำกว่ามาตรฐาน
(2,500 กรัม) ทั่วประเทศ ปี 2539 - 2546

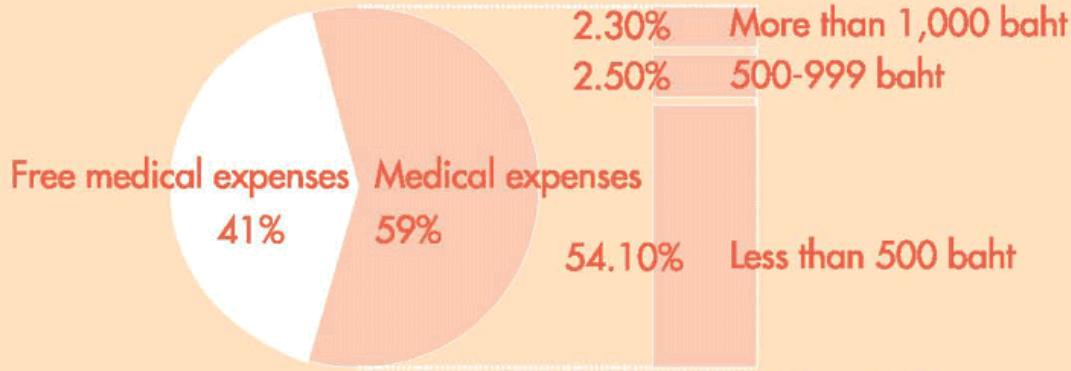
Illness



Over 90% of Thais are covered by some sort of government health insurance scheme, including the Civil Servants Medical Benefits Scheme, the Social Welfare Scheme, and the Thirty Baht Scheme. A further 5.7% of Thais are covered by some other form of health insurance, such as private medical insurance, or insurance provided by employers. Since the establishment of the Thirty Baht Scheme in 2001, the number of people seeking treatment in government facilities has increased. More than 50% of those seeking treatment live in Northern and Northeastern Thailand, the two regions with the lowest numbers of health workers per capita. In Bangkok, there are 924 people per doctor; in the Northeast, the ratio is 7-8 times higher. Doctors are still concentrated in wealthy areas.

The Thirty Baht Scheme has led to greater use of health centers and district hospitals. However, the health system needs to give more priority to health promotion, as opposed to treating illness. There also needs to be sufficient staff to cope with the rising numbers of patients.

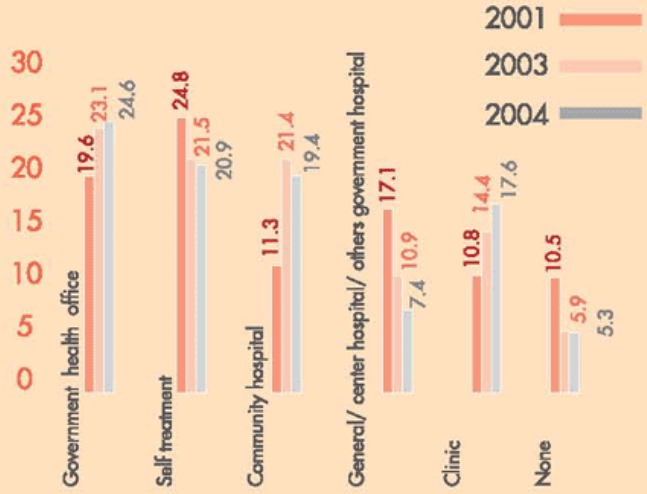
Average health expenditure, 2004



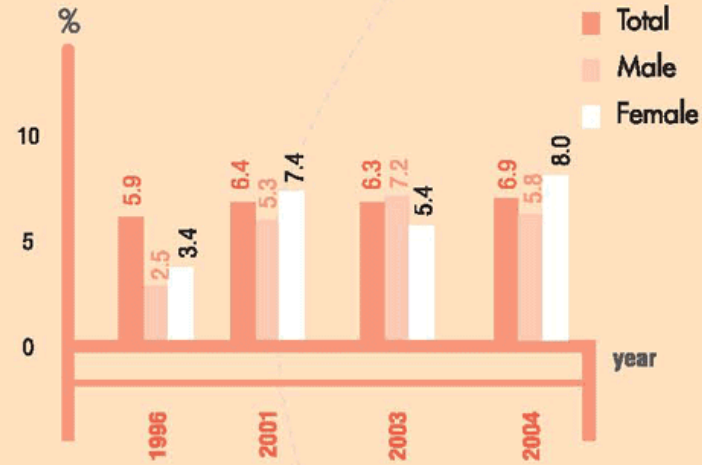
Source: Report of 2003 Health and Welfare Survey, 2004

Type of treatment, 2001-2004

Note: For 1991-2001, referred to 2 weeks before interview date
For 2003-2004, referred to 1 month before interview date



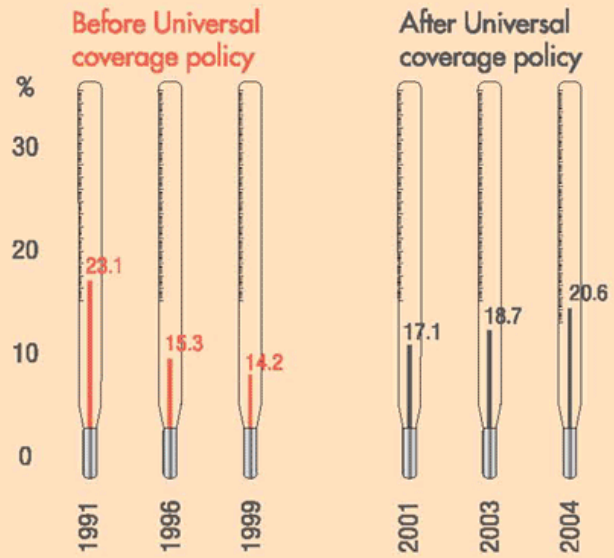
Admission to hospital, 1996-2004



Source: Report of 2003 Health and Welfare Survey, 2004

In the year 2004, 13.4 million Thais had some sort of health problem, and 90% of these people received government health insurance scheme

Reported illness of Thai population, 1991-2004

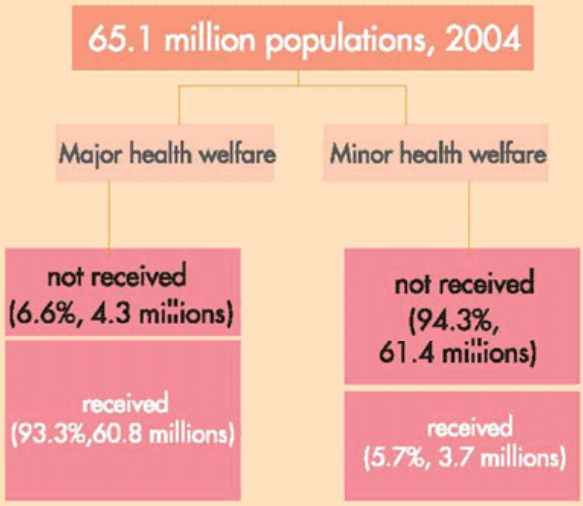


Illnesses refers to all kinds of illnesses ranging from minor to severe including not feeling well.

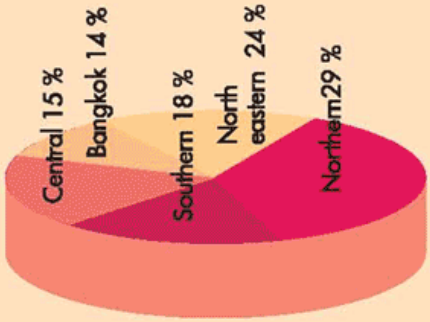
Note: For 1991-2001, referred to 2 weeks before interview date.
For 2003-2004, referred to 1 month before interview date.

Source: Report of 2003 Health and Welfare Survey, 2004

The 'Thirty Baht for Every Treatment' policy attempts to provide universal health insurance to all Thais, with equal rights for everyone



Illness of population by region, 2004

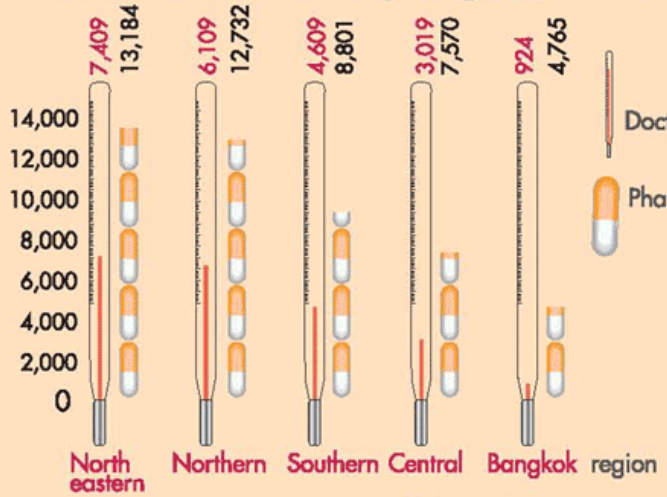


Major health welfare includes governent officer welfare/ pensioners/ state enterprise welfare/ social security/ workmen compensation fund/ health card (not pay 30 baht and pay 30 baht)

Minor health welfare includes private insurance/ employer welfare/ others

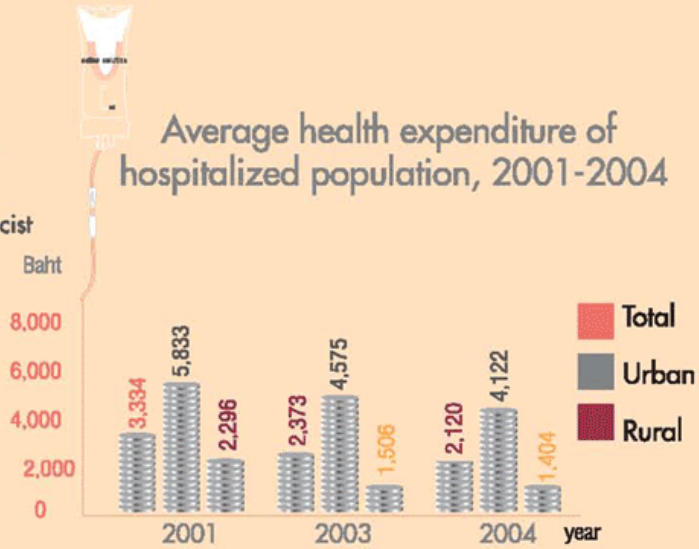
Source: Report of 2003 Health and Welfare Survey, 2004

Health resource by region, 2003



Source: Health Resource Reporting, Bureau of Policy and Strategy, 2003
Public health statistics, 2003

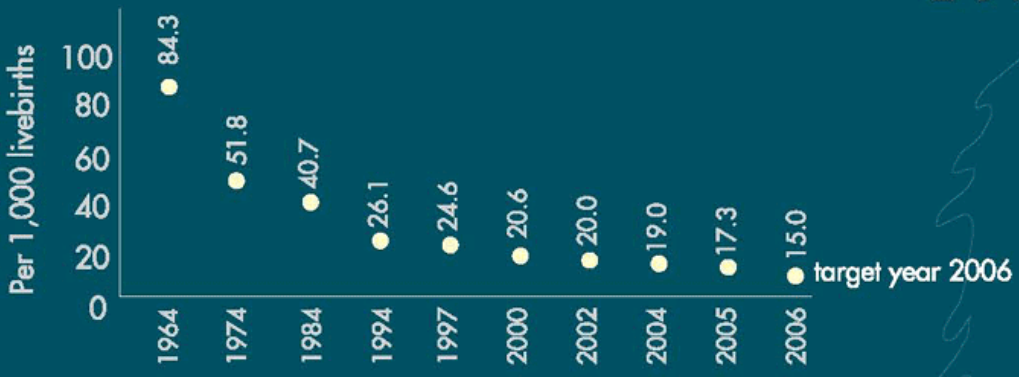
Average health expenditure of hospitalized population, 2001-2004



Source: Report of 2003 Health and Welfare Survey, 2004

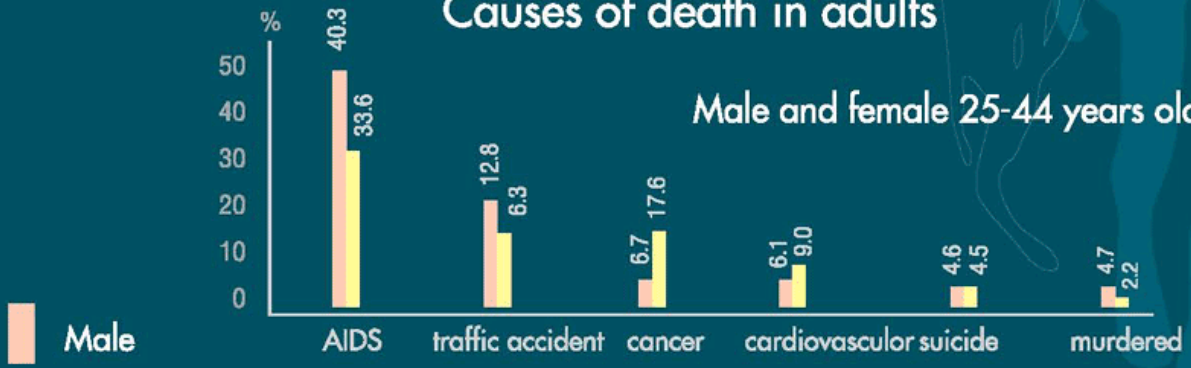
Mortality

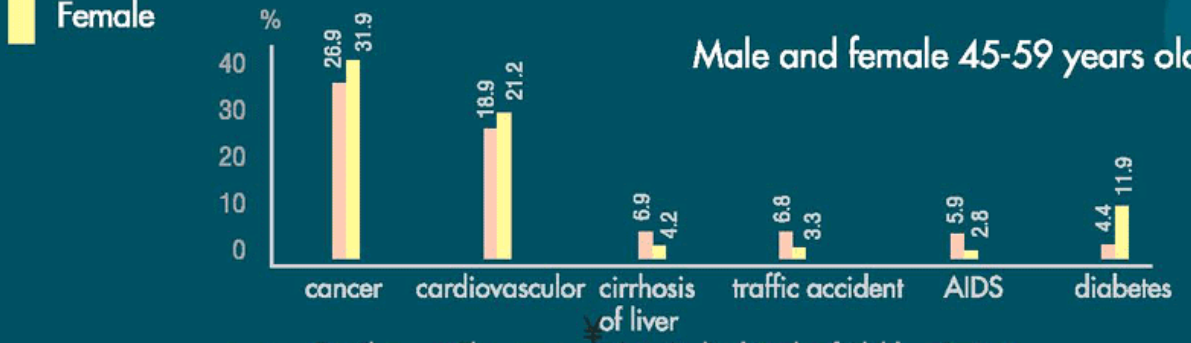
Infant mortality rate (0-12 months old), 1964-2006



Source: Survey of Population Change, National Statistical Office, 1964-1996;
Institute for Population and Social Research, 1997- 2006

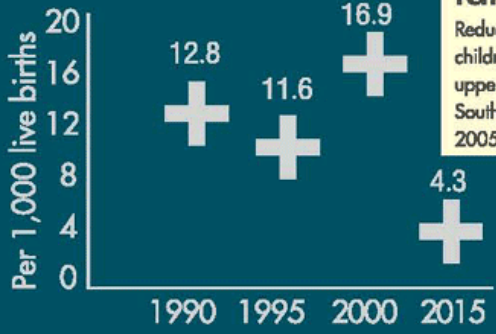
Causes of death in adults





source: Dr. Chanpen Chuprapawan, Longitudinal Study of Children Project,
Health System Research Institute, 2003

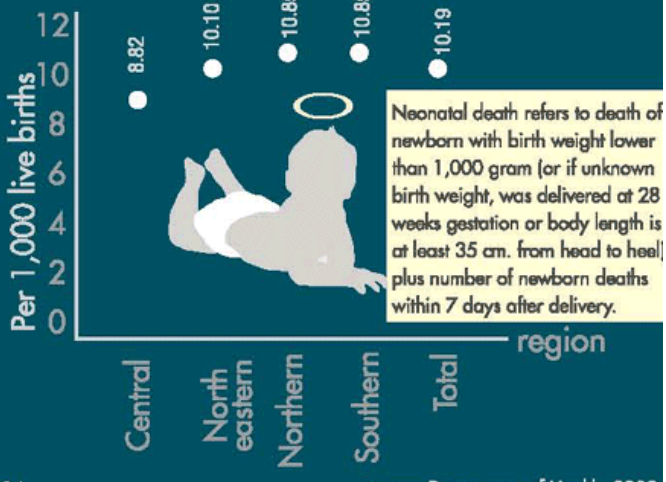
Child Death Rates (younger than 5 years old), 1990-2000



Target:
Reduce death rate by half of children living in highland and upper North provinces and three Southern provinces between 2005-2015.

Source: Department of Health cited in Millennium Development Goals Report for Thailand, 2004

Neonatal death by region, 2001



Neonatal death refers to death of newborn with birth weight lower than 1,000 gram (or if unknown birth weight, was delivered at 28 weeks gestation or body length is at least 35 cm. from head to heel) plus number of newborn deaths within 7 days after delivery.

source: Department of Health, 2002

The infant mortality rate is low, but the situation in the highland regions and the three southern-most provinces is worrying

The extension of the health system to cover people in all areas is an important factor in extending life expectancy and preventing early deaths

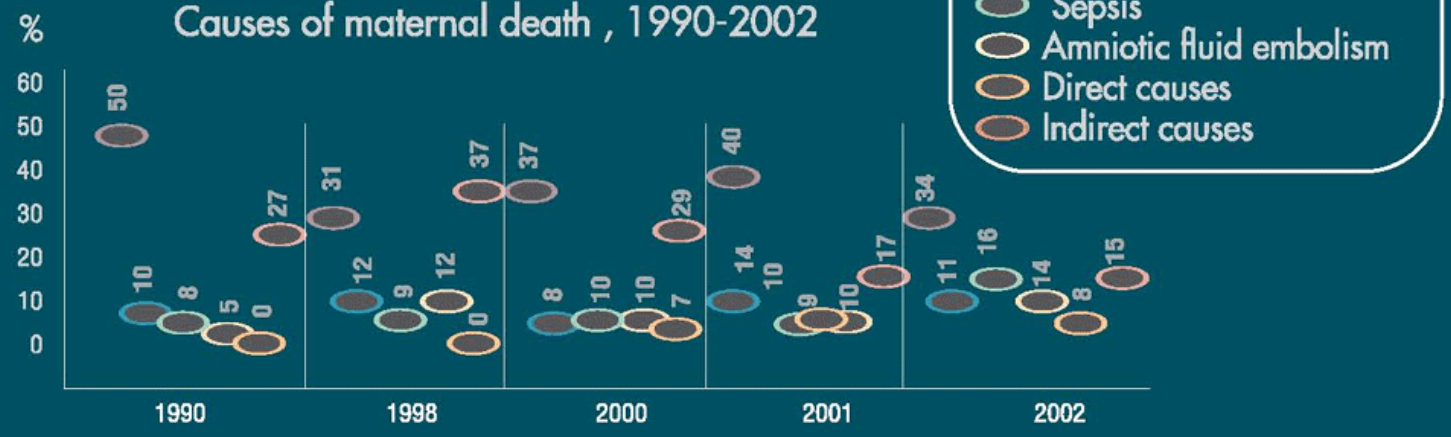
In September 2000, Thailand and countries across the world agreed to the Millenium Development Goals. One of these goals was to improve the health of children and pregnant women. It is encouraging to see that maternal mortality rates and infant mortality rates in Thailand are now low. This reflects the effects of expanding access. However, data limitations disguise differences between regions and provinces. It is only possible to say that we need to pay attention to mothers and children in highland regions in Northern Thailand, and in the three border provinces in Southern Thailand.

On average, people living in poor villages in Northern Thailand have to travel for half an hour to reach a government hospital, which is much longer than in other regions. Detailed examination shows that the main causes of death among mothers and infants are preventable. The main causes of early death among adults are HIV/AIDS, traffic accidents, and cancer. The way to extend Thai's lives is to pay constant attention to health.

Causes of Neonatal Death in Thailand, 2001

Note: Another 36.6% died from unknown cause.
Source: Maternal and Child Health Division, Department of Health, 2002

Causes of maternal death , 1990-2002



Source: Bureau of Health Promotion, Live Birth and Safe Mothers Project, 2002

MMR and births attended by skilled health personel, 1990-2002

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	target 2006
Maternal mortality rate (per 100,000 livebirths)	36.2		23.0				16.8		15.8	14.2		17.6	24.0	18.0
Proportion of births attended by skilled health personel (%)	90.8	93.2	90.4	91.1		94.4			99.0			98.0		

Note: Figures for 1999-2002 were high due to changing data collection system.
Source: Department of Health cited in Millennium Development Goals Report for Thailand, 2004

Disability and Impairment

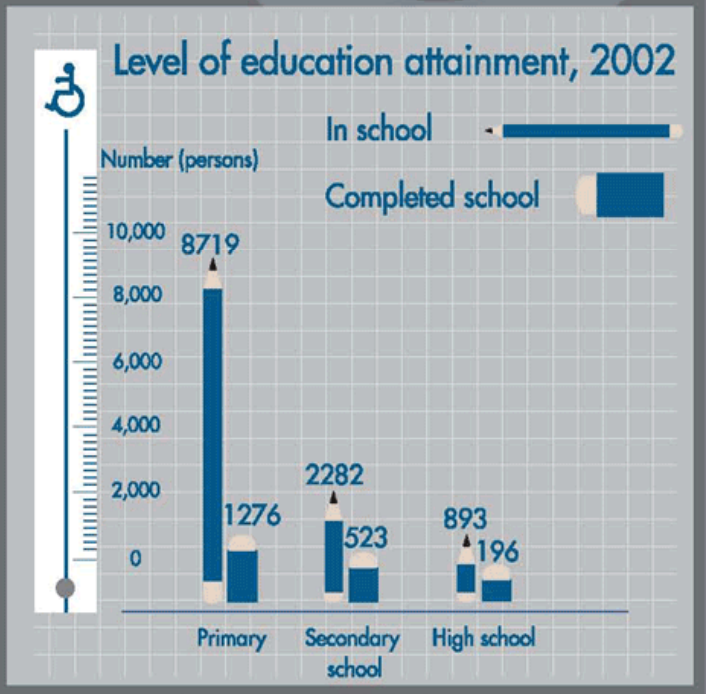
In 2003, there were 1.1 million disabled people in Thailand, most of whom lacked access to social assistance and services

Even though society is showing more concern for disabled people than it did in the past, many disabled people still lack the chance to work and study, and lack access to services that would enable them to live normal lives.

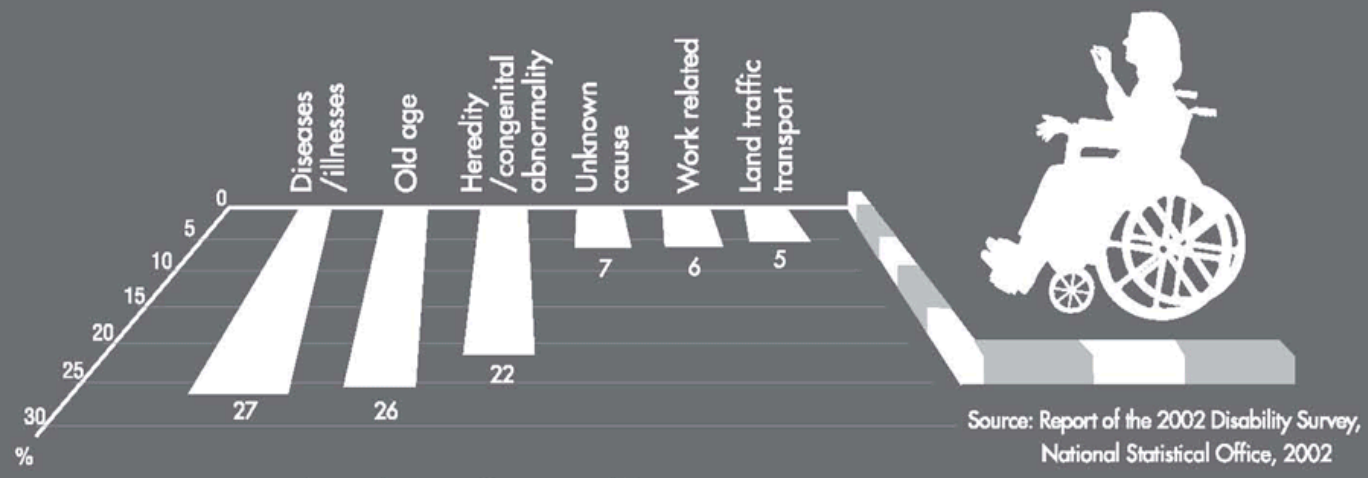
Health problems and abnormalities, such as obesity, paralysis, osteoporosis, blindness, and deafness, together affect the daily lives of more than 4.3 million Thais who have chronic health problems lasting at least six months. Of this number, 1.1 million are disabled. One quarter of disabled people has it since birth. Many people's lives are improved through the use of devices such as walking sticks, glasses, and hearing aids, but one million people still lack these things.

For those who were not disabled at birth, the most common causes of disability are disease and old age. Traffic accidents and work accidents are the next most important causes.

Many disabled people lack access to disability services and are not able to participate in society. This is apparent from the fact that, of the 4 million Thais with chronic illnesses, only 1,995 have finished high school. Three-quarters have no education or less than primary education. Altogether, only 4,311 disabled people are currently employed. Those who are employed earn only two thirds as much as people without disabilities. Many disabled people fall below the poverty line.



Source: Education statistics of Thailand, Ministry of Education, 2002



Source: Report of the 2002 Disability Survey, National Statistical Office, 2002

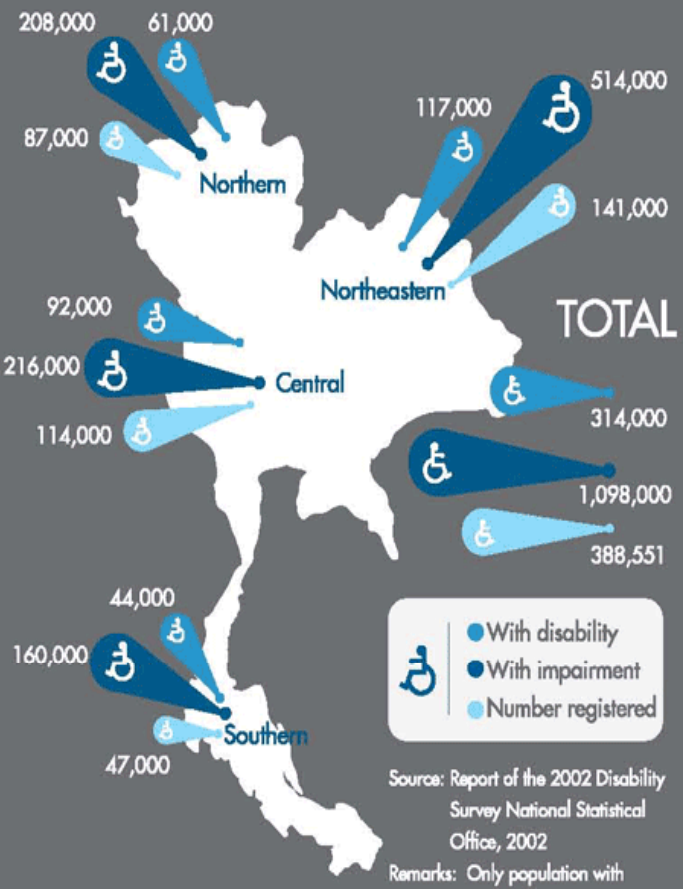
People with handicapped by causes, 2003

Characteristics of Impairment and everage onset ages

Characteristics	%	Average onset age
Emotion	6.7	43
Dexterity	7.2	53
Hearing	9.8	56
Communicating	9.9	66
Recognition	14.9	63
Seeing	21.8	61
Mobility	22.7	60
Standing (20 min.)	25.3	60
Walking upstairs (10-14 steps)	28.1	60

Source: Report of the 2002 Disability Survey, National Statistical Office, 2002
* Figures obtained from 2.9 millions people having illness for 6 months and over

Numbers of disabled people, people with impairment and number of those registered



Source: Report of the 2002 Disability Survey National Statistical Office, 2002
Remarks: Only population with handicap level 4 & 5 are eligible to register

People with chronic illnesses (aged 13 up) 5.9% (2.9 million)

Having disability or not

11% yes (3 thousand)

89% none (2.6 million)

Using aid equipment

15.6% using — 4.5 thousand

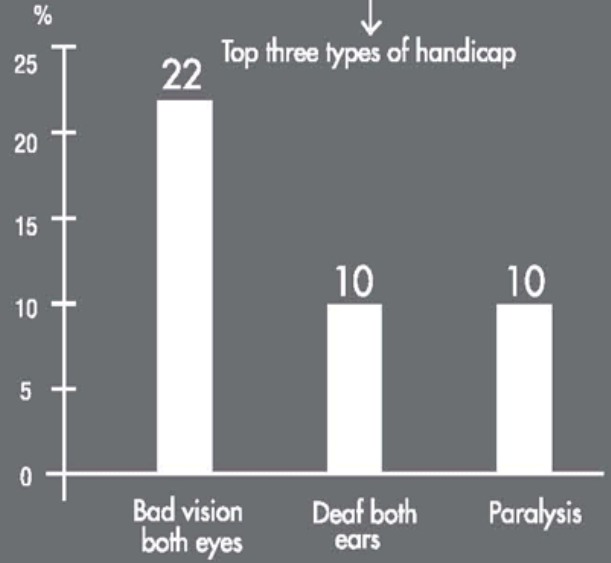
84.0% Not using — 2.5 million

- 51% do not need to use — 1.3 million
- 42% do not have — 1 million
- 7% have but not use — 1.8 thousand

Impairment refers to those who are not able to conduct any daily activities by self or need to be assisted by someone or could do by self with difficulty such as taking a bath, eating, washing face, brushing teeth, dressing, urinating including cleaning after.

People with disabilities (from birth onwards) 1.1 millions (1.8%)

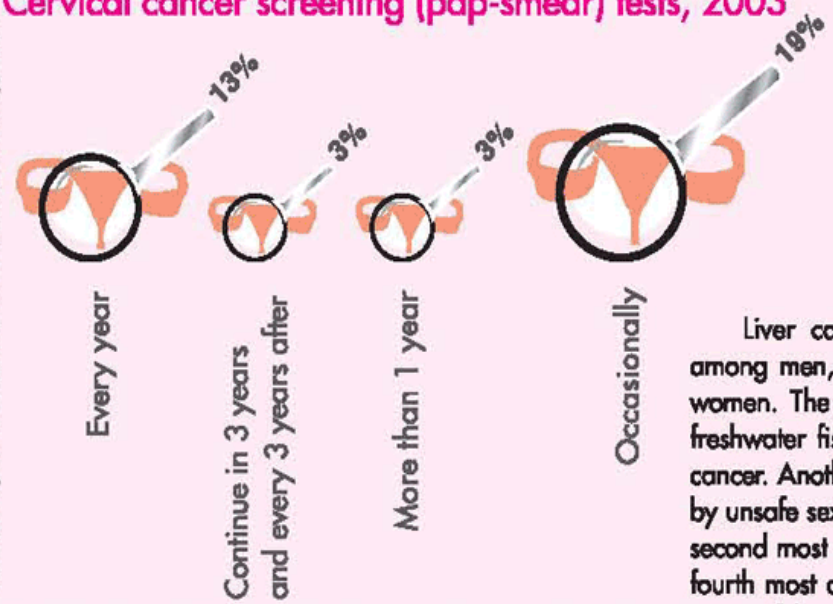
Top three types of handicap



Source: Report of the 2002 Disability Survey, National Statistical Office, 2002

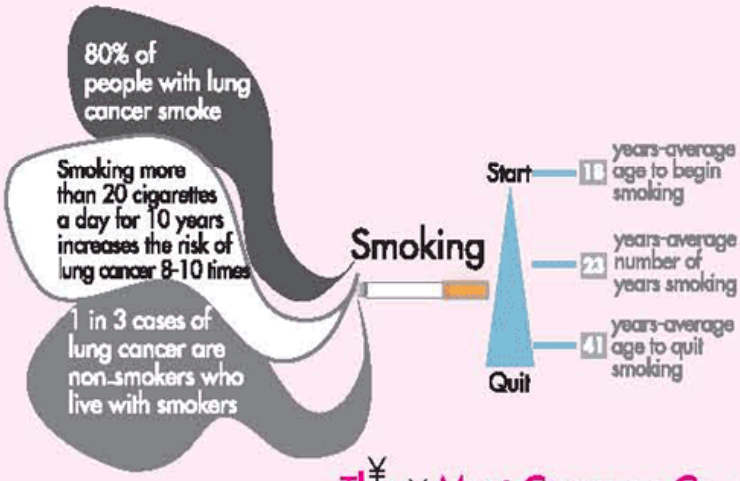
Cancer

Cervical cancer screening (pap-smear) tests, 2003



Source: Report of 2003 Health and Welfare Survey, 2003

The National Cancer Institute estimates that in the year 2005 at least 100,000 Thais have cancer of some sort. In 1995, only about 50,000 people had cancer. Thai people still act in ways that increase their risks, and few people undergo medical tests.

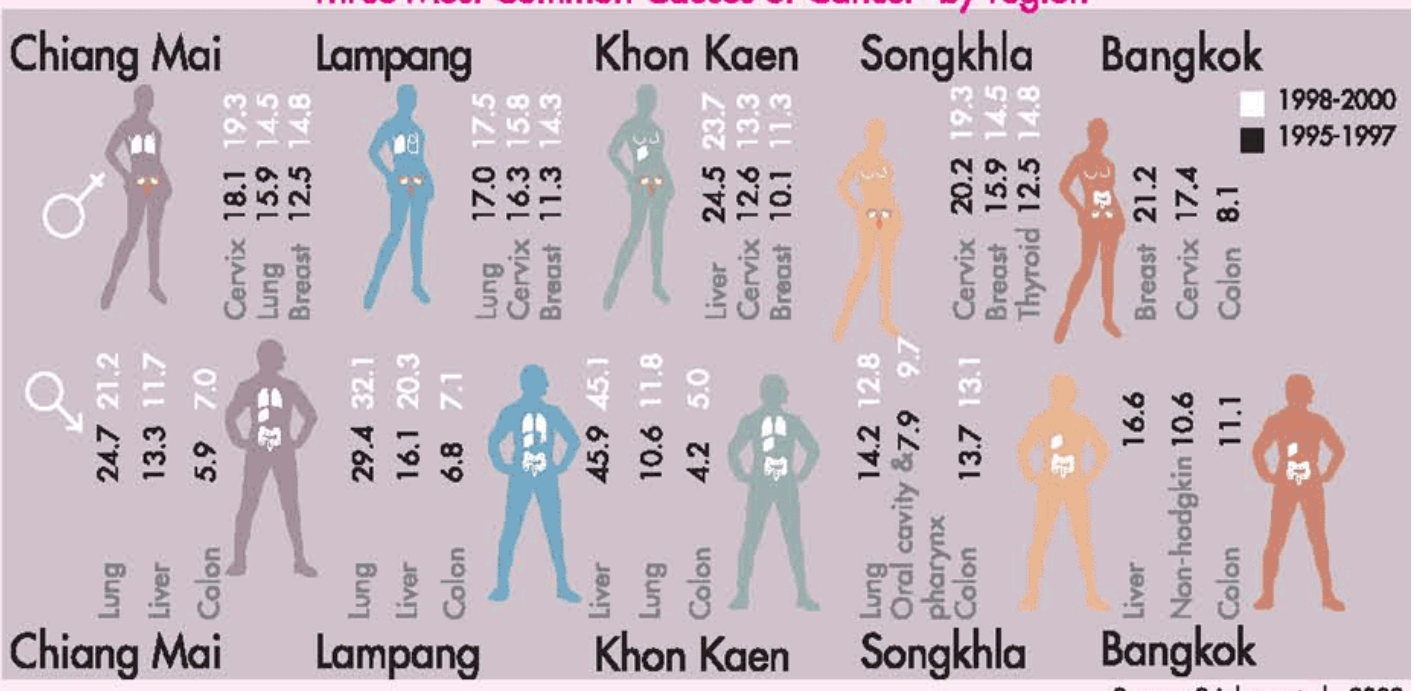


Liver cancer is the most common type of cancer among men, and is the third most common type among women. The main cause is eating raw or under-cooked freshwater fish, which leads to liver fluke, and eventually cancer. Another cause is Hepatitis B, which can be caused by unsafe sex, and by failure to receive a vaccination. The second most common type of cancer among men, and the fourth most common among women, is lung cancer. Most cases of lung cancer are due to smoking. The third most common type among men, and fifth most common among women, is cancer of the colon. This can come from eating a diet that is low in fiber, and high in fat and red meat. Among Thai women, particularly in rural areas, the most common type of cancer is cervical cancer. This can come from having sex with men who are not circumcised, who do not clean their sexual organ regularly, or who have a virus in their sexual organ.

The second most common type of cancer among Thai women, and the most common among middle class urban Thai women, is breast cancer. Causes include genetic predisposition, not breastfeeding, and having the first period at a young age.

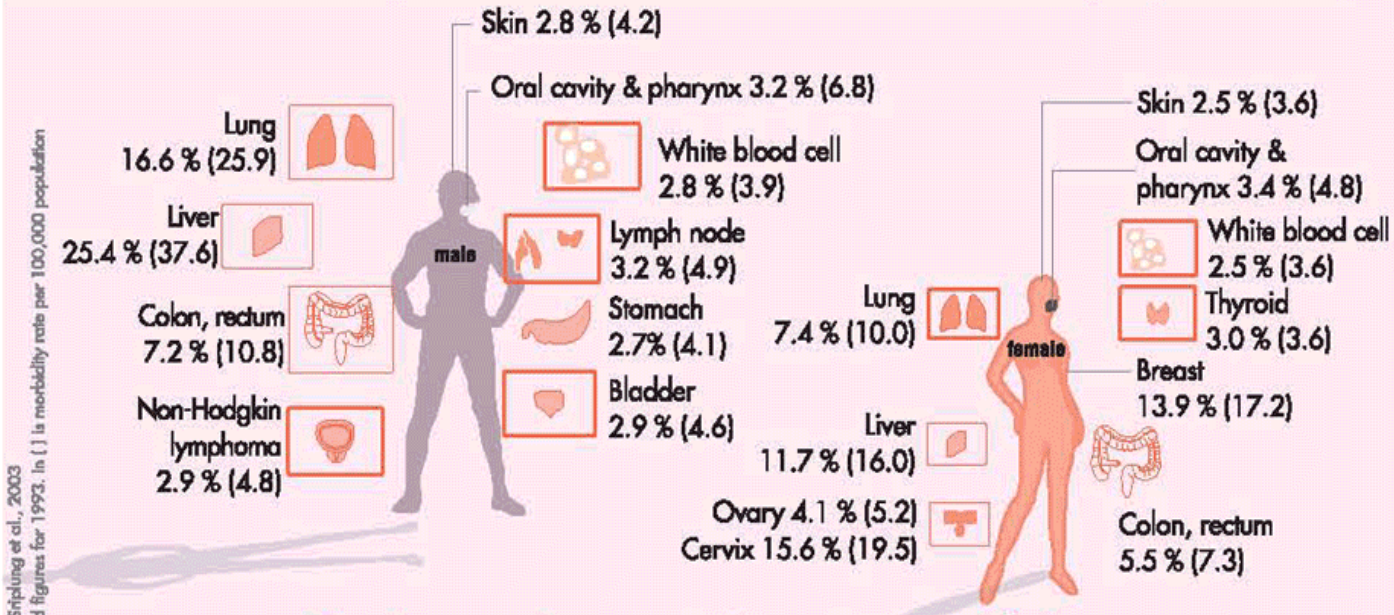
Changing eating behaviors, changing sexual practices, and breastfeeding babies would have a substantial effect on cancer rates. More tests in the early stages of cancer, when treatment is easiest, would also be beneficial. The most important is tests are for cervical cancer, breast cancer, liver fluke, and hepatitis.

Three Most Common Causes of Cancer by region



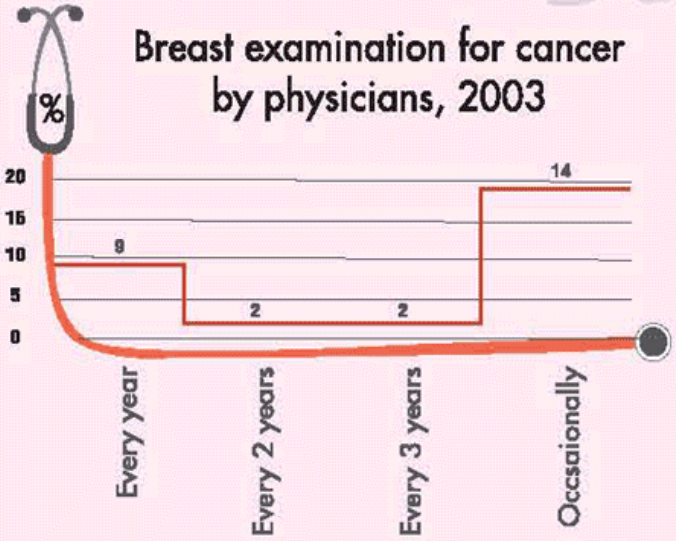
Source: Sriplung et al., 2003

Changing health behaviors-not smoking, being sensible about eating and sex, and breastfeeding children-can reduce the risk of developing cancer



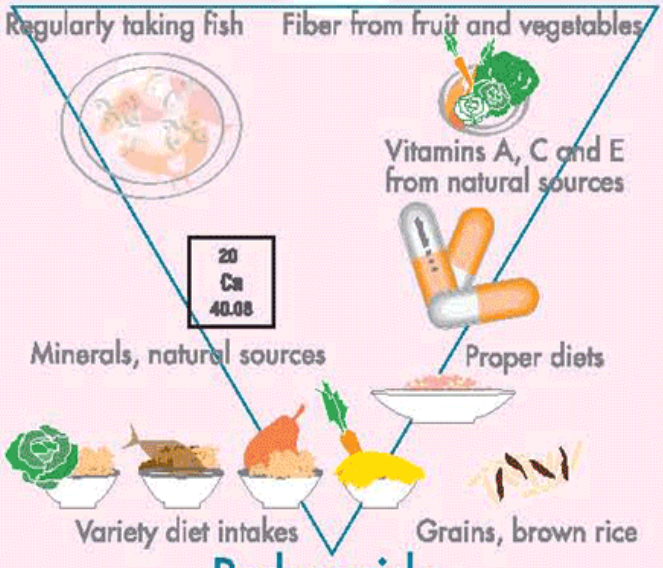
Source: Sriplung et al., 2003
Estimated figures for 1993. In ( ) is morbidity rate per 100,000 population

Top ten most common cancer among Thais



Source: Report of 2003 Health and Welfare Survey, 2003

Food and Cancer



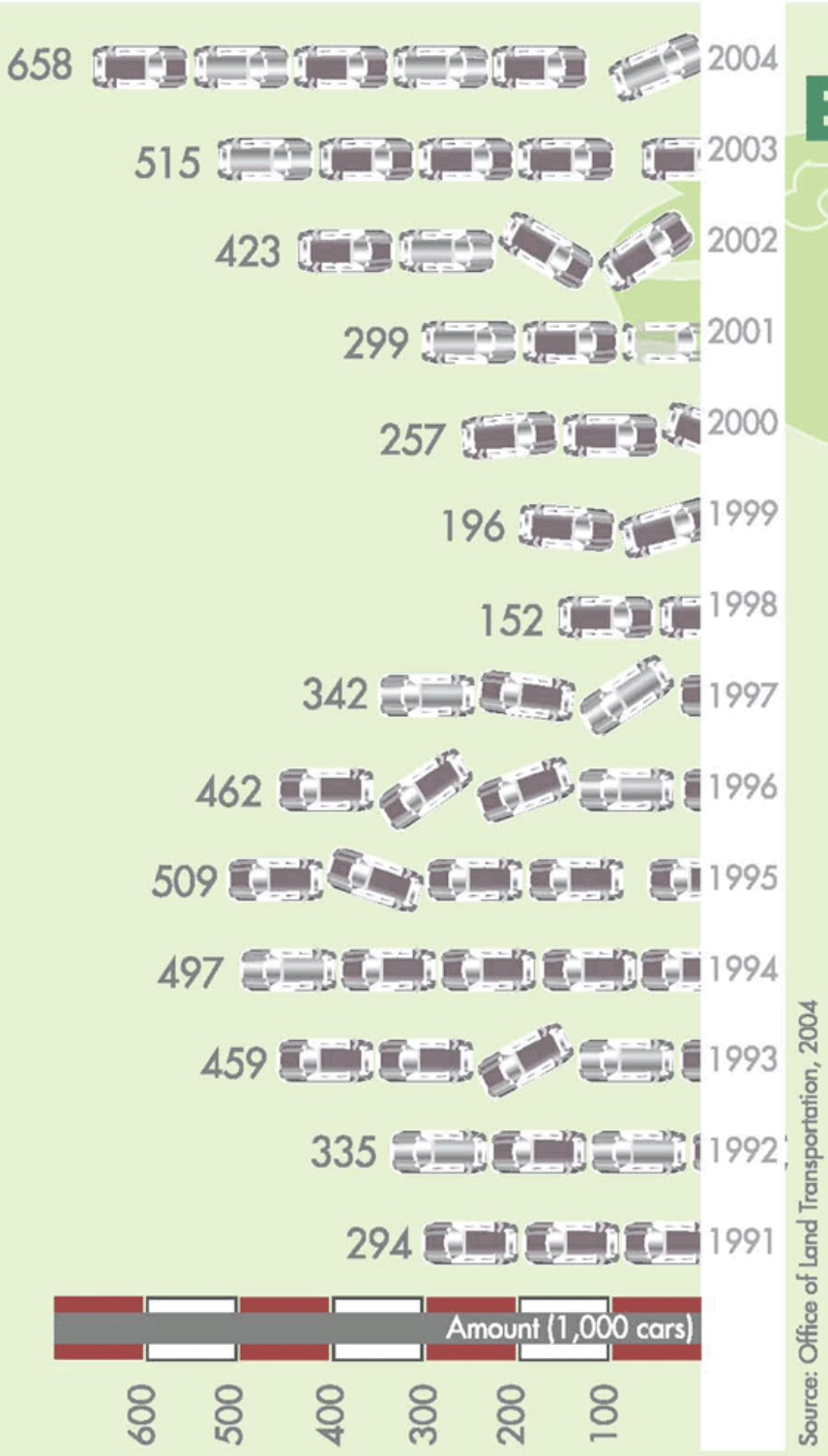
Source: Healthly eating in the period of rushing time, Food seminar 2004

Environment

The population of Bangkok grew from 4.6 million in 1980 to 6.8 million in 2005, an increase of 47.8% in 25 years. Demand for housing and transport grew accordingly. This has had a direct effect on dust levels, because almost all dust in Bangkok comes from construction and vehicles. Twice as many houses have been built or renovated in Bangkok than in other parts of the country. Similarly, the increase in the number of vehicles is 1-6 times higher than in other regions. This has had a predictable effect on dust and air pollution.

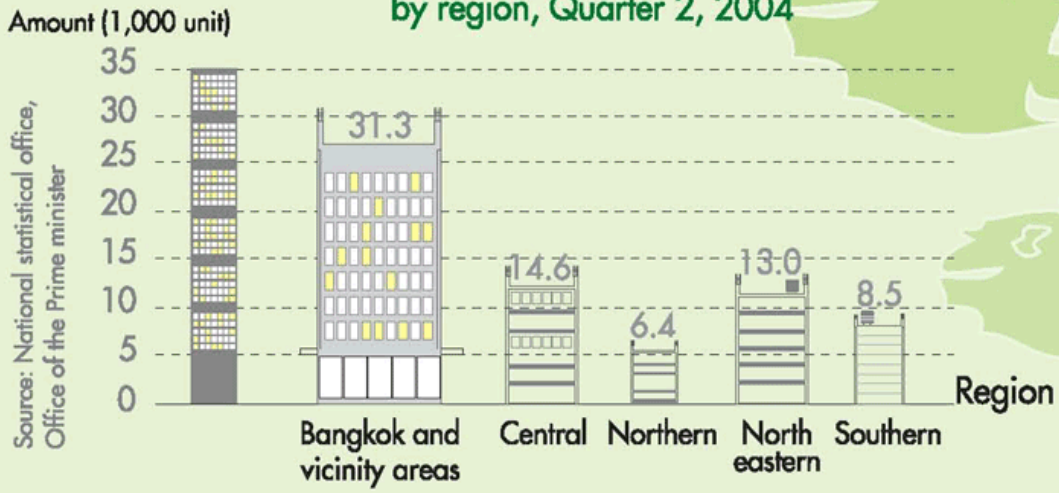
However, for many years Bangkok has strictly enforced measures to reduce dust and pollution. This has included checks on vehicle emissions, rules requiring covers on building sites and trucks, and new forms of public transport such as the Sky Train and Metro that have reduced dependence on private automobiles. At the same time, the number of parks-the "lung" of the city-has increased markedly.

All these efforts have reduced the quantity of dust in the air, though the amount of very fine dust still exceeds the health guidelines. Overall air quality in Bangkok has improved, and the number of parks and trees has increased.



Number of new registered vehicles in Bangkok, 1991-2004

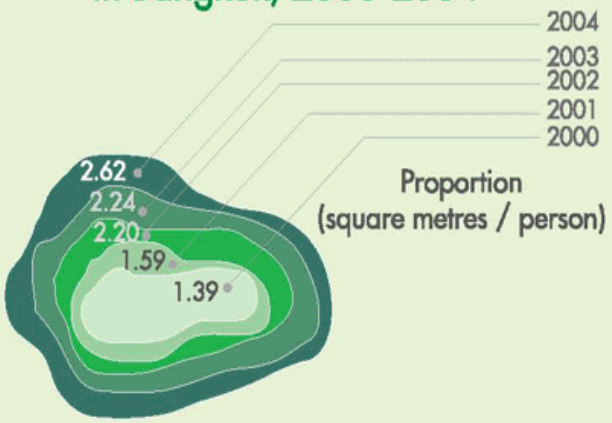
New construction building addition or alteration of building by region, Quarter 2, 2004



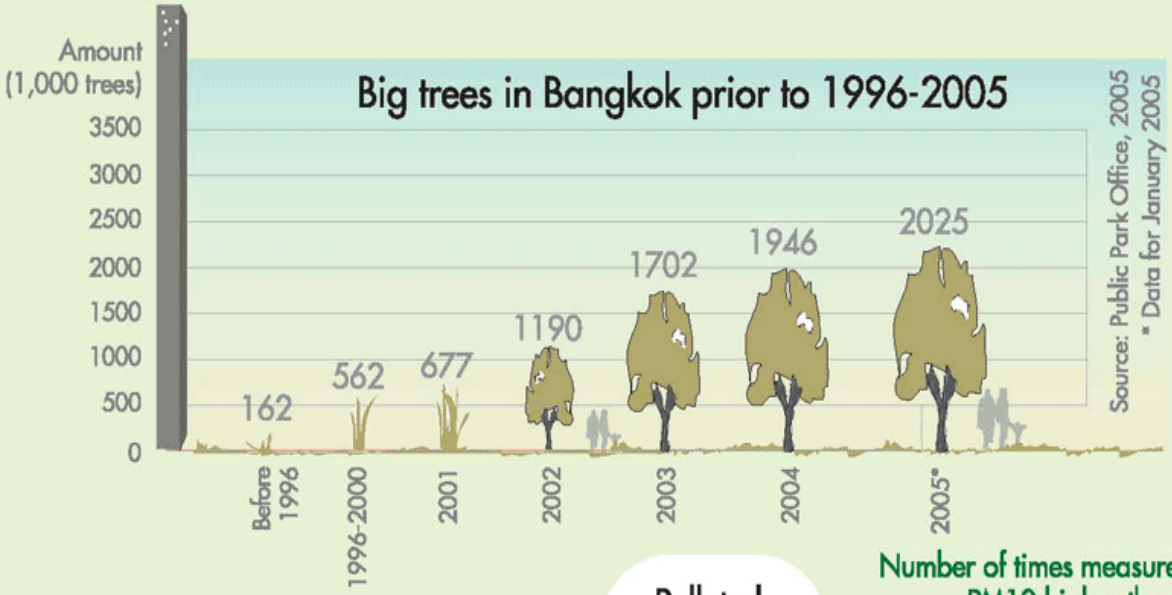
Air quality in Bangkok has been improving

Proportion of green areas per population in Bangkok, 2000-2004

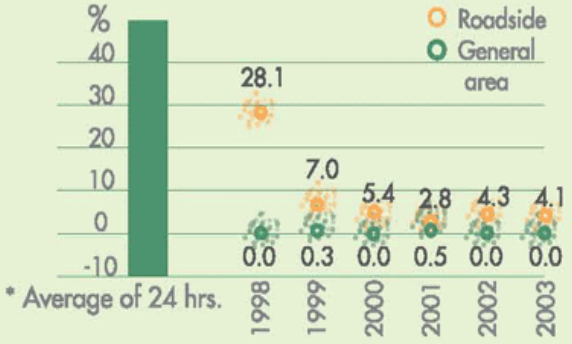
Source: Public Park Office, 2005



Strict enforcement of regulations has reduced the amount of dust in the air, and has kept air pollution at the legally allowed level



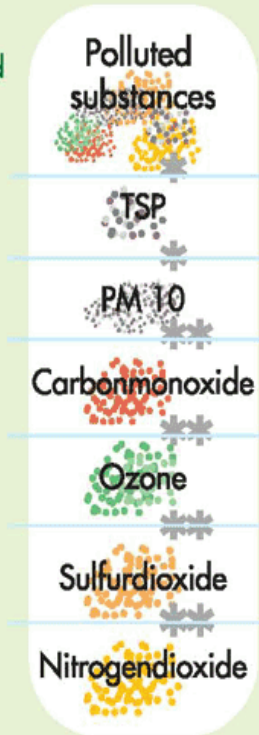
Detected higher than standard level of total suspended particulate matter (TSP) in Bangkok, 1998-2003



* Average of 24 hrs.

Detected higher than standard level of suspended particulate matter (PM 10) in Bangkok, 1998-2003

* Average of 24 hrs.



Number of times measurement of PM10 higher than standard level in Bangkok,1998-2003

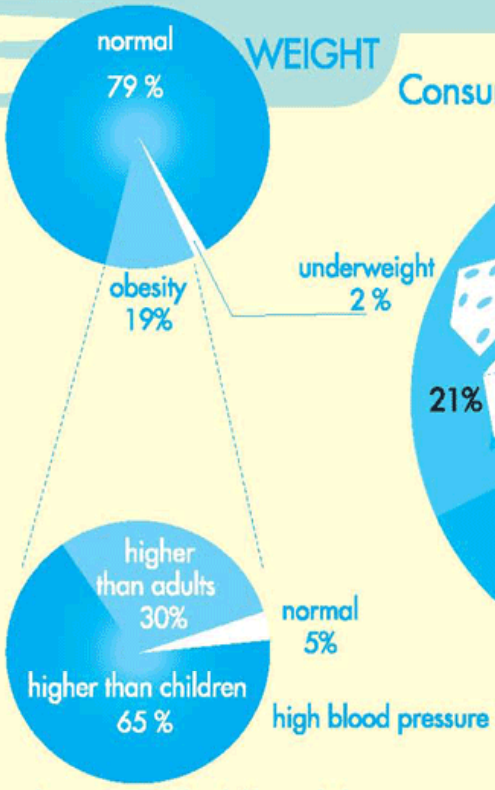
	General area			Roadside	
	standard value	number of examination times	number of times found higher than standard (%)	number of examination times	number of times found higher than standard (%)
TSP	0.33	434	0 (0%)	588	24 (4.1%)
PM 10	120	1,680	36 (2.1%)	2,152	108 (5.0%)
Carbonmonoxide	30	74,991	0 (0%)	65,389	0 (0%)
Ozone	100	61,789	155 (0.2%)	24,905	13 (0%)
Sulfurdioxide	300	77,176	0 (0%)	24,244	0 (0%)
Nitrogendioxide	170	78,041	0 (0%)	24,621	0 (0%)

Source: Pollution Control Department, 2003

Food

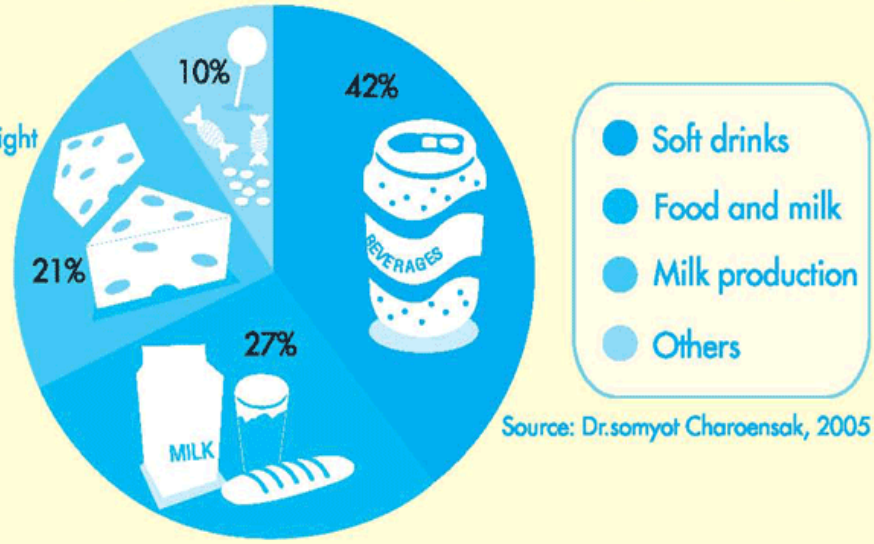
Thais are facing illnesses caused by unbalanced diets, with too much sugar, too many fatty or fried foods, and too much salt.

Obesity and High blood pressure in students grades 1-6



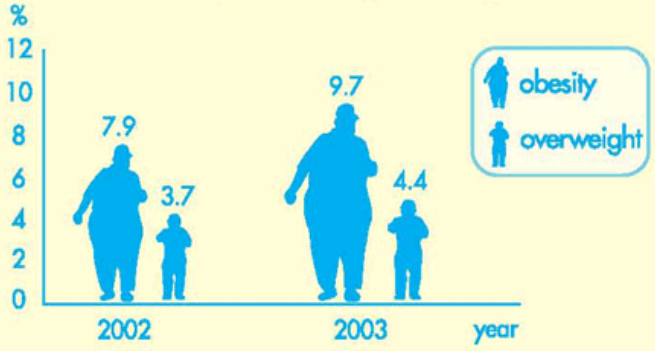
Source: Alarming Signal: Thai children with obesity, Mahidol University, 2004

Consumption of sugary foods and beverages among Thais



Source: Dr.somyot Charoensak, 2005

Childhood Obesity (students in grades1-6), 2002-2003



Source: Project of Indicator Development to monitor the growth of primary school students, 2003

This high consumption of sugar is probably an important reason why diabetes and high blood pressure have become more common.

It is not just adults who like sweet food. Small children have turned increasingly to snacks based on sugar and refined flour. Obesity is becoming more common among school children: one in five primary school students is overweight, and most overweight children have high blood pressure. Parents and other caregivers need to start paying attention to the eating behavior of children. Particular attention needs to be paid to the influence of advertisers, who are continually worsening the problem.

Snack and nibbles consumption among Thai children, 2003

Source: Development of Criterion identify risk related to sweets and decayed tooth, Department of Health, Ministry of Public Health, 2003

Populaion with illness related to food consumption (aged 35 years and over)

Diabetes

Age	Male	Female
35-39	1.5	1.2
40-44	0.8	3.3
45-49	1.7	0.4
50-54	4.5	7.1
55-59	3.9	11.6
60 +	5.2	10.7
Total	2.9	6.2

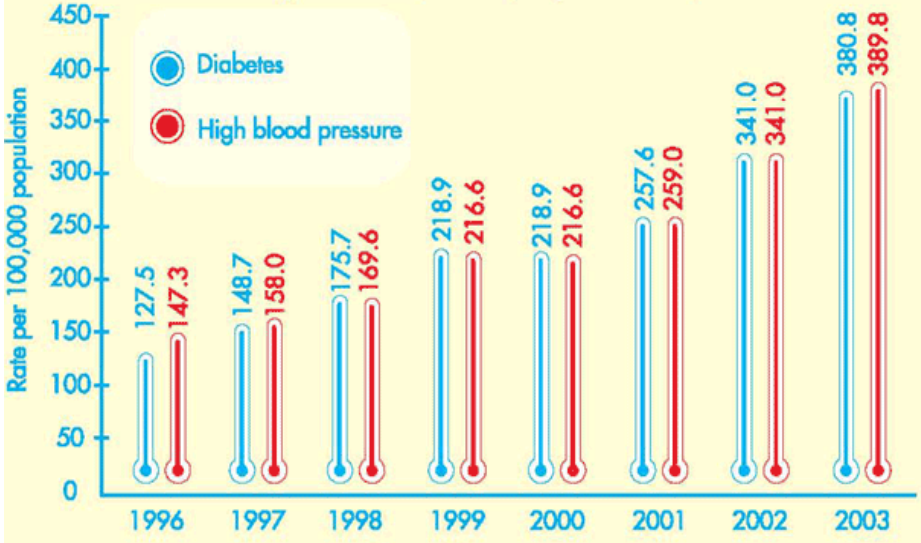
High blood pressure

Age	Male	Female
35-39	2.3	4.5
40-44	3.6	6.1
45-49	4.2	9.4
50-54	6.8	10.8
55-59	8.9	18.2
60 +	17.1	24.4
Total	7.6	12.7

Source: Report of 2003 Health and Welfare Survey, 2003

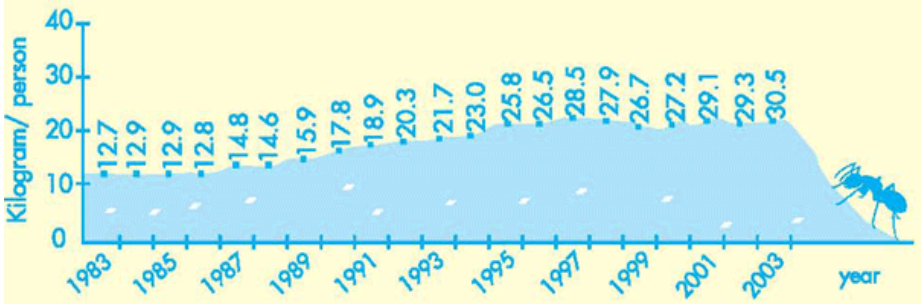
Diabetes, high blood pressure, and obesity: Warning signals that Thais eat too much sweet and high-fat food

Morbidity rate by diabetes and high blood pressure (per 100,000 population)



Source: Public Health Statistics A.D., 1996-2003

Quantity of domestic sugar consumption, 1983-2003



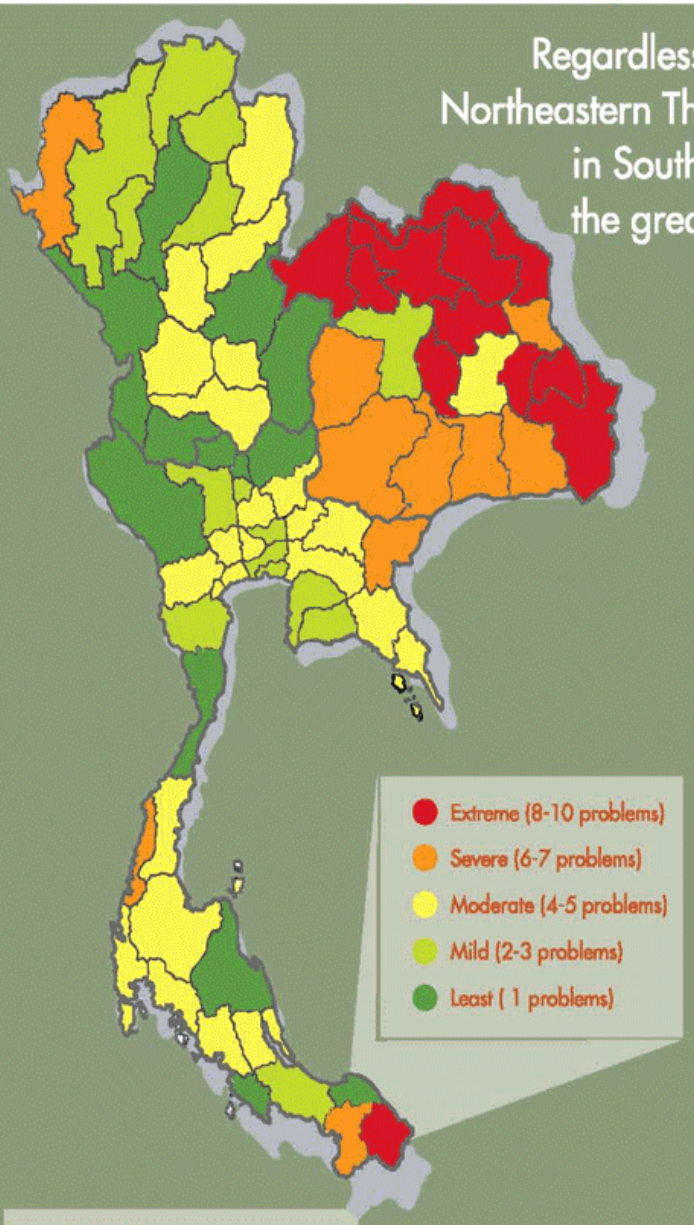
Source: Office of the Cane and Sugar Board, 2003

A health diet should contain no more than 6 teaspoons of sugar per day. At present, however, the average Thai consumes 16 teaspoons per day. Over the last decade, Thais doubled their consumption of sugar. Sugar finds its way into every type of food, with no one worrying about the consequences. Thais add to the natural sweetness of fruit, by using dips containing sugar. People of all ages drink sugary soft drinks. Sugar is even added to savory or spicy foods. It is therefore easy to see how Thais manage to consume 16 teaspoons of sugar per day, or almost three times the recommended amount.

Poverty

One in 10 Thais is still poor, having incomes of less than 922 baht per month

Regardless of how the word 'poverty' is defined, Northeastern Thailand and the three border provinces in Southern Thailand are still the regions with the greatest problems of poverty and ill health



Researchers have tried for many years to define the word 'poverty' and have modified its definition as knowledge has improved. The basic principle is that 'the poor' are those who do not have sufficient income to live on. One method is to define a threshold, and classify anyone whose monthly income falls below this threshold as 'poor' Another complementary approach is to compare incomes across the whole society, to measure inequality within that society.

Both ways of measuring poverty look only at monetary income. More recently, people have begun looking at other indicators of disadvantage, such as literacy, malnutrition, preventable illnesses, or social problems such as landlessness and lack of access to credit.

But however poverty is measured, the provinces in the Northeast of Thailand have the greatest problems of poverty and ill health.

Poverty Problems

1. Income inequality
2. Household size
3. Average income
4. Proportion of expenses per household income
5. Proportion of cigarette and alcoholic beverage costs to total expense
6. Employment rate
7. Poportion of households with income lower than poverty line
8. Life expectancy at birth
9. Ratio of hospital bed per population
10. Ratio of physician per population

Poverty quintile by individual household income

Source: National Economic and Social Development Board, 1988-2002

Proportion and number of poor people

Source: National Economic and Social Development Board, 1988-2002

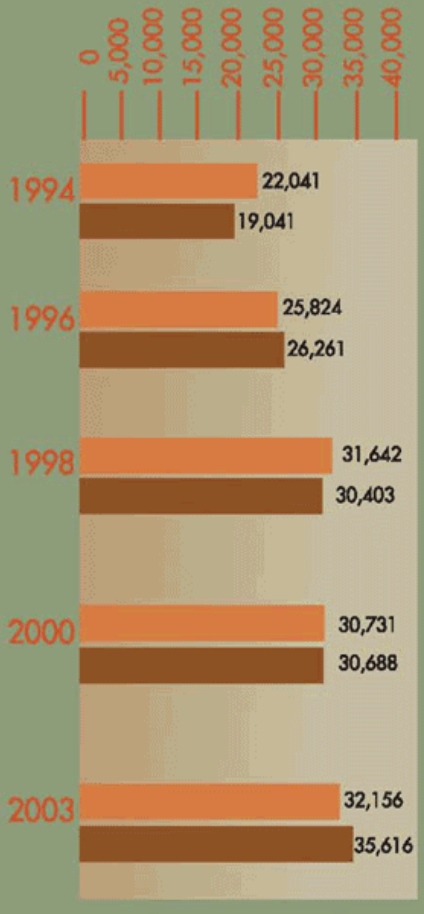
Sources for household loan according to level of poverty (Burirum province only)

Source: Chumrurtai Kanchanchitra, Institute for Population and Social Research, 2004

Household land holding size by degree of poverty (Burirum province only)

Source: Chumrurtai Kanchanchitra, Institute for Population and Social Research, 2004

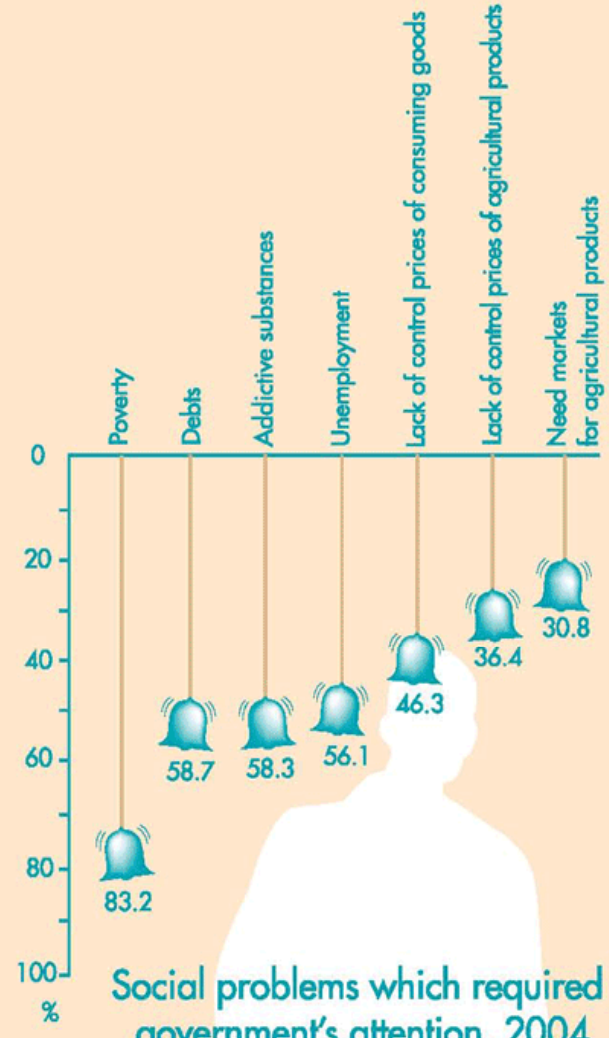
Income and Debts of very poor household, 1994-2003



Source: National Economic and Social Development Board, 1994-200

Human Security

Four million Thai households do not own their own houses and land



Social problems which required government's attention, 2004

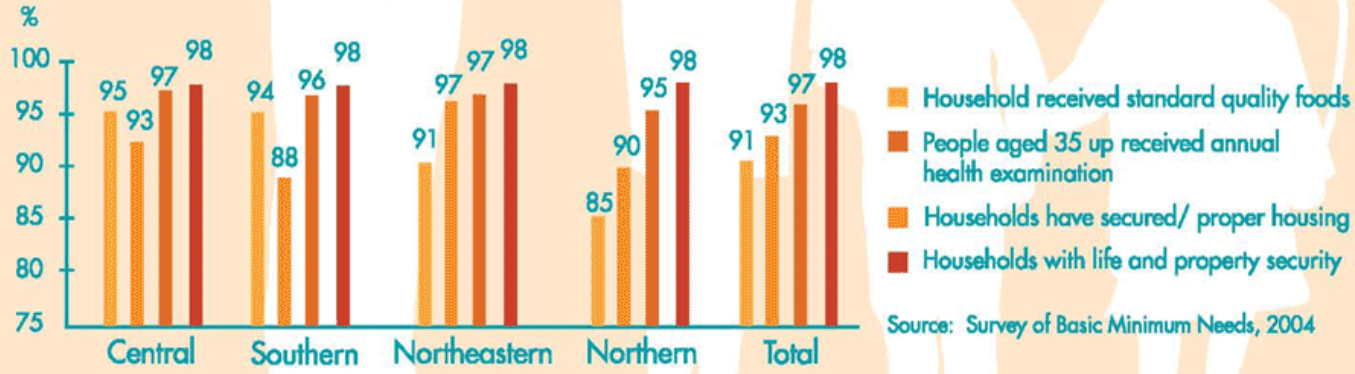
Source: Survey on Attitudes toward Government's Administration
National Statistical Office, 2004

A house and land of our own, sufficient food and water, and access to health services are important indicators of human security. The problem of poverty is still an obstacle to security.

One in five households in Thailand rent their house or the land they live on. The highest rates of ownership are in the Northeast, followed by the North, and the South. Ownership rates outside Bangkok are 50% higher than in Bangkok, because the price of houses and land in Bangkok are several times higher. Many families have to work hard in order to buy their own house and land. It is therefore not surprising that the government's subsidized housing program, which helps low-income people buy land and houses, has been very popular.

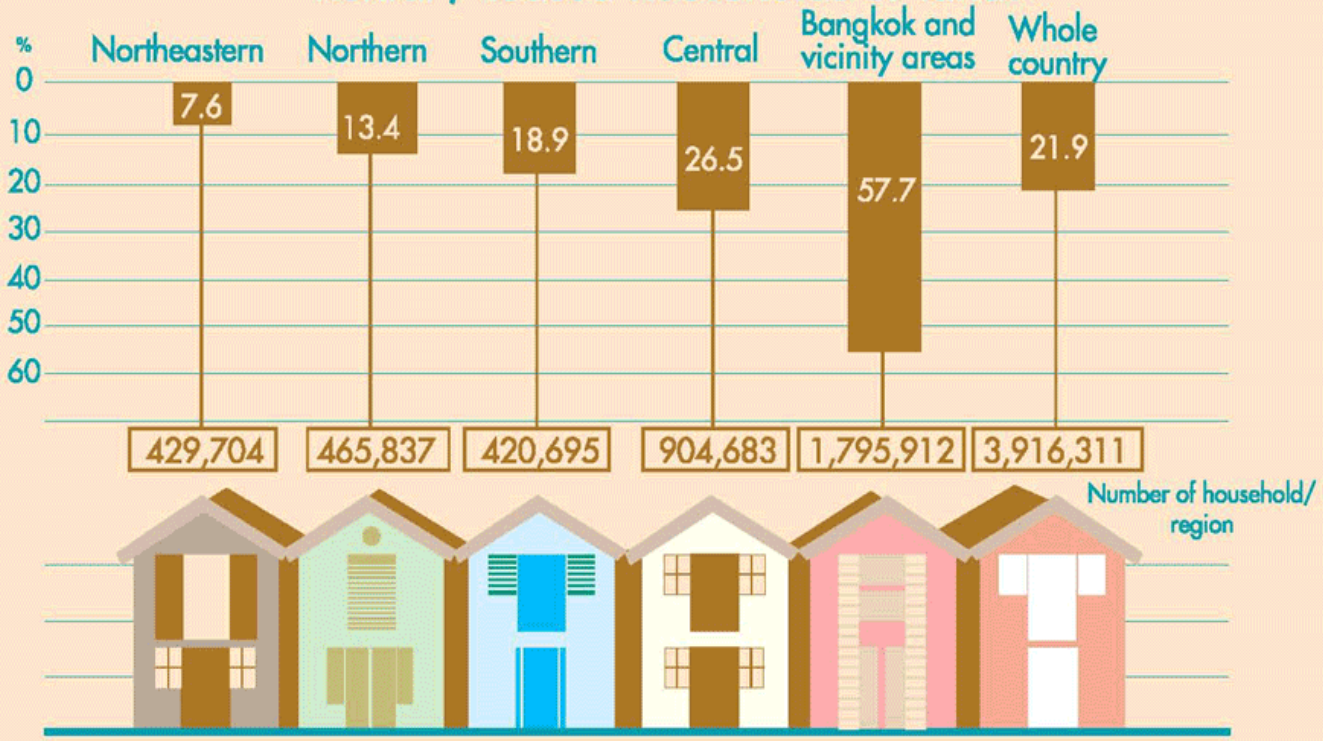
However, household debt is still high. In all regions, the value of household debts are 5-7 times monthly incomes, with the South having the highest ratio between debt and income, followed by the North and Northeast. Most people are satisfied with services provided under the Thirty Baht Health Scheme at government hospitals. The lowest satisfaction is reported in Bangkok and surrounding areas. The quality of care provided under the Thirty Baht Scheme is something that still needs attention, in order to make long-lasting improvements. The challenge is to help Thai people escape from the 'poor-sick-uneducated' trap, so that they can attain human security.

Quality of life according to basic minimum needs, 2004

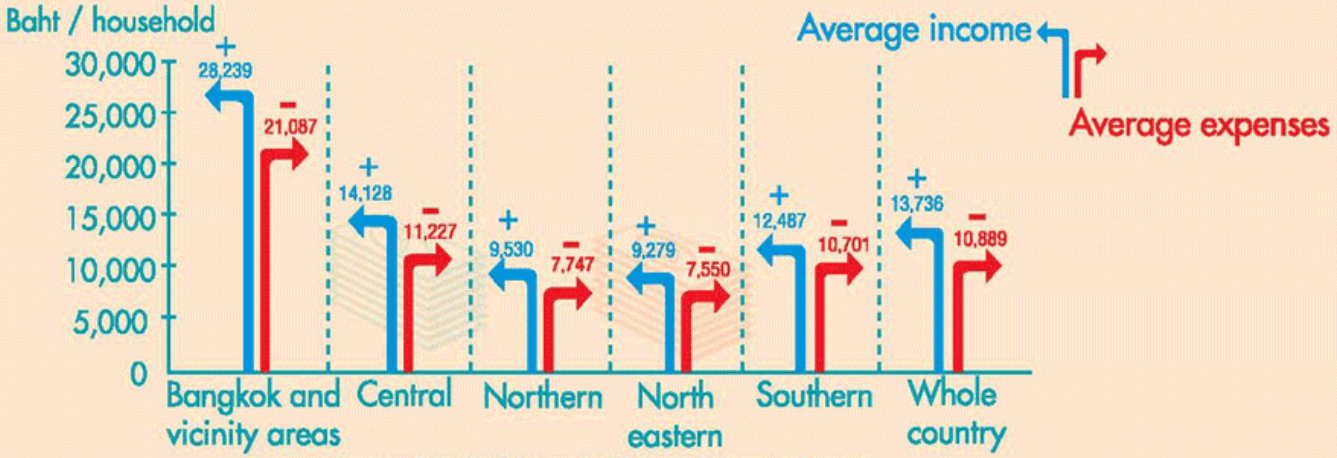


Source: Survey of Basic Minimum Needs, 2004

Rental / leased households or lands

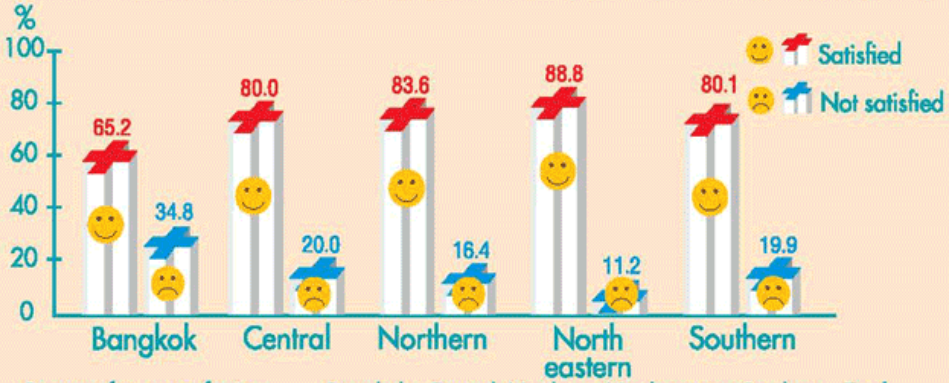


Monthly incomes and expenses by region, 2002



Source: Report of the 2002 Household Socio-Economic Survey

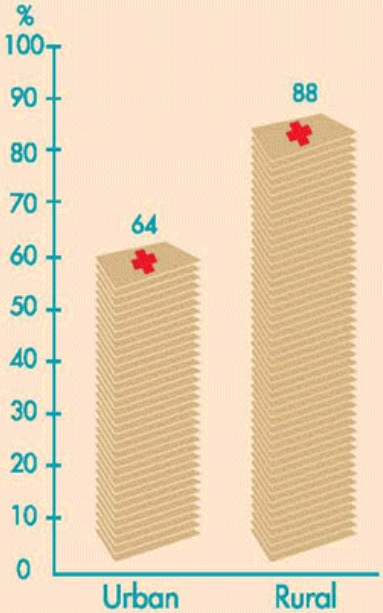
Satisfaction to health services by gold health card holders by region, 2002



Reasons for unsatisfaction	Bangkok	Central	Northern	Northeastern	Southern	Total
Received bad services	33.0	31.2	26.7	28.0	28.1	29.0
Long waiting	28.2	29.4	32.8	38.2	24.4	31.7
Poor quality medicine	28.2	21.8	24.6	14.8	32.3	22.7
Lack of specialized doctors	4.7	11.2	7.7	10.3	7.3	9.0
Lack of modern equipments	1.2	2.4	3.0	2.5	3.4	2.6

Source: Summary of Survey on People's Attitude to the 30 baht Health Policy, NSO, 2005

Gold Health Card Holders, 2003



Source: Report of Health and Welfare Survey, 2003

Mental Health

In the year 2003, 10 males and 3 females committed suicide per day

Thailand is rapidly changing from a society in which people help one another to one in which people compete in everything. To escape from the problems that these changes create,many people commit suicide.

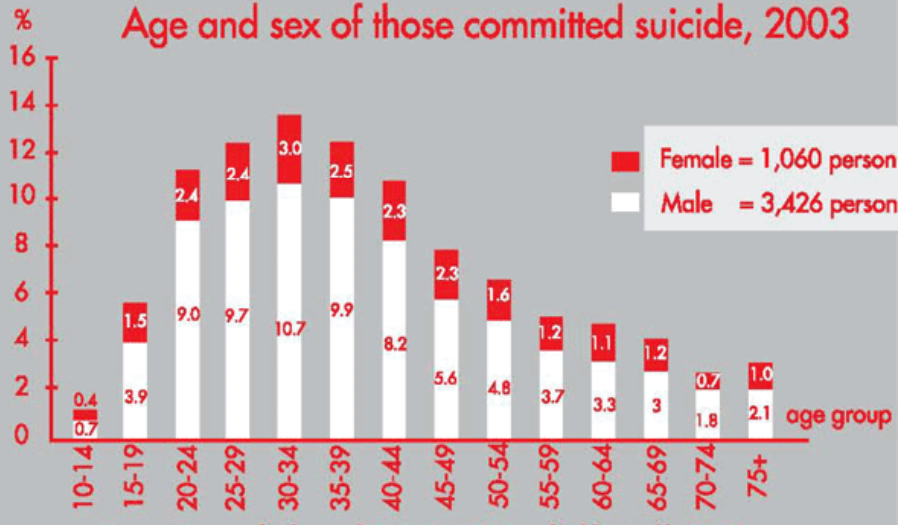
Prevalence of suicide in men and women

Source: Bureau of Policy and Strategic, Ministry of Public Health, 1981-2003

Data about those with suicide attempt or committed suicide

Suicide attempt	Committed suicide
Female (66%)	Male (72%)
Young age	Working age (39.4years)
No physical or mental health problem	Have physical or mental health problem
Methods used not severe	Severe methods used
No early planning	Advance planning

Age and sex of those committed suicide, 2003



Source: Bureau of Policy and Strategic, Ministry of Public Health, 2003

Factors related to suicide

Leading factor

Chronic disease/ AIDS
Psychotic disorders
Alcoholic
Depression
Substance addict
(In case of successful suicide)

Promoting factors

Was blamed /scolded, had arguments
Problems with love/ jealiousy
Family problems
Poor, difficult life, unemployed
Divorced, separated, living alone
(In case of suicide attempt)

Source: Epidemiology of harm self behavior and suicide , 2002-2003

Symptoms suggesting psychosis

Anxiety[1]

- Have anxiety everyday or almost everyday or continuously for month and affected work
- Feeling weak, poor appetite, sleepless
- Nervous, short of concentration
- Fear of improper things like afraid of chicken
- Compulsive recessive behaviors

Emotional disorders[2]

- Occurred in both men and women
- Severe depression, want to die sometimes without a reason, frequent crying, live in isolation or bored of living, self blaming
- Mood swing (sad and ecstasy) sometime in very good mood, like to tease others, talkative
- Have too many projects/ ideas, high self confidence, have illusion or hallucination

Having only one symptom does not suggest psychiatric problems which contain of several problems

Source: 1. Rewrite from interview with Dr.Manote lawtrakul, Psychiatrist at Faculty of Medicine, Ramathibordi Hospital, U-Life Show, 30 July, 2002
2. Dr. Vittaya Narkvatchara, 2003

Prevalence of mental disorders by region (only those aged 15-59 years)

	Male (%)				Female (%)				Total	
	Central	Northern	North eastern	Southern	Central	Northern	North eastern	Southern	%	Amount (persons)
Alcoholic	65.9	44.9	60.6	38.9	13.6	13.5	11.5	1.6	28.5	7.8 million
Emotional disorders	3.3	3.7	10.8	3.8	8.7	6.3	12.6	4.9	5.7	1.6 million
Generalized anxiety disorder	1.2	2.6	5.0	1.5	3.6	3.5	9.3	2.9	3.2	8.4 thousand
Psychotic disorders (lifetime)	1.3	1.2	2.4	0.6	1.3	1.2	2.2	1.0	1.2	3.2 thousand
Psychotic disorders (current)	0.8	0.5	1.0	0.3	0.9	0.4	1.2	0.3	0.6	1.6 thousand

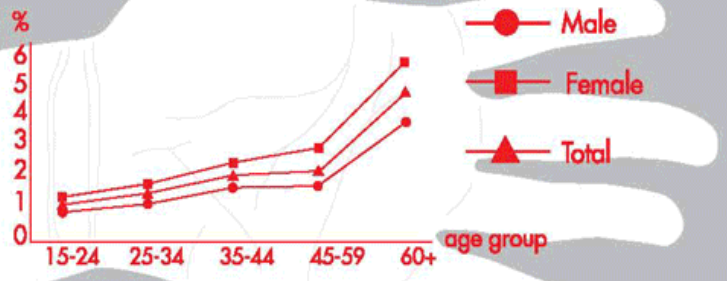
Source: Porntape Siriwanarangsan and Others, 2004

Thailand is rapidly changing from a society in which people help one another to one in which people compete in everything. This problem has deep roots in Thai society. The education system forces people to compete in exams, from kindergarten onwards. People must compete to obtain jobs that are secure and pay well. People have to compete to receive love and attention from their families and acquaintances. To live in such a competitive society, people must be alert all the time. They accumulate stress, and loose self control easily.

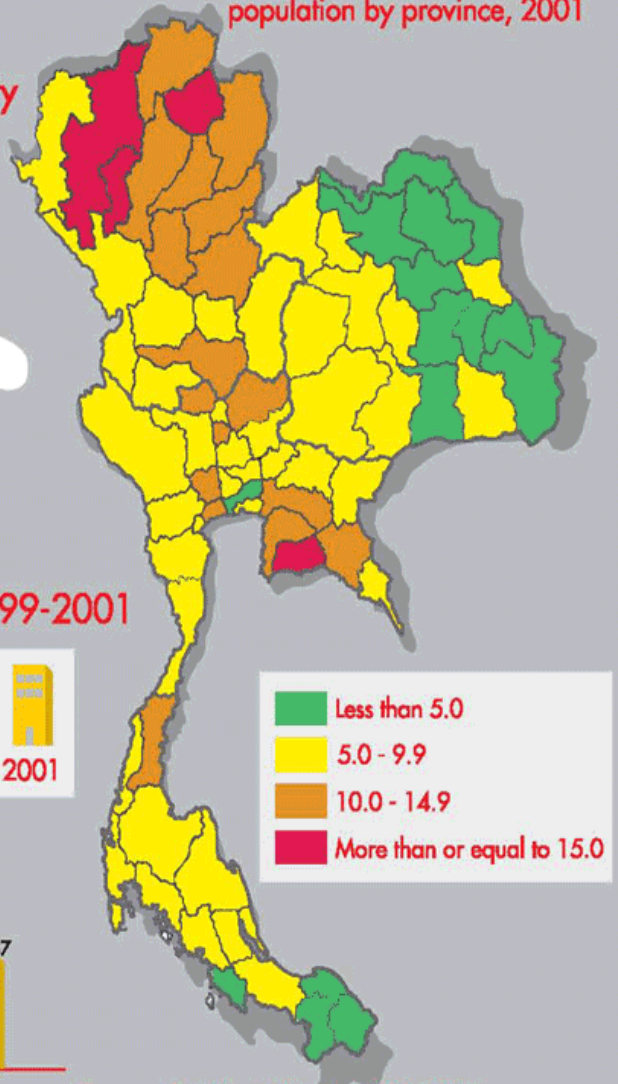
Suicide rates are an indicator of increasing social fragility. Most people who commit suicide feel that they are unloved and ignored, and that they have no other means of escape. Many people have feelings of anger or resentment, and have no one to talk to about their difficulties. In reality, suicide has many causes, and results from the combination of many difficulties at the same time. These problems can be avoided through living in a genuinely Thai way. People can consult others and talk to relative. They can meditate or living according to religious precepts. They can rest and relieve tension. They can look after themselves in a holistic way, attending to physical, mental, social, and spiritual health. In this way they can learn to face mental problems, and not choose suicide.

Prevalence of people with depression or anxiety (severe to most severe)

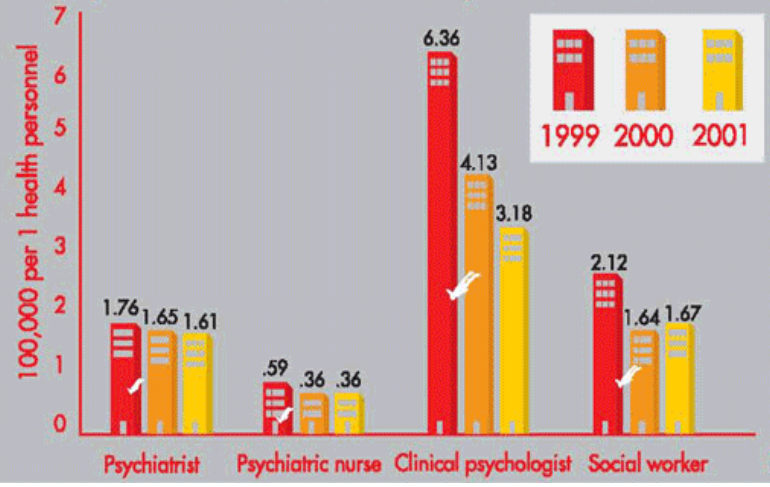
Source: Report of 2003 Health and Welfare Survey, 2003



Suicide rate per 100,000 population by province, 2001



Proportion of mental health personnels, 1999-2001



Source: Thai Mental Health, 2002-2003

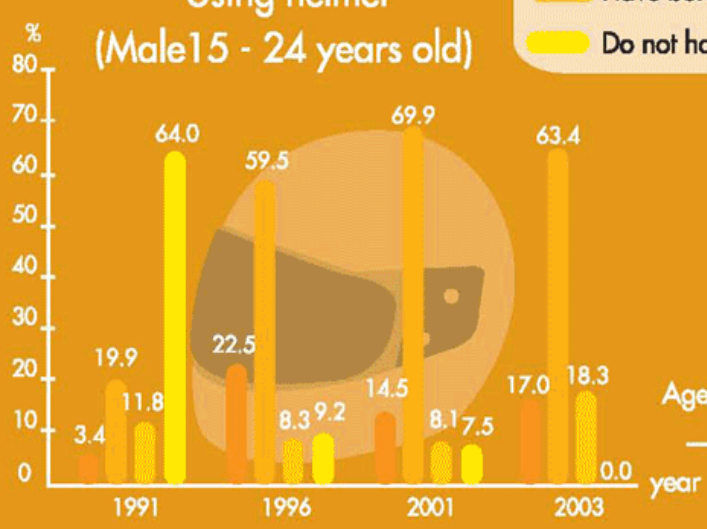
Teenagers

Half of all deaths among teenagers are caused by HIV/AIDS and road accidents

Drink driving, not wearing seatbelts, and not wearing motorbike helmets are still important causes of traffic injuries among teenagers

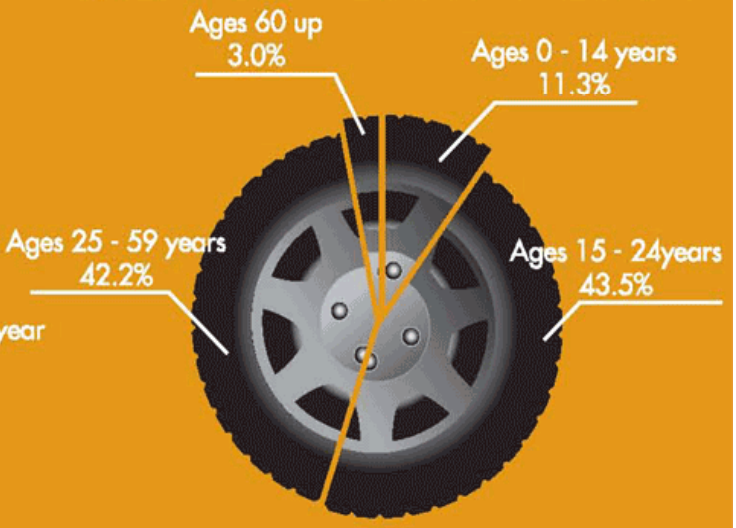
For many years, holidays such as the New Year have implied sights such as dangerous driving and drunk teenagers on motorbikes. The number of teenage males who have never worn a seatbelt is increasing, and one in five teenage males does not use a motorbike helmet. The result is that teenagers have the highest rates of traffic accidents. Teenagers race each other on public roads, which frequently leads to deaths of innocent bystanders. High spirits, competition, alcohol, and lack of concentration all lead to death, injury, and disability among teenagers. Stricter enforcement of the road code may not, on its own, be enough to reduce these problems. Campaigns to change teenagers' attitudes and provide information also require urgent attention.

Using helmet (Male15 - 24 years old)



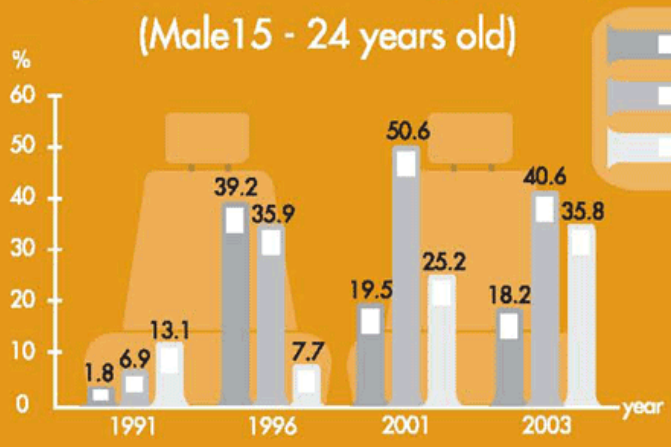
Source: Report of 2003 Health and Welfare Survey, 2003

Ages of those with serious traffic accident

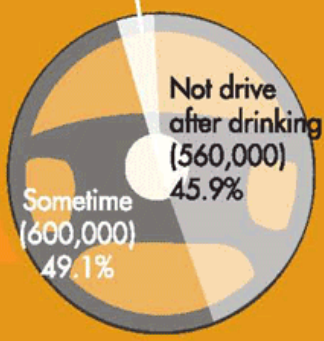


Source: Report of 2003 Health and Welfare survey, 2003
*Not able to take daily activities or required treatment

Using seat belt while driving of teenagers (Male15 - 24 years old)



Drink driving of teenager (15-24 years old)

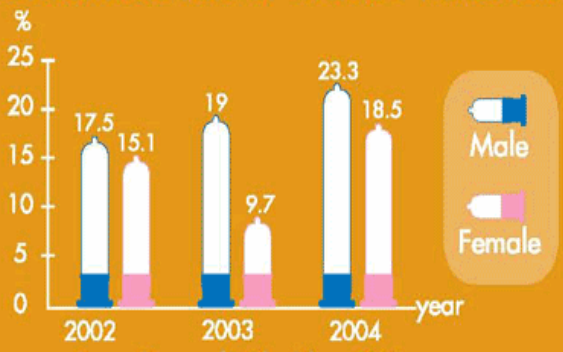


Source: Report of 2003 Health and Welfare Survey, 2003

Attitudes that men and women should not live together prior to marriage

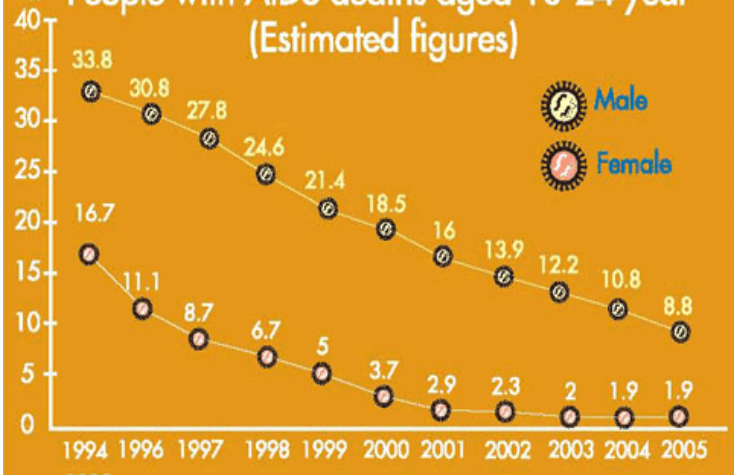
Source: Chayovan et al., 2003

Condom use rate of Grade 11 students



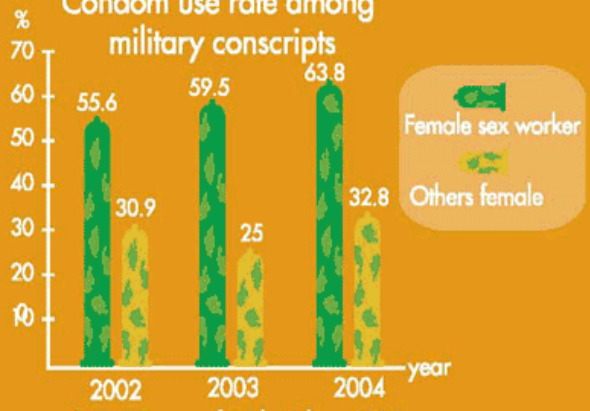
Source: Bureau of Epidemiology, 2004

People with AIDS deaths aged 10-24 year (Estimated figures)



Source: The Working group on HIV/AIDS Projection, 2001

Condom use rate among military conscripts



Source: Bureau of Epidemiology, 2004

Sexual behaviors of students

Visit to commercial sex worker of men aged 20-24 years old

Source: Chayovan et al.,2003

Students with sexual experience

Source: ABAC Poll.,2004

Although the number of AIDS deaths among teenagers is falling, it is important to ask how recent trends in teenagers' sexual behavior will affect AIDS deaths in the future

It needs to be recognized that teenagers now regard sex as normal. Conversations among teenagers are about who did what to whom, who is unfaithful, and who is going out with who. Only one in four teenage males buys sex.

But almost half of teenage males believe that it is acceptable for unmarried women to have sex, and over one in four believe that it is acceptable to live together before marriage. It is worrying that one in five males and females aged 15-19 use condoms, which is a very low rate. How can we be sure that AIDS will not spread among male and female teenagers?

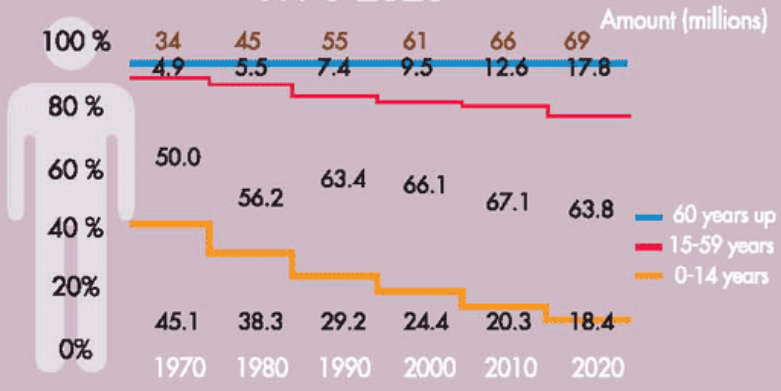
Elderly People

Elderly people who received or gave financial support

Source: Situation of Thai Elderly People, Ministry of Social Development and Human Security

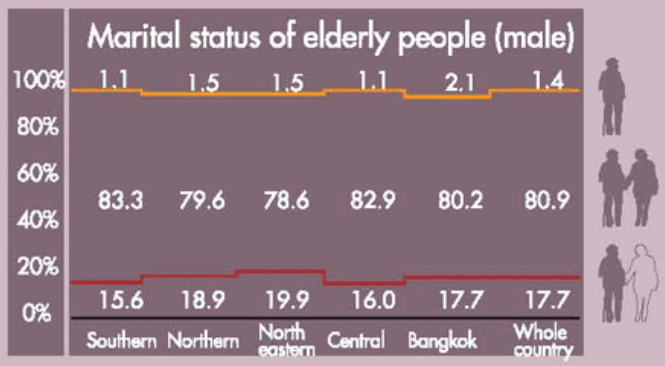
One Thai out of every ten is aged 60 and above. The proportion is set to increase. Rising life expectancy means that there are one million people aged 75 and over.

Elderly population by age groups, 1970-2020

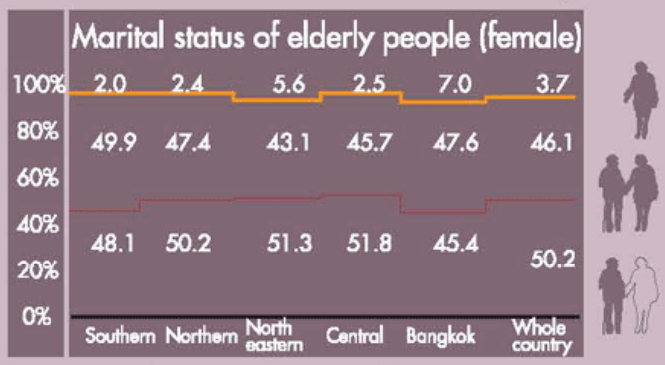


Source: The Population and Housing Census, 1970-2000
Population Projection for Thailand, 2000-2025

Marital status of elderly people (male)



Marital status of elderly people (female)

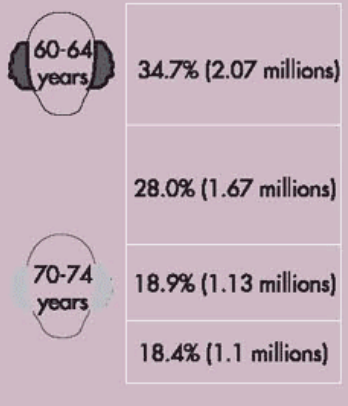


Single | Living together | Divorced / separated

Source: Survey of the Elderly in Thailand, 2002

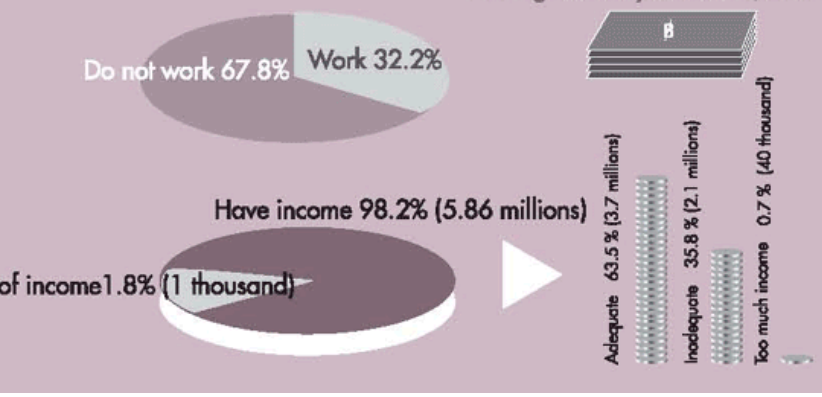
Total number of elderly population 5.97 millions or 9.4% of total population

Elderly people according to different age groups (2002)



Elderly people who did not attain formal education, 2003

Average monthly income 3,431baht



Source: Survey of The Elderly in Thailand, 2002

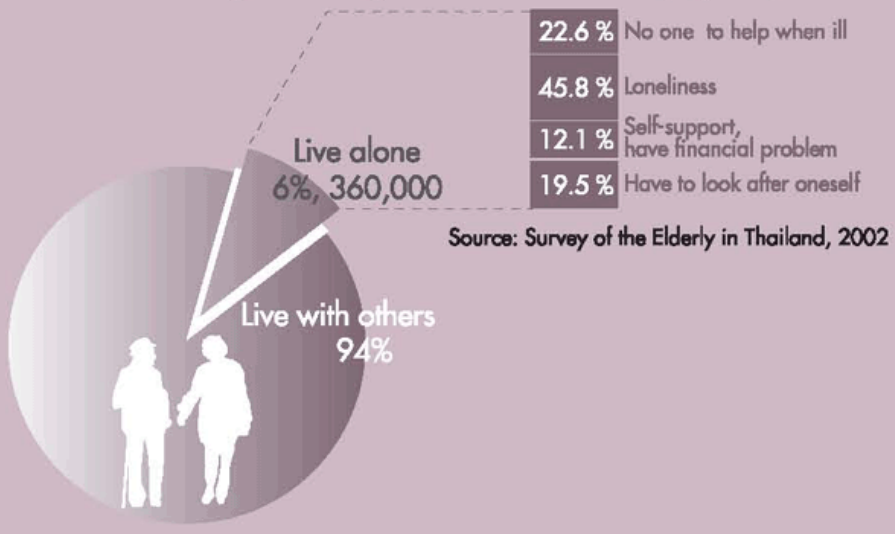
Source: Survey of the Elderly in Thailand, 2002

Two million elderly people lack sufficient income for their daily expenses

It is well known that there are more elderly women than elderly men, since women have fewer risky behaviors than men. Activities for old people therefore usually have more women attending then men. The number of old people is increasing at the same time that the number of children is decreasing, which makes it more difficult for children to look after their parents, as they are expected to do. Some old people continue working, despite receiving low pay, in order to avoid loneliness and boredom. Others have no choice, because, even if they have a pension, it is not sufficient to live on. One worrying statistic is that one in three old people do not have enough money to live on. Children and grandchildren are giving older generations less financial help than the older generations gave them.

A group of old people that needs special attention from the government is those who have lost a child to HIV/AIDS. It is estimates that between 1984 and the present, 550,000 Thais have died from AIDS. Most of these people have been in the working ages. The parents of these people had hoped to depend on them when they were old. Instead, in many cases, the old people have to look after grandchildren whose parents have died from AIDS. The situation of old people is therefore something to which Thais need to pay attention. Old people need to have financial security, independence, a decent quality of life, and dignity.

Living arrangement of elderly people



Source: Survey of the Elderly in Thailand, 2002

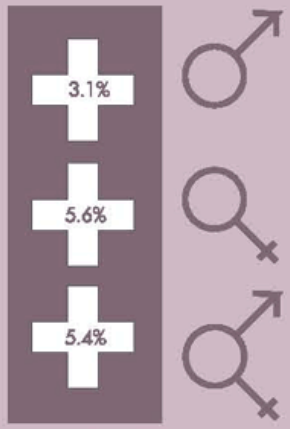
Health risk behaviors of elderly people

	Male %	Female %	Total %
Regular smoking	27.4	2.9	14.1
Regular drinking (everyday or 3-4 times a week)	10.9	1.6	5.7
Lack of exercise	56.6	65.1	61.2
Lack of knowledge about breast examination	-	75.4	-
Never see physician for breast examination	-	80.8	-
Never have cervical cancer screening	-	78.6	-

Health problems of elderly people

	Male %	Female%	Total %
Sick/ ill (within past month)	34.7	44	39.8
Badly sick/ ill (within past month)	5.4	7.1	6.3
Frequent sick (more than 8 times/ month)	6.4	7.6	7.0
Have chronic diseases	45.4	54.8	50.5
Hospitalized (within past year)	12.5	12.4	12.4
Difficult mobility	7.2	10.4	8.9
Difficult self-care	4.1	4.7	4.4
Poorer health than previous year	6.7	7.8	7.3
Poorer health than others in same age	5.8	6.1	6.0
Have diabetes	5.2	10.7	8.3
Have high blood pressure	17.1	24.4	21.2
Injured or had accident	5.2	5.6	5.4
Feeling sad, depressed or memory loss	3.0	4.9	4.1
Lack of concentration or memory loss	3.9	5.5	4.8
Have problem with socialization	4.2	5.3	4.8

Elderly people without health welfare



Source: Report of 2003 Health and Welfare Survey, 2004

1. The Tsunami
The Worst Natural Disaster in the World

> No one predicted the earthquake under the ocean off the coast of Sumatra, measuring 9.0 on the Richter scale, would lead to such a massive human tragedy. The wave generated by the earthquake hit 12 countries around the Indian Ocean, and killed 300,000 people.

The celebrations and parties that Thais had prepared for the New Year of 2005 were immediately cancelled on the morning of 26 December 2004, when the tsunami hit six provinces on the Andaman Sea, destroying the lives and property of thousands of people, as well as coastal habitats and historical sites. It was a year's end that was full of tears and human tragedy, which will be difficult to forget.

The disaster was caused by a violent earthquake at 7:58am, Thai time. The epicenter of the earthquake was under the east coast of the Indian Ocean, near the city of Banda Aceh on the island of Sumatra. The United States Geological Survey measured the earthquake to be 9.0 on the Richter scale. It was the fourth most powerful earthquake ever recorded, and the most powerful for 40 years.

No one predicted that the clash of the continental plates would cause a fissure more than 1,000 kilometers long under the Indian Ocean, which would cause enormous tragedy in Thailand. Water was sucked into the fissure, and was then forced out again, creating a 80-200 kilometers long, traveling at 700-1,000 kilometers per hour. When it reached shallow water, it slowed down, but rose to 10 meters high as it reached the beaches. This was one of the greatest natural catastrophes in the history of Thailand and of the world.

Numbers of people killed, injured, and missing

In the first minute that the tsunami reached Phuket it crashed down on Kamala, Patong, Kata, Karon, and Rawai beaches, sweeping away everything in its path, and causing massive destruction.

Aside from Phuket, the tsunami reached all along the Andaman coast, hitting the provinces of Ranong, Phangnga, Krabi, Trang, and Satun. Phangnga suffered the greatest number of deaths. According to data of 8 March 2005, 5,395 Thais were killed by the tsunami, 8,457 were injured, and 2,932 were missing (see Table 1).

There were 127,282 undocumented migrant workers from neighboring countries in the six provinces. It is likely that many of these people were also killed and injured. Some indication can be gained by looking at the number of fishers who were lost at sea. A total of 1,200 boats of 10 meters or more were missing after the tsunami. Each of these boats had 10-30 migrant workers. If migrant workers employed in hotels and resorts, or on beachfront shops, are also included, then it seems likely that around 2,500 migrant workers were killed. The places with the most deaths were Ban Nam Kem, and Khao Lak, in Phangnga.

The tsunami also caused devastation in seven other Asian countries: Indonesia, Malaysia, Myanmar, Bangladesh, India, Sri Lanka, and Maldives. It even reached four African countries: Somalia, Kenya, Tanzania, and Seychelles. The global death toll was 298,705 people. The most deaths occurred in Indonesia, the country closest to the epicenter of the earthquake, with 237,488 people killed in total. (see Table 2).

Among tsunami deaths across the affected countries, many were tourists from Europe and from Asia. It was, therefore, called a global tragedy.

Destruction of property, lives, and natural features

In the affected provinces, a total of 11,616 houses were damaged, of which 4,363 were totally destroyed. In addition, more than 968 hectares of farmland, 1,224 fishponds, 651 cows and buffalo, 4,044 poultry, 1,214 large fishing boats, and 4,337 small fishing boats were lost. The total value of the productive assets lost was 9,168 million baht. Altogether 503 hectares of coral were partly damaged and 88 hectares were completely destroyed, 992 hectares of beach were damaged, 298 hectares of mangrove swamps were partly damaged, and 89 hectares were badly damaged. Following the loss of lives and property, approximately 20,000 people working in the tourist industry lost their jobs, including about 3,700 people in Phuket, 4,000 people in Phangnga, and 3,000 in Krabi. The government has provided many forms of assistance to these people, including compensation money and help in finding new jobs.

Approximately 10,000 people working in industries that depended on the tourist industry were also affected. These people were not eligible for social welfare.

An organization assisting undocumented migrant workers affected by the tsunami stated on 27 February 2005 that about 1,600 survivors of the tsunami were unemployed because they had lost their personal identification papers. However, no government agency has estimated the number of migrant workers killed or injured in the disaster, or the number of migrants who lost or changed their jobs, or the number of employers who need migrant workers to replace people killed by the tsunami. In addition, the government has not seriously conducted any investigations of migrants who died in the tsunami, has not offered any help to survivors, and has not tried to replace migrants' identification papers.

Help from many sources

After the crisis, Thais from every part of the country came to the six affected provinces to help. There was a saying that the 'wave of kindness from Thais was many times bigger than the tsunami.' Large numbers of volunteers worked without rest, alongside survivors and local people. In addition to sympathy from Thais, other countries sent help in the form of medical teams,police, forensic science teams, counselors, relief supplies, money, and volunteer translators.

The government instructed the Ministry of Interior and the Governors from the affected provinces to mobilize police, soldiers, local officials, and volunteers to assist the survivors, and to mobilize doctors and nurses to treat the injured and carry out post-mortems. The government worked with embassies to assist foreigners. It also began to prepare plans for rehabilitation, including mental recuperation and the repair of public buildings, career rebuilding, tourist sites, and ecological recovery.

The disaster demonstrated that Thailand has abundant social capital when facing a natural catastrophe. Thais helped themselves, one another, and people from other countries, before the arrival of official assistance. The kindness shown by Thais received praise from the Scandinavian tourists.

It is time for Thailand to improve its earthquake and tsunami warning system

The lack of warnings about the tsunami has persuaded people around Asia to establish a warning system. At the ministerial level meeting in Phuket on 29 January 2005, ministers from around the region decided to cooperate in establishing a warning center in Southeast Asia and the Indian Ocean. Under the resolution, the United Nations would supervise the installation of the warning system including the establishment of a fund that would provide supports to the warning system installation. Thailand is also establishing a broadband satellite system, connected to the warning system in Hawaii.

However, early warning systems based on local wisdom should also not be overlooked. Traditional instructions about what to do when the sea rose and fell helped the Morgan people and many tourists narrowly escape death. Similarly, fishers in the village Laem Tookkae on Sirae Island in Phuket observed that the sky appeared unusual, and that many marine animals swam to shore on the morning of the tsunami. The fishers decided that something strange was happening, and prepared themselves for danger. No one in this village was killed in the tsunami.

Television, the most powerful mass medium, failed to give warnings or adequate information on the first day of the tsunami. Television stations, whether public or private, have to ask themselves in natural disasters, what can they do to reduce loss of life and property? In addition, what can the government do to make television more useful to society? News programs currently compete among themselves to mislead viewers with feel-good stories, devoid of content, rather than quality programs.

Money also needs to be invested in an earth- quake warning system, because most Thais know nothing about earthquakes, and because no Thai government has ever invested in research on earthquakes. The first step would be to investigate the nature of the fault lines passing through Thailand. Preparing for an earthquake is difficult, because natural events are hard to predict. However, it is possible to prepare measures to protect tall buildings from the effects of tremors. In terms of the plans on national earthquake system, the government has laid out the plans as following.

1. Establish an information center in Bangkok that will coordinate different agencies, such as the Department of Meteorology, the Department of Geological Resources, and the Department of Pollution Control. All data will be provided to technical experts, who will decide whether to issue a warning.
2. Construct a warning system to send data to the information center, which will distribute it to all radio and television stations, to 150,000 amateur radio operators, and to the message services of more than one million mobile phones.
3. Construct warning towers in high-risk areas. This will be completed by the end of 2005. The first towers will be built in the southwestern provinces that experienced the tsunami. The next will be set up in the Southeast, and then finally in the eastern part of the Gulf of Thailand, and in low-lying areas near water. These towers will use battery or solar power, and will be sent information by satellite. Even if electricity is cut off, the communication system will be intact. The towers will broadcast spoken warnings and use sirens. With 20-30 meters high, the towers will be able to withstand wind and waves, and will have warning lights at night.

Natural barriers are the best defense against natural hazards

The Ministry of Natural Resources and Environment has assigned Chulalongkorn University to bring together academics from educational institutions to make plans for environmental recovery consisting of four plans on natural resources, information technology and natural resource database, environment preservation areas , and the recovery of damaged marine national parks.

However, experience with the tsunami shows that nature provides the best protection against natural disaster. The tsunami caused enormous damage to areas along beaches, but much less damage in areas where there were mangroves. Places with natural barriers, such as the fertile mangrove of Ban Bang Ben, Ranong province, escaped much of the devastation received by places without barriers, or where the barriers had been removed.

Are we ready to recognize the importance of nature and to live in ways that are in harmony with it?

Table 1 Number of people killed, injured or missing from the tsunami (As of 8 March 2005)

Province	Killed	Missing	Injured
Phuket	279	620	1,111
Phangnga	4,224	1,733	5,597
Krabi	721	569	1,376
Ranong	160	9	246
Satun	6	0	15
Trang	5	1	112
	5,395	2,932	8,457

Source: www.disaster.go.th/news01/1247/news_after_shock_97.pdf

Table 2 Number of people killed, injured,and missing from the earthquake and tsunami, by country (As of 24 February 2005)

Country	Killed	Missing	Injured
India[1]	10,872	5,766	7,214
Indonesia[2]	123,487	113,961	1,736
Malaysia[1]	68	6	767
Maldives[1]	83	26	1,313
Myanmar[1]	61	3	43
Sri Lanka[1]	30,974	4,698	23,176
Bangladesh	2	-	-
Thailand	5,395	2,932	8,457
Somalia[2]	298	-	-
Kenya[2]	1	-	-
Tanzania[2]	10	-	-
Seychelles[3]	3	-	-
Total	171,254	127,392	42,706

Source 1. World Health Organization http://w3.whosea.org/EN/Section23/Section1108/Section1835/Section1862_8812.htm accessed 24 Februaru 2548;
2. IFP News office,http://story.news.yahoo.com/news?tmp=story&cid=1539&ncid=1539&e=11&u=/afp/20050224/sc_afp/asiaquaketoll_050224130937 accessed 24 February 2548;
3.http://www.reliefweb.int/rw/RWB.NSF/db900SID/SODA-69G9SE?OpenDocument&rc= 3&emid= TS-2004- 000147-LKA
Note Dashes indicated no data available

3. The Dilemma on Bird Flu Epidemic: Human Health or Poultry Exports?

Bird Flu is an example of a new infectious disease that poses grave dangers to health, the economy, and society. The Asian bird flu epidemic caused record losses in 2004. Over100 million birds were killed in attempts to control the epidemic. Twelve Thais and 20 Vietnamese died from the illness.

“

At the end of 2003, there were news reports that chickens in coops in Nakhon Sawan Province in Thailand were dying of a strange illness. However, only when chickens throughout the country began to die did the government accept that the country was facing a bird flu epidemic. In mid-January 2004, the epidemic had spread to 32 provinces. Almost every Thai household kept chickens for eggs and meat, and production of chickens was an important export industry for the country, earning 60 billion baht in 2003. In 2004, once the epidemic had arrived, earnings fell to 30 billion baht.

The dangers posed by bird flu can be seen from the two outbreaks of the virus in 2004. The government tried every method to control the disease, killing tens of millions of chickens, and paying more than 5 billion baht in compensation. It enforced rules on safe methods for raising chickens, established special areas for poultry farming, and introduced regulations on the movement of poultry.

All this merely led to the slowing of the epidemic in late 2004. In early 2005, there was a serious outbreak of H5N1 in Vietnam. In Thailand, there may have been a third outbreak, because the illness was still detected in chickens raised in homes. Around 0.5-1 percent of wild birds and 1-2 percent of commercial chickens were infected. Thailand has about 10 million wild ducks; in some places 40 percent of these were infected. This led the government to order another round of tests. Many people predict that Thailand and neighboring countries will continue to be a source of the disease for many years

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Infection of humans

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Lessons about the suppression and disclosure of information about bird flu

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It is therefore not surprising that government officials at first tried to suppress news about the deaths of Thai chickens. Some officials claimed that the chickens were dying from a form of cholera that appeared every year. But it is important to ask why Thai officials, after receiving information from neighboring countries, ignored the dangers to Thailand.

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Disputes about the epidemic

It has to be accepted that bird flu is a new issue for Thai society, and little is known about it. People are concerned about the epidemic, but with little knowledge on the H5N1 Virus, the parties involved have two disagreements on the approaches of solving the problem:

1. Disagreements about methods for raising chickens in Thailand. On one side are people who want to raise chickens using industrial methods, which treat chickens like goods, and enclose them in farms where they can be controlled. On the other side are people who want to raise chickens domestically, who believe that chickens should live in natural conditions so that their immune system can be naturally developed. During the first outbreak, chickens raised using industrial methods, which were weaker than domestic chickens, suffered higher mortality. But in the second outbreak, many domestic chickens and ducks died. It is possible that the outbreak started among the industrial overcrowded birds, and then spread to the domestic ones. However, there have not yet been systematic studies of this issue.

2. Disagreements over the use of vaccines. The main users of vaccines are people raising laying hens, domestic chickens, ornamental chickens, and cock-fighting chickens. If birds receive the vaccine after they have been infected but before they show symptoms, they may continue not showing symptoms despite being infectious. The risk of infection is low, however, as the quantity of the virus is reduced by about 1,000 times. Vaccinated chickens can be raised as if they were uninfected. Opponents of vaccination argue that vaccinations may cause the virus to evolve into a more virulent form that can infect other animals. Use of vaccines may also affect systems of disease control, by making it impossible to distinguish between infected and non-infected birds. In addition, there is a risk that trading partners, especially the European Union and Japan, will refuse to allow imports of chickens from Thailand if any chickens or other birds are vaccinated. Regulations in both places forbid the importation of vaccinated birds. This rule does not apply to cooked chickens, but consumers are likely to reject these too if they are vaccinated.

Rather than waiting for scientists to reduce the uncertainties, concerns about the effect on chicken exports have led Thailand to be the sole country in the world to forbid the use of vaccines in all animals, and to forbid the legal registration of a "bird flu vaccine".

Long term solutions

It is undeniable that there is no easy solution to the problem of bird flu. Collaboration among countries is essential. Thailand itself needs strong surveillance measures. It needs to be able to test for the disease in animals and people in order to control it quickly. Thailand can use its 900,000 village health volunteers to continuously monitor the disease-an idea that has drawn praise from the World Health Organization representative.

Humans have to co-exist with diseases that can kill many people. If bird flu cannot be eradicated, ways must be found to cope without great loss of life. People must take ownership of the problem, share ideas, and cooperate to find a solution. The government must work efficiently, cooperating with civil society.

The bird flu crisis indicates that we still lack sufficient knowledge about migratory birds in Thailand. Therefore, we need systematic studies of Thai birds. Volunteers should be recruited among birdwatchers to collect information and do the research about the birds.

Bird flu is becoming a global problem. there are influenza epidemics every 10-30 years. Every epidemic comes from the transformation of an influenza virus in birds. The last such epidemic was 40 years ago. It is possible that the next epidemic will come from bird flu. Medical scientists around the world believe that bird flu, and particularly H5N1, is coming into contact with people, and may combine with human influenza, or evolve so that it can spread easily from person to person. If this happens, it could kill tens of millions of people. The government therefore needs to prepare plans for dealing with a large-scale epidemic of bird flu, as well as finding ways to fight the disease.

Table showing events associated with bird flu in Thailand from November 2003 to January 2005

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February 2004	The government started a campaign 'Eat Thai chicken, 100% safe', and promised that the family of anyone who died from eating well-cooked chicken would receive 5 million baht.
March 2004	The Prime Minister announced that bird flu was receding, and that the government was preparing to declare Thailand disease-free on 9 April.
April 2004	In Chiang Mai, 1,000 chickens died. The government postponed the declaration that Thailand was diseased free until 27 April. It then accepted that it could not make the declaration.
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June 2004	There were protests that the compensation paid for bird flu was unfair. In Phichit Province, it was found that people were deliberately bringing chickens together to infect them and claim compensation.
July 2004	At the beginning of the month, bird flu was discovered in a farm in Ayutthaya. Subsequently it was detected at 59 places in 21 provinces.
August 2004	The Ministry of Public Health prohibited the import, sale, or use of bird flu vaccines. The punishment for violations of the regulation was up to three years in prison.
September 2004	The Ministry of Public Health announced a new plan entitled "Protect 100%, across the country". Rather thanwaiting for disease to be detected, it began to take preventative measures.
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January 2005	The epidemic in Vietnam became widespread, killing 10 people. In Thailand a law was passed accepting the recommendations of the strategic plan. A budget of 5 billion baht for the period 2005-2007 was approved.

3. The Dilemma on Bird Flu Epidemic: Human Health or Poultry Exports?

Bird Flu is an example of a new infectious disease that poses grave dangers to health, the economy, and society. The Asian bird flu epidemic caused record losses in 2004. Over100 million birds were killed in attempts to control the epidemic. Twelve Thais and 20 Vietnamese died from the illness.

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At the end of 2003, there were news reports that chickens in coops in Nakhon Sawan Province in Thailand were dying of a strange illness. However, only when chickens throughout the country began to die did the government accept that the country was facing a bird flu epidemic. In mid-January 2004, the epidemic had spread to 32 provinces. Almost every Thai household kept chickens for eggs and meat, and production of chickens was an important export industry for the country, earning 60 billion baht in 2003. In 2004, once the epidemic had arrived, earnings fell to 30 billion baht.

The dangers posed by bird flu can be seen from the two outbreaks of the virus in 2004. The government tried every method to control the disease, killing tens of millions of chickens, and paying more than 5 billion baht in compensation. It enforced rules on safe methods for raising chickens, established special areas for poultry farming, and introduced regulations on the movement of poultry.

All this merely led to the slowing of the epidemic in late 2004. In early 2005, there was a serious outbreak of H5N1 in Vietnam. In Thailand, there may have been a third outbreak, because the illness was still detected in chickens raised in homes. Around 0.5-1 percent of wild birds and 1-2 percent of commercial chickens were infected. Thailand has about 10 million wild ducks; in some places 40 percent of these were infected. This led the government to order another round of tests. Many people predict that Thailand and neighboring countries will continue to be a source of the disease for many years

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4. Rape and Thai Society

In 2004, sexual crimes and violence increased markedly, to the point where they became a health issue requiring attention from many groups. However, no one has taken overall responsibility and there is not yet any policy that ensures that all women, young, old, or disabled, will be safe from rape.

One indicator of sexual violence against Thai women has increased alarmingly. The number of reported rape cases in Thailand has increased every year. In 1997, 3,741 cases were reported to the police, while in 2004 there were 5,052, an increase of 35% in only eight years.

Attention must be paid to the efficiency of the police. The proportion of cases in which the rapist is apprehended has been falling each year. In only one third of the cases that were reported to the police in 2003-2004 was the perpetrator brought to court.

It is important to recognize that cases reported to the police are only the tip of the iceberg because many rape victims do not inform the police. In all countries therefore, statistics on sexual crimes greatly understate the true situation. One estimate is that only 5% of rape cases in Thailand are reported. Reasons for not reporting include shame, fear of threats, or the fact that the rapist was someone close.

The true number of cases is a mystery. Many of the accused go free, and some rape again. It sometimes appears that the number of places in Thailand that are safe for all women is steadily declining.

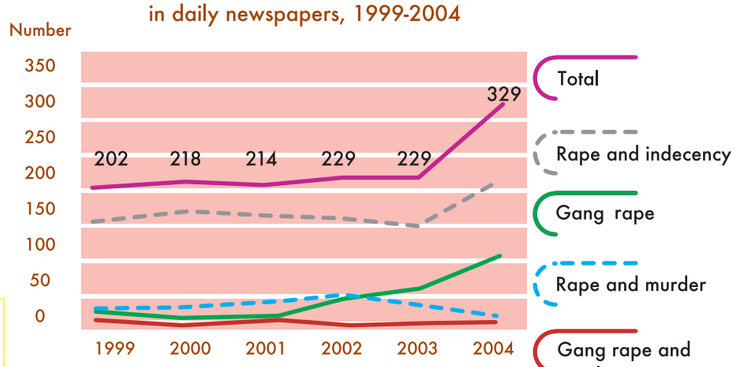
Table 1 Number of rapes reported, 1997-2003

Year	Reported	Rapist	arrested %
2540	3,741	2,576	68.9
2541	3,540	2,391	67.5
2542	4,005	2,532	63.2
2543	4,053	2,640	65.1
2544	3,857	2,544	66.0
2545	4,445	2,556	57.5
2546	4,818	1,707	35.4
2547	5,052	1,861	36.8

Source: Calculated from rape statistics from the Royal Thai Police [http://www.police.go.th/pisc]

The Friends of Women Foundation has collected statistics on sexual crimes reported in five daily newspapers. The statistics, shown in Figure 1, clearly show the number of crimes reported in newspapers increased from 202 in 1999 to 329 in 2004. The number of gang rapes increased from 24 to 100 over the same period.

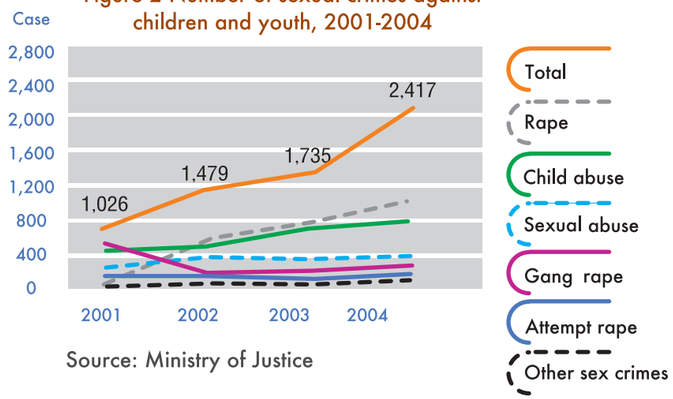
Figure 1 The number of sex crimes reported in daily newspapers, 1999-2004



Source: Data collected from five daily newspapers by the Friends of Women Foundation

The Center for Research on Children and Youth has assembled statistics on sex crimes against children and youth in the period 2001-2004. The total increased from 1,735 in 2003 to 2,417 in 2004. Rapes alone increased from 630 in 2003 to 942 in 2004. This means that in 2004, 2.6 children or youth were raped per day.

Figure 2 Number of sexual crimes against children and youth, 2001-2004



Source: Ministry of Justice

The "rape craze" and the decline of morality

Rape is a major threat to society, but has received little attention from the government. In response to the rise in the number of reported rapes, one newspaper spoke of a "rape craze", and described teenagers abducting women to gang rape them, or patrolling the city looking for victims (Kom Chad Luek, 4 February 2004).

On International Women's Day, 8 March 2004, a report on sex crimes against women in Thailand stated that there were as many a 12 rapes per day, with 4% of the victims aged less than 15 years. At a seminar entitled "How to avoid rape" at the Satri Withaya School on 18 November 2004 described statements by young men who had committed rapes:

One young man who has been prosecuted for murder said that a major cause of rape was women dressing seductively. Men saw these women as offering "free sex", leading them to rape.

Another man, prosecuted for rape of a minor stated that he had once participated in the gang rape of the girlfriend of a friend, because he was drunk and could not control himself, and because the victim had worn a singlet and short skirt.The third young man said that at the time of the rape he had no idea of right or wrong, and that he was overcome by his emotions. He would not do it again, because one moment of lust had led to three years in prison.

The director of the Office of Youth Affairs, in the Royal Thai Police, has said that there are three factors leading to rape: a victim, a perpetrator, and an opportunity. He said that it is necessary to pay attention to all three factors.

Are harsher punishments the solution?

The Minister of Culture stated in early February 2004 that he could not understand contemporary youth, who seemed to think that rape was something normal. He also expressed concern that the age of rapists seemed to be falling, and suggested that rapists be punished to the maximum degree allowed by the law.

A similar idea was expressed by Mr. Wallop Tangkananurak, Chair of the Senate Committee on Women, Youth, and the Elderly. He stated that children, old people, and the disabled suffer the greatest number of rapes, and that Thai society has major problems with sex. He said that one reason for rape was that Thai law did not have sufficiently severe punishments, unlike other some countries, where people did not dare to commit rape.

It should be noted that the Department for Children and Youth, in the Ministry of Justice, has a special policy for youth who commit crimes involving pre-meditation or extreme violence, such as gang rape or rape combined with murder, that in adults can be punished with life imprisonment or execution. The Department's policy is to try these youth in adult courts, as a deterrent to others.

What can Thai society do to eradicate rape?

Many people believe that rape is the fault of the victims, especially those who wearsinglets, tight shirts or short skirts, or who go to dangerous locations. In this view, rape is women's fault.

This view prompts two questions. If women did not dress provocatively, did not walk in dangerous places, and did not go out at night, would rape really disappear? Why do girls, elderly women, and disabled women who live with relatives or by themselves, who dress conservatively, fall victim to rape?

In December 2004 the Ministry of Education responded to the rising sexual violence by distributing a Guidebook on How to Avoid Being Raped to schools all over the country. The guidebook was given to all children in grade 4 and upwards, and to the parents and teachers of children below grade 4.

However, we still lack sufficient policies to protect people from sexual violence, even though Thailand depictions of sex are becoming ever more common, in forms such as pornographic movies or Internet rape games. The guidelines issued by the Ministry of Education are one step, but the reduction in rape will require cooperation from many different groups.

สังคมยุติความรุนแรงต่อผู้หญิงได้
ร่วมมือร่วมใจ สร้างความปลอดภัยให้ผู้หญิง
คำขวัญชนะการประกวดปี 2541
คณะกรรมการรณรงค์ยุติความรุนแรงต่อผู้หญิง

1. Boys need to be raised in ways that lead them to respect the value and dignity of women. There needs to be a campaign against the idea, which is still widespread, that the duty of women is to fulfill the sexual demands of men, and that men's desires for sex must always be answered.

2. The government needs to campaign for adults, and especially teachers, monks, and guardians, to act as good role models for children. If any of these people commits some sort of sexual crime, then they must immediately be disciplined by their profession, before proceeding to a court case.

3. News reports, movies, or television programs that are likely to lead to copycat behaviors should be banned.

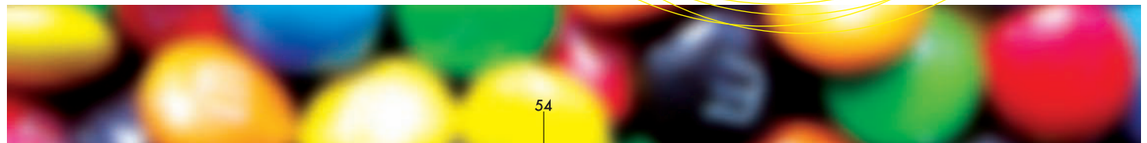
4. Families, schools, communities, and every other part of society must cooperate to establish places that are safe from rape, and to end the pornography epidemic.

5. Close loopholes in the law and weaknesses in implementation that mean victims receive incomplete protection or even further abuse during the legal process.

6. Communities, schools, private organizations, and Subdistrict Administration Organizations need to provide funds and set up measures to reduce the 'want to try, want to know' attitude among teenagers. Local organizations should promote healthy activities such as music, sport, social service, and nature appreciation. Organizations working in the field of mental health need to work with rapists so that they live in society without re-offending.

5. Sugar in children's milk and snacks: Not a small issue for Thai society

All Thais, young and old, like sweet food and drink. The preferences of the country's smallest consumers are reflected in its snack production. Thais once produced snacks in their homes and sold them at local markets. Now, however, the manufacture of snacks is a large andcompetitive industry.



"Who would have guessed that the amount of money that Thai children and youth spend on bags of crunchy snack—which have no nutritional value-would have reached 100 billion baht per year?

Producers of children's snacks understand well that even if their customers do not have their own incomes, clever marketing, pricing, advertising, and distribution of free toys will lead children to buy snacks all day, everywhere, including at school shops. Money finds its way from the parents to the children, and from there to the manufacturers.

Background documents distributed at a conference entitled "Thai Children Know" (Dek Thai Roo Than, 10 March 2004, Bangkok) noted that Thailand's 21 million children and youth aged 5-24 receive spending money of 354,911 million baht per year. Children and youth spend 161,580 million of this on bags of fried snacks. This money is equivalent to 15.7% of the government budget for 2004, or more than the combined budget of six ministries: Defense, Foreign Affairs, Commerce, Justice, Labour, and Health, which together have a budget of only 158,000 million baht.

Altogether 16,470,000 Thai households, or two-thirds of the national total, have debts. The average household's monthly income is 13,736 baht, while the average annual expenditure on children's snacks is 9,810 baht, or about 800 baht per person per month. Average annual expenditure on education is 3,024 baht per year, or 3.24 times less than expenditure on snacks. The huge expenditure on children's snacks has attracted many producers, competing for a share of the market.

Thai children are addicted to sugar from birth

The National Center for Child Health has stated that Thai children's addition to sugar and their problems with obesity begin in the womb. High consumption of sugar by the developing babies' mothers means that the amniotic fluid is sweet. After the babies are born, they are fed sweetened milk. Children who eat sugary food feel full, and refuse to eat more nutritious foods.

The Art and Cultural Institute for Development (MAYA) has found that many caregivers do not see any danger in giving sweet foods or drinks to children. They have been convinced by advertisements claiming that snacks and drinks quickly satisfy children's appetites. The eating habits of the caregivers themselves also contribute to the problem, and the caregivers inadvertently make the children addicted to sugar.

Since addiction to sugar seems to begin from birth, parents and others need to start preventative measures from birth. The Network Against Sweet Food in Thailand has disseminated information on the health effects of sugar consumption. For instance, consuming more than six teaspoons of sugar per day can lead to diseases of the heart and circulatory system, kidney failure, diabetes, and other serious conditions. The network has attempted to change parents' attitudes, to avoid sugar addition and the associated health problems. Many studies by nutritionists and doctors agree that sugar addiction among Thai children must be reduced. In 2004, the Ministry of Public Health began concerted efforts to do so."

Obesity and sugar: Big problems for modern children

The World Health Organization has stated that obesity is a global health problem. In 2003, one billion people out of the world population of 6.3 billion were overweight. Of the one billion overweight people, 22 million were children. The United States, Canada, and Singapore have 'declared war' on obesity.

Researchers in Singapore have found that obesity can even affect intellectual development. Children with low grades are disproportionately likely to be overweight.

However, the Thai government still has no clear policy on combating child obesity. This is despite the fact that the Network Against Sweet Food in Thailand estimates that 20% of 10-year-old children in Bangkok are overweight, and most eat large quantities of fast food. Fast food advertisers are currently targeting children, encouraging them to eat sweet, fatty food. Children's parents do not have enough time to look after the children, so the children face problems of obesity and diabetes from an early age.

The National Health Foundation has said that parents who see milk as being good for children, and insist on children drinking it, are contributing towards the weight problems of Thai children, as the milk often contains sugar. The Child Health Committee called on the Ministry of Public Health to ban the addition of sugar to infant formula. Sugar or honey should not be added to milk or other foods for children. A research program on child obesity carried out by the National Foundation for Public Health and the National Research Fund found that infants who consumed infant formula had a 20% greater risk of nutritional problems than children who were breastfed, due to the use of sugar in infant formula.

The Ministry of Public Health responded by banning the addition of sugar to infant formula on 11 November 2004. The regulation came into force 90 days later. The Food and Drug Administration of Thailand will send instructions to provincial health offices on the implementation of the regulation.

Which is more important: Value for money or risks to health?

Sweet snacks were once something to be eaten after a meal, but now people eat them instead of a meal. The National Institute for Nutrition at Mahidol University has found that Thai children obtain 23%, or almost one quarter, of their calories from snacks, which is substantially more than nutritionists recommend. Children who eat snacks to the point where they refuse ordinary food can suffer from malnutrition and obesity, as these snacks contain flour, sugar, oil, monosodium glutamate, and sugar, but have few of the nutrients that children need for development.

Salt contains sodium and chloride. Humans need about 2,400 milligrams of sodium per day. Packaged snacks contain up to 1,175 milligrams of sodium per hundred grams, so eating more than two packets can be dangerous.

In addition, caffeine, which most people think is only found in drinks such as tea, coffee, and soda, is in fact included in many children's sweets. There are controls on the amounts of caffeine in drinks but none on the amounts in sweets. Long-term consumption of caffeine can affect children's physical and mental development.

Advertising

Advertising of all forms, but particularly television advertising, encourages children to eat unhealthy foods. Many children spend several hours a day in front of the television. These children come to yearn for junk food, or the free gifts that comes with it, and are extremely difficult to refuse. It can perhaps be said that the families and advertisements together create sugar addiction among children.

Mr. Damrong Phuttan, a senator from Bangkok has given a striking example of the prevalence of advertising: "among the children's cartoons shown between 7am and 10:30am one Saturday morning on Channel 1 were 112 advertisements for snacks, showing 69 different types of snack. We do not have the National Broadcasting Commission to control media advertisements, whereas some countries, such as Sweden, prohibit any television advertisements to children under 12 years old".

Professor Praves Wasi has suggested that television promotes consumerism and suppresses creativity, and that televisions have taken over childrearing from parents. He suggests that anything that harms children harms the nation, and that the government needs to take action.

How to reduce sugar consumption by Thai children

1. Require manufacturers to add labels to food and drink warning them about excessive consumption, and showing ingredients and recommended daily amounts. These labels should be constructed so that they are easily read and understood.

2. The government should introduce regulations preventing advertisers from encouraging excessive consumption.

3. There need to be public health campaigns encouraging parents and caregivers to pay attention to the effect of over-consumption on children's health.

All parts of society need to work together to protect Thai children from sugar addiction and obesity.

6. Will Thai traditional medicine fall into the hands of foreigners?

At present, countries compete with each other to sell biological resources in the global market. Thailand is one of twenty countries that is a "bio-diversity superpower". We therefore attract the attention of foreign researchers and companies, who come looking for useful biological products.

The movement to preserve Thailand's traditional medicine began in 2004, after the organization Bio Thai announced that many foreign companies had applied for patents on Thai plants, such as jasmine rice, plao noy, kwao krua khao, and a genetically modified papaya. People objected that Thai traditional medicine and knowledge about plants, which should be community property, were instead becoming the private property of companies or individuals. In November 2004, Thais learnt that a Japanese cosmetic company had, in 2002, applied for a United States patent on kwao krua khao. Kwao krua khao is an important Thai traditional medicine that traditional healers had used for decades as a beauty treatment.

> The patent application cited the use of kwao krua khao as an external medicine to treat the effects of aging on the skin. The patent application included 20 items, such as the chemicals that could be extracted from kwao krua khao, the method of extraction, and the idea of using the chemicals for skin care.

The patenting of traditional medicines is not a new issue: The interesting question is how different patents affect the accumulation of knowledge

The issue of patents on Thai traditional medicines first arose about 20 years ago, with the well-known case of plao noy. This plant is highly effective at healing stomach ulcers. It occurs naturally throughout the provinces of Prachuabkhirikhan, Prachin Buri, and Kanchanaburi. A Japanese company, with the assistance of Thai researchers, patented the active ingredient from plao noy in Thailand. The ingredient is patented under the name Plaunotol, and sold under the name Kelnac, as a medicine for healing ulcers in the stomach and intestine. It is sold in Japan for 30 baht per tablet. The company has no plans to sell the medicine in Thailand. However, it has established a factory in Prachuabkhirikhan to make the active ingredient from plao noy for sale around the world.

It has been claimed that there are many Thai traditional medicines that are at risk of being patented by foreign companies. Examples include fa talai jone, chum hed ted, mon, krajiep daeng, som khaek, luk prakob, kurmin , plai, kwao krua daeng, krachai dam, bua bok, and pepper.

However, Dr. Wichai Chokwiwat, Director of the Department for the Development of the Thai Traditional and Alternative Medicine has observed that there are at least 16 overseas patents on kwao krua, dating from 1957. There are important differences between the Japanese and Korean patents, which have contrasting effects on the development of traditional medicine in Thailand and other countries. The Japanese patent applies only to kwao krua as an external medicine for skin, and clearly specifies the uses. The Korean patent is registered, not only in Korea, but also in many other important markets. It applies to the whole plant, including the head, roots, leaves and stalk. It covers all extraction methods, and also all types of final product, whether drink, food, or medicine. It covers medicine in the form of tablet, capsule, or liquid. The breadth of the patent has a major effect on other producers because it leaves no scope to develop new products.

Cases like that of kwao krua led to an extensive public debate in 2004 on whether foreign companies patenting Thai traditional medicines might be depriving the country of enormous benefits. Some groups strongly opposed patents, while others claimed that there was no cause for concern.

Thai traditional medicines should belong to Thais

The fundamental idea of groups who disagreed with patents was that Thailand had a natural right to its own biological resources. Foreign companies that registered patents were therefore violating the terms of the Convention on Biological Diversity, which has been ratified by more than 100 countries. In addition, patents violate the 1999 Protection of Plant Species Act, which holds that wild plants, such as kwao krua, and cultivated plants do not constitute new entities as required by the patent law of the United States and other countries.

Anyone wanting to take plants covered by the 1999 Act overseas to carry out research or use for commerce has to receive permission from the Committee for the Protection of Plant Species, and has to sign a contract promising to share the benefits. The patent application for kwao krua may also violate Thai law, as Thai traditional healers have known for many years that kwao krua can be used to look after skin.

Groups opposing patents are disappointed that the Department for Intellectual Property and the Department of the Development of Thai Traditional Medicine and Alternative Medicine appear to have accepted that foreign companies have the right to apply for patents. Groups opposing patents suggest that every government agency whose work relates to Thai plant species should try to prevent the patenting of kwao krua because of its effects on research and development, and on the export of Thai medicines based on kwao krua khao.

Patents are not a problem

Supporters of patents argue that international patent law only applies to original inventions that do not have owners. It does not apply to natural products, and kwao krua is a natural product. Thai intellectual property rights have therefore not been violated.

The only Thai people who can oppose the patent are cosmetic producers who make the same cosmetic using kwao krua khao, and who can prove that they invented it before the Japanese company currently applying for patent. To do so they would have to take the company to court in Japan and the United States, and provide evidence that the product is not new because Thais have already invented it. Japan and the United States would then withdraw the patent, as it would violate the inventor's intellectual property rights.

Another factor is that natural plants such as kwao krua khao grow in other countries in Southeast Asia. The Japanese patent application does not clearly specify whether it applies to the Thai plant. Moreover, it is a good thing that a Thai plant is used for research and development and becomes known around the world. Once the 20-year limit on the patent has expired, anyone can produce the product.

Similar arguments have been made by Mr. Kanissorn Navanugraha, Director of the Intellectual Property Department. He has said that there will be no impact on research in Thailand. Anyone can still conduct research on kwao krua khao, and can even produce and sell products that contain kwao krua khao, provided that they do not use the same ingredients as the patented product.

Protecting Thai tradition medicine in the future

Supporters and opponents of patents on Thai traditional medicines agree that the Thai government should make its view clear. It should revise the laws so that it has genuine control over the removal of natural resources, and should promulgate supporting regulations.

It needs to be emphasized that the protection of Thai plants involves more than just biology. Protection also needs to be given to the traditional extraction methods using water and alcohol. Thais should have the right to use medicines produced with traditional extraction methods. The government should apply for international patents, and appoint an agency to take responsibility. The government will need to pay the costs, because they are beyond the means of private organizations in Thailand.

The Department for the Development of Thai Traditional and Alternative Medicine has made two suggestions for Thai traditional medicine:

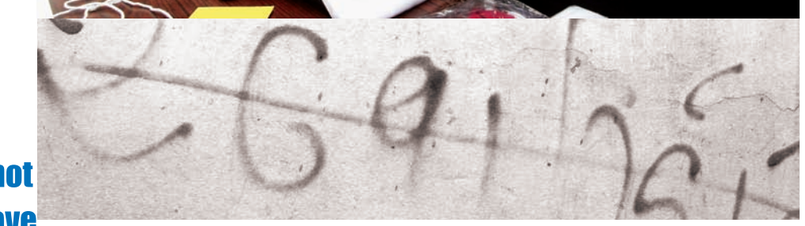
1. Support comprehensive research on Thai traditional medicine, to develop high quality production that can be patented in Thailand and in important overseas markets. Build a secure knowledge base for developing Thai traditional medicines, drawing on agricultural knowledge, science, and law.

2. Accelerate the cultivation, breeding, classification, modification, production, and marketing of traditional medicines.

8. Teenage Violence:
High-spirited or hooliganism? Accidental or intentional?

Regardless of whether teenage violence is "intended" or accidental, Thai society should not leave teenagers to defend for themselves. We have to change our attitudes, so that we take care of all children, and not just our own. Adults, who were once teenagers themselves, have to help each other find a solution to the problem.

In 2004, the number of cases of teenage violence again increased alarmingly. Police statistics show that in Bangkok alone, between October 2003 and August 2004, there were more than 3,000 cases of teenagers fighting one another. The high incidence of teenage violence prompts questions about contemporary Thai society. What is happening to young people, the future of the nation? What are these acts of violence: accidental or intentional



The patterns of teenage violence in 2004

When teenagers join up with their friends they become a powerful force. This is a good thing when the teenagers are doing something constructive, but is dangerous to the health of society when the teenagers lack self-control. The crimes committed by teenagers in 2004 reflect weaknesses in the institution of the family and weaknesses in Thai society. (The discussion will not consider sexual crimes, which are discussed in an earlier section of the report.)

• Theft by teenagers To obtain money for entertaining themselves, teenagers steal money from defenseless individuals. Teenage thieves use motorbikes and knives, and patrol for victims at night. An example is the crime that took place on 5 January 2004, when three teenagers stole the property of two male students from Kasetsart University within a short period at a bus stop. The students were beaten from behind until they were unconscious. The three teenagers slashed another person on the face and arms so that he required 50 stitches.

The favorite target of teenage thieves is mobile phones, since they are easy to steal and easy to sell. For instance, a 15-year-old boy in Yasothon Province was riding home on his motorbike when he was attacked by four teenagers. The teenagers slashed the boy with a knife until one of his fingers was nearly severed, and then stole his mobile phone. The police apprehended the attackers the next day. A worrying feature of this crime was that the teenagers appeared to be imitating a scene from a movie.

Another teenage crime was particularly frightening because it occurred in a temple, indicating that nowhere is safe. The crime occurred on 19 August 2004. A 17-year old thief was attempted to enter the temple to steal goods. A nun who happened to be passing saw him and called out. The thief attacked her with a knife, cutting her on the head, face, and arms in an attempt to kill her. The nun required 205 stitches.

• Teenagers disturbing the peace Aside from fighting, which has become a regular occurrence, teenagers also destroy public property, such as telephone booths and traffic lights, and vandalize cars. They show no respect for the laws or the police. For instance, in Chiang Mai in January teenagers in a motorcycle gang set fire to four shops on a main road, for no apparent reason.

Another shocking event was the death of a well-known comedian. A teenager threw a rock at the comedian's car when he was traveling on the highway. The rock hit the victim in the face and cracked his skull. The teenager confessed that he did this because he was angry at the van for turning its headlights on full. The teenager stated that he always kept rocks with him to throw at barking dogs.

• Boy racers Teenagers modify their motorbike exhausts to increase the noise. They ride their motorbikes in a near-suicidal manner, with no concern for safety of the friend or girlfriend sitting behind them. Boy racers are a difficult issue for police: many officers have been hurt while chasing offenders. Ordinary people who try to stop the racers have also been injured.

The boy racers also damage public property. One such incident occurred on 12 September 2004. About 50 police officers from Phayathai Police Station set up a checkpoint to apprehend members of a motorcycle gang who had been disturbing the peace. Gang members responded by vandalizing traffic lights and control boards in the Phayathai area.

Studies of why teenagers use violence

In 2003, the ABAC Poll research organization from Assumption University studied the violent behavior of male students in secondary schools and technical colleges in Bangkok. They found that the influences that prompted violence were as follows.

Rank	Influence (respondents could choose more than one)	Percent
1.	Movies	57.9
2.	Peers	56.3
3.	News reports on violence	43.8
4.	Video games	32.4
5.	Internet	30.8
6.	Television	27.2
7.	Other	23.4

Source: www.abac-ksc.poll.th.org

Researchers from the Thailand Research Fund found that ten years ago, fighting was mainly found at sports matches, but at present, fighting occurs at concerts, school events, and shopping malls. The research showed that about 78 percent of fights occurred in public places, and only 16 percent occurred at sports events.

Research from Thailand and overseas has shown that exposure to violence in the family or community can make children themselves violent. Children become permeated by a culture of violence, whether from the home, the community, peers, or the media, but particularly from movies and television. Through these means, violence is perpetuated.

These effects are illustrated by the phenomenon of dek chang (a slang term for mechanics student) Being a dek chang means refusing to acknowledge the norms and standards of wider society, and risk-taking as a way of life and an important part of personal identity. A dek chang considers that using violence to assert leadership and win respect is

• Gang warfare There are frequent reports of teenage boys fighting one another, sometimes using guns, with no fear of the law. Innocent bystanders have been injured or killed. For instance, in one case teenagers fired at each other in a public bus, and killed a young computer programmer. In another case, a third-year university student from the Pathumwan Institute of Technology was stabbed to death by students from a rival college while riding a bus.

• Teenage murderers There have been cases of teenage contract killers working for small amounts of money. There have also been revenge killings, murders combined with thefts, and murders of rape victims. A particularly strange and tragic case was that of the 15-year old boy who brutally killed his victim, simply because of sexual desire and a need for money, and then returned home as if nothing had happened When he was arrested, he said that his victim was generous to him, and used to give him snacks and sweets.

Diverting teenagers energy from harmful activities to constructive ones is an important challenge for families, schools, and every other part of society. We need to find a way so that all groups cooperate to address the causes and the effects of teenage violence, and help teenagers escape from it.

The government needs to ensure that its policies towards youth are consistent. Youth should be given the opportunity to gain work experience while at school. The curriculum should be flexible, and should include contents that help reduce violence.

There needs to be a data system covering every family in the country to identify youth experiencing problems. Television, radio, and the mass media should have high quality programs for children and youth in the evenings. Children need to be protected from violent and inappropriate environments. For instance there should be bans on pornography and there should be zoning in Internet cafes so that children cannot play violent games or games involving motorcycle racing.

Currently, one factor that greatly influences violent behavior among children is the media. The government needs to act against media that encourage violence, particularly movies that lead to copycat crimes. There needs to be a classification system that prohibits young children from watching violent movies, because of the possible effects on behavior when they become teenagers. Non-violent entertainment needs to be promoted.

The family has a vital influence on the training of young people. But in contemporary society, many adults are too busy working to attend to children's problems. Evenings should be times for families to come together, to eat and to watch television. But this is rare, and never occurs in some families, whether rich or poor.

Employers therefore need to give staff opportunities to spend time with their children after work and on school holidays. Employers could allow older children to obtain work experience with their parents during the holidays. Governmental and non-governmental organizations need to work with families in which economic difficulties, alcohol, or other factors lead to violence against children. However, this type of social work needs to be on a voluntary basis.

Educational institutions need to provide students with skills in critical thinking, and need to teach them to use their free time constructively, such as doing part time jobs or community work. Schools need to promote activities where youth can use their energy constructively.

Youth at risk of committing crimes should not be isolated from society. Educational institutions need to work with parents to change the young people's behavior. Schools need to encourage positive thinking among parents.

At the same time, quality peer groups need to be developed, so that young people have a chance to socialize with good role models. This is because peers are the group with the greatest influence on the attitudes of teenagers.The last question is whether the government, families, schools or communities have tried enough to eradicate the culture of violence among Thai teenagers, and whether they can divert these young people excessive energies into constructive activities. If concerned people could achieve this, it would help teenagers realize their potential.

In response to this challenge, the government will provide 200 million baht in April 2005 to support students to earn incomes during school holidays. The policy emphasizes activities that strengthen youth development in educational institutions, such as music, sport, and computers. It is now important to ask how children who are not at school can be assisted.

If we can divert the energies of young people towards constructive activities, then the problem of teenage violence will be solved.

7. Pornography and Teenage Sex

For most Thais, the term pornography means obscene images. Many people consider it immoral. But supporters argue that it is a matter of art, or a matter of individual choice.

In 2004, Thailand experienced a worrying increase in the number of sexual crimes. At the same time, pornography became more common through mobile phones that could receive pornographic photographs, overtly sexual music, pornographic cartoons, pornographic videos, and pornographic DVDs, as well as the traditional pornographic magazines and newspaper pictures.

For Thais of all ages, sexually explicit images are ever-present, and are almost becoming normal. But it is hard to deny that the uncontrolled proliferation of images is related in some way to the rise in sexual crimes. It is even more worrying that the group most involved with pornography are young people, who lack judgment, and are both victims and perpetrators.

The manufacturers of pornography usually deny that they are responsible for young people's behavior. They argue that young people know for themselves what is right or wrong. But it is undeniable that in a consumerist society, profits are more powerful than morality.

Sexual movies and the line between art and pornography

Movie sales ought to depend on the quality of the acting or the writing, but at present one major factor is the degree of sexually explicit content. The constant public display of films involving sex draws people's attention, and helps boost sales to both sexes and all ages.

A group of investors and celebrities more interested in money than society are making sexually VCD movies. Pornographic movies are becoming a major social problem, particularly because of their links to rape. People accused of rape claim that the desire to commit rape was prompted by watching pornographic movies.

The demand for pornographic photographs

A number of newspaper advertisements have created great controversy, including an advertisement for credit cards from the Bank of Thailand. This advertisement had a picture of a young model and her European-Thai boyfriend wearing nothing but their credit cards, and prompted newspaper headlines such as "The notorious credit card: Art or pornography?" Magazines aimed at men, such as car magazines or sports magazines, have poster photos of naked women, as well advertisements with sexual content. Even ordinary daily newspapers have pictures of scantily dressed celebrities on the front covers of their weekend editions. Another source of sexual content, not widely known except by teenagers, is Japanese cartoons.

Technology moves quickly, but emotions lag behind

Although modern technology brings many benefits, some people also use it in inappropriate ways, such as

- 'internet sex'. A study of the ten potal websites on pornography in Thailand found that they led to a further 1,000 sites where people could look at pornographic photos, send their own photos, buy pornographic books, or buy sex toys. There were also programs giving advice on sexual technique.
- 'Mobile phone sex' is another new development. People can use their phones to take pictures of themselves, or download pictures of others, or listen to people talking about sex.
- 'Webcam sex' uses new technology that combines video cameras and the Internet, and enables customers to talk and see pictures. Some people pay using electronic banking, or by phone using a system called 'Sex Multi-Media Service'.

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Research on the 'sex crisis'

Research has described many abnormal sexual practices among Thai teenagers. There are claims that Thai youth are "spoiled", "unfaithful", or "addicted to sex". Much of this research emphasizes problems over solutions.

Many researchers and child development specialists with this approach. Ticha Na Nakorn, a child development specialist, has spoken about the ethical challenges involved in research on children. Collecting data on problems among young people, and disseminating this information widely, leads society, and the young people themselves, to think that they are worthless. Adults who over-emphasize young people's problems do not inspire the young people to improve their situation.

When these researchers talk about the problems, they never offer concrete solutions. Just talking about the problems all the time does not achieve any anything, even if the problems are real. It just exacerbates the problems. Why don't people help solve the problems, and occasionally talk about good things. That way young people will receive some encouragement.

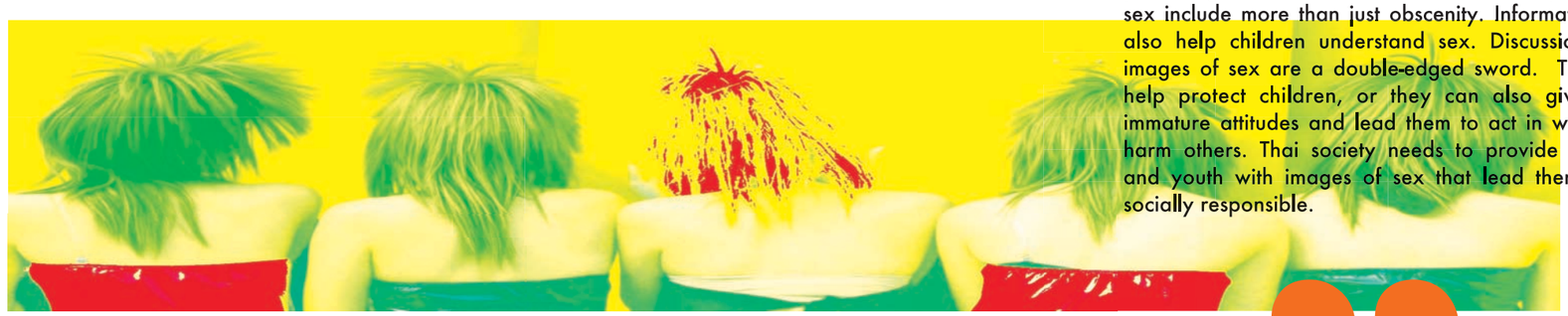
Similarly, Wallop Tangkananurak, Chair of the Senate Standing Committee on Women, Youth, and Elderly Affairs has cast doubt on claims that Thai teenagers had the highest rates of 'swinging' in the world, and stated that such claims damage Thai society.

Dr. Taweesin Visanuyotin, a spokesperson from the Department of Mental Health has observed that these is still little statistical evidence to back up the image of 'young people addicted to sex':

It is a good thing that they want to have sex. It means that they have developed normally. But it is important that they have sex at an appropriate age-that they are fully prepared for it. I think that the problem has become worse because society has changed into one of individuals families, which increases young people's freedom, and because youth are living dormitories, have constant exposure, and lack constraints or careful decision-making

At the same time, Dr. Somchai Chakrabhand, Director of the Department of Mental Health, has argued that the youth crisis is partly due to the media, which has widened young people's knowledge and experience. The widespread availability of VCDs makes it easy for teenagers to obtain pornography.

I think that one part comes from the family. Thai parents are embarrassed and do not teach their children about sex, so the children learn from their friends. European countries and the United States have sex education programs, but they allow children to opt out. These programs are worth studying.



Thai society needs to look for solutions, instead of just complaining about the problem

People tend to blame the mass media for social problems. People argue that the industry should produce content that contributes to society, and that does not violate professional ethics. They argue that the media should not produce programs that lead youth astray or provide bad role models.

However, it is important to suggest concrete measures, rather than simply questioning the role of the media. The government needs to pay urgent attention to the problem, looking especially at the law. In fact, the government has already recognized that current laws are out-of-date, and is currently preparing for reforms.

Thailand's laws on the production and distribution of obscene material and its laws on computers are currently under review, but the process is likely to take a long time. Thailand is still at the stage of waiting for effective weapons.

It is now time to define, for each type of media, a minimum viewing age. For instance, to see certain types of movies, children should be above a certain age, or perhaps should be accompanied by their parents.

The most important point is that there must be a system for protecting children against obscenity and leading them to have appropriate sexual behavior. This does not mean shielding children and youth so that they know nothing about sex, because exposing children to information about sex is the first step in protecting them. In fact, discussions and depictions of sex include more than just obscenity. Information can also help children understand sex. Discussions and images of sex are a double-edged sword. They can help protect children, or they can also give them immature attitudes and lead them to act in ways that harm others. Thai society needs to provide children and youth with images of sex that lead them to be socially responsible.

9. Hazardous Waste: A Hidden Danger

> At present, society produces many kinds of dangerous waste. There is poisonous waste, discarded electronic equipment, and hospital waste. These kinds of garbage decompose very slowly. If they are not disposed of correctly they are a threat to the environment and the health of the local community.

The accumulation of garbage around cities is a problem for many countries. Garbage that is biodegradable does not cause great difficulties. However, aside from toxic waste from factories, there are also agricultural wastes such as chemicals and pesticides, household wastes such as light bulbs, batteries, engine oil, and car tires. There is also medical waste with blood or bodily fluids of patients that, if not disposed of properly, is 'infectious waste'. All these wastes are a threat to the environment and the health of the local community.

The same is true for components from computers, mobile telephones, and other electronic equipment that has expired and has become 'electronic waste'. This sort of waste is accumulating every day, as a result of industrialization and technological progress. However, the gap between the production and disposal of waste is widening. Attention needs to be paid to dangerous waste, electronic waste and hospital waste. Different groups need urgently to cooperate to address the problem of dangerous waste.

Data from the Department of Pollution Control indicate that in 2003 Thailand produced as many as 1.8 million tons of dangerous waste. Of this, 1.4 million tons was industrial waste, 0.4 million tons was household waste, and 22,500 tons was infectious waste. On average, Thais produce about 5,000 tons of waste per day. The habit of not separating waste means that dangerous waste contaminates ordinary garbage. The different types of waste form a garbage mountain, containing germs and chemicals. Poor management practices lead to contamination of water, soil, the environment, and the food chain.

The used mobile phones and computers increasing, but the disposal system is not coping

In the past five years, use of mobile phones has been increasing. In the years 2003, Thais owned a total of 12 million mobile phones. Of these nine million were new. Ten years earlier Thailand had had only 0.34 million mobile phones. The huge increase resulted from improvements in technology and reductions in price.

Data from 2004 show that 27.2 million Thais used mobile phones. The number of users is expected to increase to 31 million in 2005. The Department of Customs has reported that 24.74 million mobile phones were imported into Thailand in the last three years. A similar increase has been reported for computers. A survey by the National Statistical Office in the year 2003 found that there were 1.531 million computers in Thailand. A survey in 2004 found that the number had increased to 1.948 million.

Thailand does not yet have data on the number of mobiles and computers that have been thrown away. But it is possible that electronic waste could become a serious problem for people and the environment in the near future. A particular concern is mobile phone batteries. One million of these are thrown away per month, but few are disposed of correctly. A study by the Kasikorn Bank Research Center in 2003 found that only 11.1 percent of mobile phone users returned batteries to the producers for disposal.

Similarly, about one million car batteries are thrown away per year. The chemicals in batteries are carcinogenic, and can affect the reproductive system. They enter the body through being eaten or inhaled, or can be absorbed through the skin. If Thailand does not develop a system for disposing of used batteries, then they could damage the health of everyone.

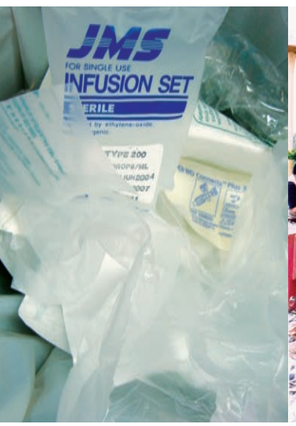
Waste from developed countries coming to Thailand

In addition to worrying about waste from Thailand itself, Thai people also need to deal with waste from developed countries. Early in the year 2003, the Department of Customs reported that five containers of tires, automobile engines, used batteries, and used gloves from the United Kingdom were thrown away in Samut Prakan Port. Foreign ships disposed of 0.7 million tons of used oil at Laem Chabang Port in Chonburi Province. This is a warning sign that Thailand is becoming a dumping place for waste from developed countries.

In 2003 foreign companies illegally brought hazardous electronic waste and chemicals for disposal in Thailand fifteen times. This is despite the fact that Thailand signed the BASEL agreement regulating the international transfer of waste in 1992, and has strict laws against the practice. However, un-documented waste often appears in Thailand.

Incredibly, factories for disposing of foreign waste have been established in Thailand. Companies have also been established to buy electronic waste from foreign countries. These investors disappear when waste enters the country, as they have already received their payments. The Thai government therefore has to take responsibility for clearing up the mess created by countries that call themselves developed.

Some supposed benefactors donating or selling cheap goods have a hidden objective of disposing of electronic wastes well away from their own countries, so that other people have to suffer the ill effects. This is the real reason for the influx of cheap electric appliances and second hand electronic goods into Thailand. It is another factor leading to increases in the quantity of waste in Thailand.



The plan for disposing of electronic waste

Recycling and re-using are important methods for slowing the increase in waste. Re-using is easier and more common. For instance, rural schools and local organizations already receive second-hand computers. There are also shops selling second-hand computers and mobile phones throughout the country.

Some electronic wastes can be recycled by using expensive technology from overseas. However, this solution cannot fully help reduce electronic wastes.

The last resort is to dispose of waste. This can be done through the cooperation of the Department of Environmental Quality Promotion, the Department of Pollution Control, and non-governmental organizations. The companies AIS, DTAC, Nokia, and Ma Boon Krong have launched a campaign to reduce the waste from mobile batteries. In the year 2004, they asked people to return used batteries and telephones, which the companies and government would dispose of in ways that would not harm the environment.

Very recently, the Department of Pollution Control drafted a master plan for dealing with the national problem of electronic waste in the future. It will submit the plan to the National Environment Committee for the Cabinet to consider. The plan calls on three groups-manufacturers, consumers, and importers-to cooperate. Local authorities will be responsible for managing waste in a systematic way, and recovering their costs from manufacturers and consumers. The Department hopes that the plan will come into effect in the near future.

Who is affected?

The failure of the policy of separating hazardous wastes from other wastes is attributable to lack of knowledge and concern among the general population. In the past five years, the Bangkok Metropolitan Administration has collected 84 tons of hazardous waste per day, which is only 0.314 percent of all waste. This is well short of the target of 20 percent.

At the same time, the incineration of hospital waste is a notable environmental problem. For instance, in October 2004, people in Mae Taeng District complained that the local hospital had covertly incinerated waste for many years, to the point where trees were dying. Local people suffered from smoke and odors, and were worried about the effects on their health. In Phu Ruea, people have had to endure smoke and odors from the local hospital for 4-5 years, and report feelings of dizziness from the pollution. They have been negotiating with the hospital to improve the system for incinerating waste.

The problem can be solved through cooperation between consumers and the government

In all cases where hazardous waste damages health and the environment, the damage is inflicted on local people. An effective management system must therefore start with the source of the waste. This means the consumers.

1. The most important point is to educate consumers on separating different kinds of waste. When hazardous waste is separated from other kinds, disposal is much easier.

2. People must take responsibility for the problems they create. For instance, people who change their mobile phones often should pay higher taxes for disposing of waste than other people, because they create more waste.

3. The government should support small state-owned enterprises to recycle waste. This includes centers for receiving used electrical goods and computers, to repair the goods and donate them to needy groups. It should also include the establishment of funds to support activities caring for the environment and looking after garbage in schools and communities.

4. At present private companies hired by hospitals incinerate infectious waste in the middle of the night. These companies must follow the law, or receive fines and be de-registered.Hazardous waste needs to be disposed of correctly. If not, everybody will suffer.

10. Thai kids in the 'legal' traps of vices: smoking, drinking and frequenting night life

> Thailand has been so concerned with economic growth that it has neglected social development. Thai youth have become trapped by consumerism, and many are interested only in eating, drinking, smoking, partying, drugs, and gambling.

A survey by the National Statistical Office in 2004 found that 3.78 million Thai youth aged 15-24 drink alcohol. Alarmingly, the proportion of young women aged 15-19 who drink alcohol has increased six times, from 1 percent to 5.6 percent in seven years. Altogether, 9.6 million Thais of all ages smoke regularly, and another 1.7 million smoke occasionally. These numbers include 1.26 million young smokers aged 15-24. In February 2005, Sukhothai Thammathirat Open University released results from a survey on the drinking behavior of Thai youth aged 15-19. Forty-five percent of them drink regularly. The majority start drinking at the age of 15, and the lowest reported drinking age was 3 years. These young people start drinking out of curiosity and their major opportunity for drinking is New Year. The environmental factor that has the most influence on drinking behavior is the accessibility of alcohol in the community.

A summary of five conferences on Cultural Dimensions of Thai Children based on research by Family Network Foundation, Child Watch, the Thailand Research Fund, and ABAC Poll showed that contemporary Thai youth are not concerned for society, and exhibit the following problems:

1. Alienated from religion. Forty-five percent of youth do not alms giving to the monks and 65 percent do not listen to religious sermons.
2. Regard sex among school-aged youth as normal. The average age at first sexual intercourse is 17 years. Among those who have sexual relations, 50 percent admit that are living together before marriage, and 40 percent use pornography.
3. Do not spend their time constructively; like only to go to malls. Fifty-two percent of youth like to frequently buy new mobile phones.
4. Some are addicted to gambling. About 5 percent gamble on football more than one or two times per week.
5. Live in immoral environments, nearby as massage parlors and karaoke bars

These statistics demonstrate that Thai youth are exposed to many behaviors that are risky but not illegal, including going out late at night, smoking, and drinking. Millions of Thai youth are drawn into a vicious circle of drinking, partying, and consumption. Many go from there into illegal activities such as smoking marijuana, or taking methamphetamines or heroin. Drug addiction can lead males and females into prostitution, theft, and drug dealing.

From social regulation to child protection laws

Attempts since 2002 to enforce social regulations through measures such as strict inspections of bars and nightclubs has shown the truth of anecdotes about teenage smoking, drinking, drug abuse, and fighting. Some bars and nightclubs have been closed because they permit youth under 18 years to enter.

Worries about Thai youth living risky lives have increased. The government responded by hasting drafting the Child Protection Act, which was passed on 30 March 2004. The Act aims to resolve the problems currently afflicting Thai youth, and to create a better society for them.

The Act included conditions that had not previously been used in Thai law (see box). For instance, if parents neglect their children, commit child abuse, or permit the children to gamble, buy alcohol or cigarettes, they can be punished under the law. At the same time, if children break the law or are arrested, the guardians have to take responsibility. Parents of arrested children are required to attend meetings to discuss ways to change the children's behavior.

Actions towards children that are now prohibited. Violations can be punished by imprisonment of up to three months, or fines of up to 30,000 baht, or both.

1. Forcing, persuading, or encouraging children to act in ways not appropriate for their age that put them at risk of improper behavior
2. Making children beg, depriving them of a home, or using them to commit crimes
3. Making children play sport or act in other ways for commercial benefit or as a form of abuse
4. Allow children to gamble in any way, or allow children enter unsuitable environments
5. Use children for any form of child pornography, for whatever reason
6. Sell or give children alcohol, cigarettes, or drugs

Ways to prevent smoking and drinking among children and youth

Campaigns to discourage new smokers, particularly among children and youth, began in 19 January 2005. The Ministry of Public Health required tobacco companies to print pictorial warning labels on cigarette packages, showing people suffering from tobacco-related diseases, covering at least 50% of the package, on the front and the back. Packages must also show six types of written warnings. The new color photographs are more effective than black and white photographs or written warnings. All tobacco companies had to start using the new packages from 25 March 2005.

The campaign against smoking may not actually reduce the number of smokers, because tobacco companies are always looking for new methods to market their product and respond to anti-smoking campaigns. For instance, in convenience stores, cigarettes are displayed at the counter, next to children's sweets, so that customers notice them, and so that children want to try them. It is worrying that foreign companies are still looking for ways to increase their sales, by lowering their prices and by targeting the poor. At present, foreign cigarettes are the same price as Thai cigarettes, and cigarette factories have started selling to low-income groups.

At the same time, tobacco companies have been organizing social activities, such as supposed campaigns against smoking or campaigns to increase Thai youth's social responsibility. The companies' hidden agenda is to reach powerful people, to seek their protection.

In addition some retailers sell individual cigarettes, making it easier for children to experiment. The Network for Protecting Thais Against Smoking, accordingly, submitted a letter to the Ministry of Public Health in September 2004, asking the Ministry to request the Excise Department to prohibit the sale of single cigarettes or the sale of small packages for children.

One month later the Excise Department responded that it was studying the feasibility of increasing the tax on cigarettes and increasing the registration fee for selling cigarettes. The Department was also looking for ways to control smuggling and the sale of cigarettes to children under 18 years.

Even with concerted efforts by many groups, there appeared to be no improvement. In December 2004, Dr. Hatai Chitanond, Chair of the Thailand Health Promotion Institute, called on the government to act more decisively against tobacco, as cigarette sales were continuing to increase. In particular, he wanted action against foreign tobacco companies, which had increased their market share from 3 percent to 20 percent. He compared the anti-tobacco campaigns to the anti-alcohol campaigns, which were only implemented seriously during public holidays and religious festivals. He claimed that the current drinking laws were not enforced in bars and nightclubs.

Initiating cooperation

"Kids and youth need to learn how to contribute to society. Young people cannot contribute to society because they are addicted to drugs. The effects of drugs do not need to be spelled out. But cigarettes damage the ears, brain, arteries, and heart"

This is a statement by the King on 4 December 2004, showing his concern towards Thai youth. Government ministries responded to his words.

The Ministry of Finance suggested that the cabinet allow the Excise Department to regulate the distribution of alcohol and tobacco. The Excise Department can reduce alcohol and tobacco consumption among youth by prohibiting people aged under 18 years from buying them, and by preventing the sale of alcohol and tobacco in certain designated places such as temples and schools. Shops that break the regulations should no longer be allowed to sell alcohol and cigarettes. Convenience stores and other retailers should only be allowed to sell alcohol and cigarettes between 11:00am to 2:00pm and 5:00pm to midnight. Shopkeepers who sell alcohol to under-age people should receive fines of up to 30,000 baht or three months in jail, and should have their permit to sell tobacco and alcohol revoked.

The Ministry of Public Health cooperated with the Ministry of Finance in the enforcement of the law to reduce smoking and drinking, by issuing three ministerial regulations. The regulation prohibited the sale of alcohol and tobacco to people aged less than 18 years, and prohibited sales outside the times defined by government policy.

The government is attempting to prohibit advertising cigarettes at the point of sale; setting up a cabinet to display cigarettes; selling individual cigarettes; selling in a place of worship; and smoking in a public place. It has increased the tax on tobacco, and has encouraged the public by giving people reporting infractions 80 percent of the fine.

The Ministry of Education has displayed the King's statement in schools as a warning to students. It is cooperating with the Excise Department to campaign against alcohol and tobacco. It has modified school bathrooms, so that teachers and students use the same facilities, to discourage students from secretly smoking in the bathrooms. Finally, it is using students as its eyes and ears, and has set up phone numbers that students can call to report infractions.

Reduce the number of bars and nightclubs, and protect kids against legally-permitted risks

The government has passed laws on the sale of alcohol and cigarettes at shops, bars, and nightclubs, but these laws are not enforced. Regulations on registration, methods of sale, free gifts, or minimum ages are also not enforced.

Regulations alone are not enough. There need to continuing campaigns warning youth about the consequences for health and society of alcohol, cigarettes, and going out late at night. People need to be reminded of the links to road accidents. There needs to be a long-term plan to keep young people out of bars and nightclubs.

The most important point is to raise children so that they do not drink, smoke, or go out late at night. Adults have to be good role models for children. Families, schools, temples, cultural sites, and the media all have a role, because all play a major role in teaching Thai children to avoid dangerous behavior.

How the Ten Issue of 2003 Changed in 2004

The war against drugs: A victory that raises some questions

Domestic production of illicit drugs fell in 2004, but extra efforts were needed to control drug trafficking across borders. Trafficking routes changed to the lower Northeast, and returned to the North. At the same time, the price of illicit drugs increased, and drugs became more difficult to obtain. However, in 2004, ecstasy, cocaine, Ketamine, and Eramine-5 became common in Thailand for the first time.

Campaigns to promote exercize

In 2004 campaigns promoting exercise continued to be successful. On 20 November 2004, millions of Thais across the country participated in aerobic dancing at sport grounds in each province. The government announced it would continue to establish health promotion clubs. At present there are 41,316 such clubs.

The Thirty Baht Scheme

The 'Thirty Baht, Treat All Illness' Scheme continued to face problems in 2004, but has nevertheless made notable achievements. The biggest problem was coverage of all groups. In September 2004, there were 3.2 million Thais who were still not covered. Many of these people were in urban areas. Despite not having cards, they still had a legal right to coverage, which deprived hospitals of 4 billion baht worth of revenues, contributing to budget deficits in both small and large hospitals. A survey by the National Statistical Office found that the Thirty Baht Scheme had significantly reduced poverty arising from ill health.

Food safety

Food safety campaigns have continued because of persistent problems with chemicals and pathogens in food. Free trade with China has led to increases in imports of vegetables and fruits, such as snow peas, cauliflower, bok choi, broccoli, garlic, and apples, that have been treated with chemicals that are banned in Thailand. The 2004 Health Forum has suggested that the health of Thais could be improved through measures to control the production and import of chemicals used in agriculture. Measures should also be taken to encourage organic farming, to ban the advertising of agricultural chemicals, and to ban the production of genetically modified organisms.

Banning advertising of alcohol on television and radio

On 1 October 2003, television advertisements for alcohol were banned between 5am and 10pm. This has not yet reduced teenage drinking: the number of female youth and youth under 18 years who consume alcohol has increased. One reason for this that that convenience stores display alcohol prominently. In early December 2004 the government therefore banned the sale of alcohol to people aged less than 18 years, and required that alcohol be sold only between 11am and 2pm, and 5pm to midnight. Violations could be punished by fines of up to 30,000 baht or imprisonment of up to three months. Adults who ask children to buy alcohol for them are subject to the same punishments. In addition, rewards have been established for people who report infractions.

SARS

In June 2004, the medical journal The Lancet reported that experiments with a SARS vaccine carried out at the National Center for Infectious Diseases in the United States had been successful. The vaccine was produced from DNA from the SARS virus. There was no record of SARS in 2004, but the bird flu epidemic took its place.

Teenagers, condoms, and AIDS

Campaigns for teenagers to use condoms to protect against AIDS in late 2003 do not appear to have worked. A survey of behavior related to AIDS in 2004 found that 80,000 Thais aged 15-24 were infected with HIV. Only one in three teenagers who had sex used condoms.

Online games: Helping or damaging the health of youth?

The major news in 2004 was the case of an 11-year-old boy addicted to computer games who ran away from home to become a street child. Many children skipped school to play computer games, affecting their performance at school. Some guardians responded by prohibiting children from leaving the house. The Department of Information and Communication Technology recommended that children under 18 years should not play computer games for more than three hours per day, and should not play after 10pm. The regulation included punishments for game shops that violated the restrictions. The Institute of Psychiatry for Children and Youth also opened a clinic for game-addicted teenagers.

The Mae Moh Coal-fired Power Plant

In May 2004, Lampang Provincial Court decided in favor of 153 villagers who had taken an electricity generator to court because coal fumes had affected crop production. The villagers received compensation of 5.7 million baht, plus interest. Fourth thousand villagers who had campaigned for 10 years to be relocated away from a power station were, on 9 November 2004, granted their wish by the government. The Electricity Generating Authority of Thailand announced a 60,000 million baht project to add 1600 hectares to one of its power plants.

Lessons from the Big D2B case

In 2003, Thai pop star Big D2B was found trapped in his car in a canal. Polluted water from the canal caused a serious brain infection. Big D2B has returned home, and has condition has improved. The government has launched campaigns to prevent drink driving, enforce the use of motorbike helmets, and inspect cars. Roads are being repaired and there has been advertising to change attitudes towards road safety. During Thai New Year in 2005, 467 people were killed, compared with 654 the previous year.

Free Trade:
A Double-Edged Sword for Thai People's Access to Drugs

Free Trade:

A Double-Edged Sword for Thai People's Access to Drugs

Free trade is a global trend bringing many benefits to economies and societies. But some people are asking how it will affect the health of Thais, especially their access to medicines.

Who wins and who loses from the intellectual property regime?

Medicines and free trade

Medicines are crucial for the maintenance of human life. But they are also goods that people produce and sell for profit, like the food we eat, the clothes we wear, the cars we drive, and countless other goods. Moreover, medicines are a high-technology product, requiring long periods and huge investments to develop.

Medicines are more than something used to extend human life, and are more than ordinary market goods. At present they are also assets that the owners can monopolize for themselves.

Rights to exclusive production and marketing of medicines, commonly known as patents, are an important part of the intellectual property system. They are at the core of the new trade rules that we refer to as free trade.

Rights to exclusive production and marketing imply the removal of competition from other producers. This generally implies higher prices that make medicines unaffordable for the poor in developing countries. The issue of medicines therefore needs to be examined together with the issue of free trade. How will Thai people's access to medicines be affected if Thailand enters a trade agreement with countries that are major producers and sellers of drugs, such as the United States?

That is the question that this article aims to answer.

1. Some Key Terms

Free trade—Trade between countries, governed by several agreements, i.e.,
Multilateral agreements—under the World Trade Organization
Regional agreements—organized by countries of the same region, and
Bilateral agreements—between two individual countries.

Patents—Legal rights, applying to 'products' such as medicines and to 'production processes'. These rights are awarded to those who invent the products or the production processes.

Access to medicine—Individuals' ability to obtain the medicines that they need.

Original medicines—Medicines based on original research and development. These are normally patented, so that no one can legally copy the medicine and compete with the patent owner for the duration of the patent.

Generic medicines—Medicines using the same active ingredients as original medicines. These are generally produced once the patents on the active ingredients expire.

The Development of Free Trade

The system that we now call 'free trade' has developed over many years. It is the result of attempts beginning after World War Two to improve and regulate international trade. Many countries agreed that the world economy was severely weakened by the war, and that measures needed to be taken to aid its recovery. These attempts led to the founding of organizations such as the International Monetary Fund (IMF), the World Bank, and the General Agreement on Trade and Tariffs (GATT).

GATT, which did not have the status of an organization, aimed to facilitate international trade in goods and services, by removing all obstacles to trade, such as tariffs, quotas, preferential access for certain countries, or health and environmental regulations. The free flow of goods and services was the main goal of GATT, and the ideal for many countries. The philosophy of free trade is associated with political liberalism, which grew markedly after World War Two.

From its inception in 1948, GATT organized many multilateral trade agreements, through numerous international meetings. GATT's last round of trade talks, the Uruguay Round, lasted from 1986 to 1994. On 1 January 1995, member countries agreed to move beyond GATT and established a global trade organization, called the World Trade Organization (WTO).

2. Thailand and the Free Trade System

At present the WTO has 148 members. Its main responsibilities are to set multilateral trade rules and to oversee the free trade movement among member countries.

In recent years, many regional agreements have been established. Examples are the North America Free Trade Agreement (NAFTA), and the ASEAN Free Trade Agreement (AFTA), of which Thailand is a member. Almost all of the countries involved in these agreements, including Thailand, are also members of the WTO.

All members of the WTO have a single vote, regardless of their size. This, together with the rule that all proposals have to be adopted by consensus, has increased the bargaining power of developing countries, and made it more difficult for powerful countries to impose their wishes.

In response, some developed countries such as the United States have complained about the difficulty of reaching agreements in the WTO. They have instead been pursuing bilateral Free Trade Agreements (FTAs) with individual trading partners. At present the United States is negotiating with many countries, including Thailand. This tendency became much more pronounced after the WTO meeting in Seattle in 1999, where trade talks collapsed.

At present Thailand is a member of three types of trade agreement. It has been a member of the World Trade Organization since its establishment in 1995. As a member of the Association of Southeast Asian Nations, or ASEAN, it belongs to the ASEAN Free Trade Agreement (AFTA), founded in 1992. Thailand signed a free trade agreement with China in 2003, with India and Australia in 2004, and with New Zealand in 2005. It also signed an agreement with Bahrain in 2002, but the agreement has not yet come into effect. Thailand is currently negotiating bilateral trade agreements with the United States, Japan, Peru, and countries in the BIMST-EC group, which is comprised of Bangladesh, the Maldives, Myanmar, Sri Lanka, Thailand, Nepal, Bhutan, and India (though India already has an agreement—see Figure 1.)

To carry out these negotiations, the Thai government has set up three working groups (see Figure 2). There are several Negotiation Groups, each responsible for negotiating with a designated country such as Australia and Japan. There is also one Strategy Coordination Group that coordinates the Negotiation Groups and the Monitoring Group overseeing the impacts of negotiation.

3 Thailand's Strategy for Choosing Partners for Trade Agreements

- Large countries with important markets, such as the United States and Japan
- Countries with potential for trade expansion, such as China, India, Australia, and New Zealand
- Countries that act as doorways to their region, such as Peru in Latin America, Bahrain in the Middle East, and the BIMST-EC countries (Bangladesh, India, Myanmar, Maldives, Sri Lanka, Nepal, and Bhutan) in South Asia

Bilateral trade agreements are not supposed to contravene the rules of the WTO. These agreements are therefore like smaller and more advanced versions of the multilateral agreements.

There are therefore three connecting levels of trade agreement: multilateral agreements under the WTO, regional agreements between neighboring countries of the same region such as AFTA, and bilateral agreements such as the ones between Thailand and China, and Thailand and Australia.

Figure 1: Countries negotiating trade agreements with Thailand

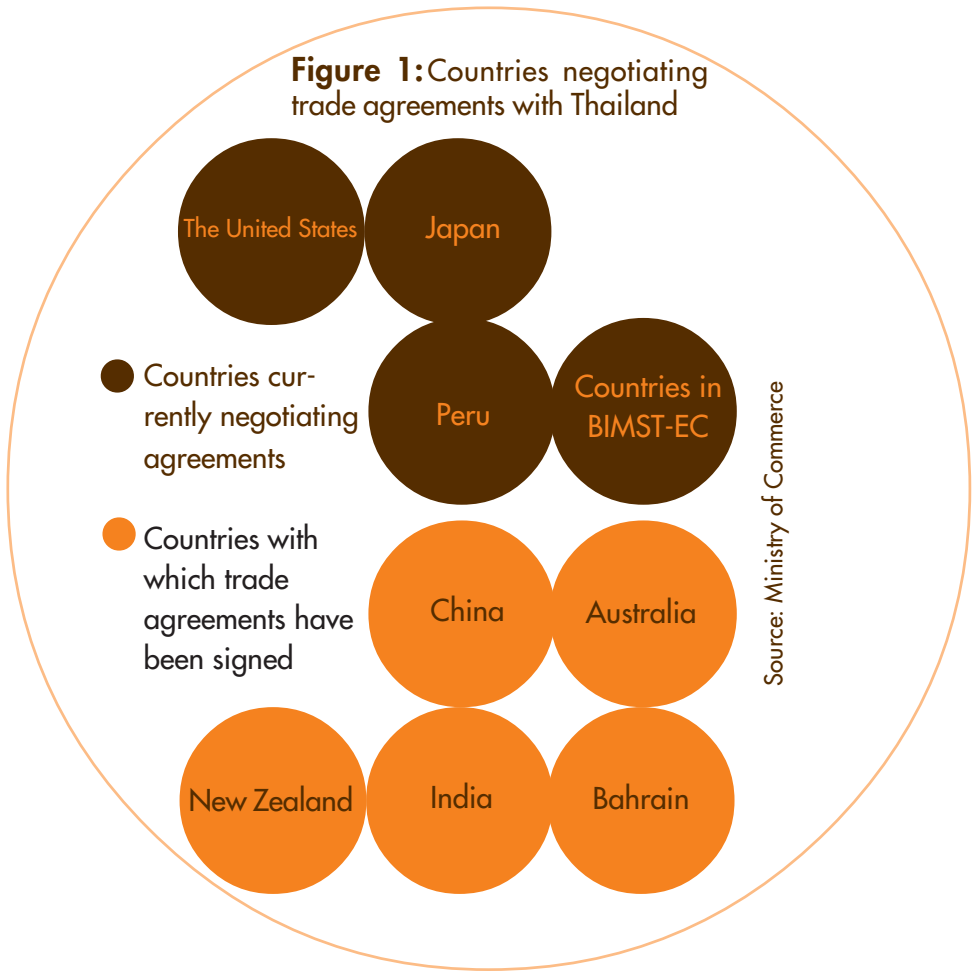
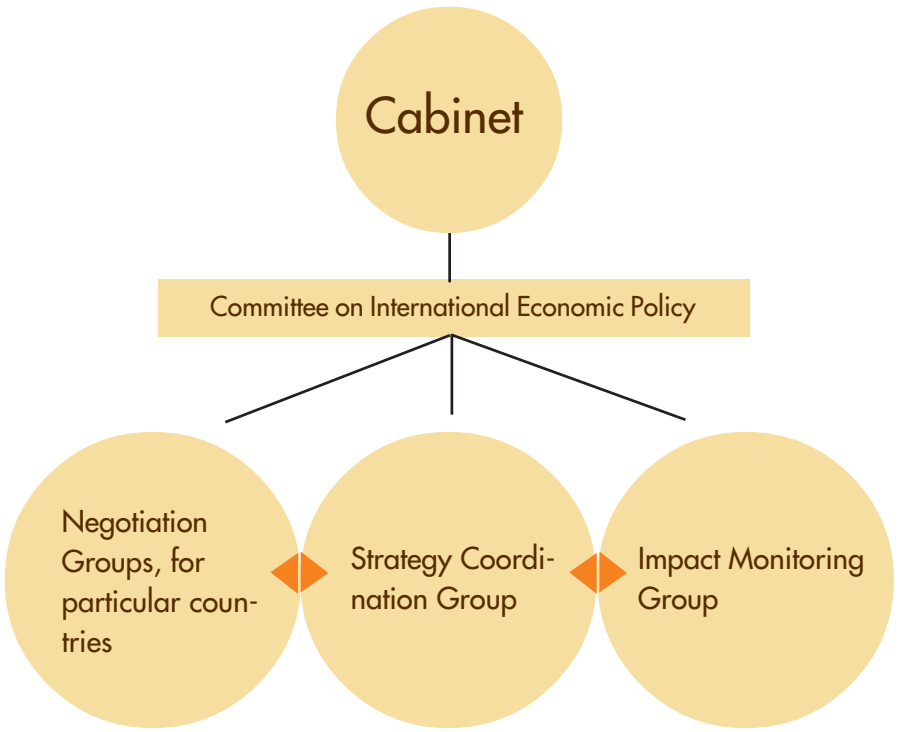


Figure 2: The framework for free trade negotiations with other countries



Source: Department for International Trade Negotiations, Ministry of Commerce

Why do we need free trade?

International trade is an important source of income. In 2003, for example, 54% of Thailand's Gross Domestic Product (GDP) came from exports. A large proportion of the money used to develop the Thai economy and Thai society comes from selling goods abroad.

Thai history since the Ayutthya period shows that whenever international trade is flourishing, the country makes social and economic progress. Whenever trade is limited, the country stagnates. For instance, in the 170 year period from the 1670s to the 1840s there was little trade with the outside world, and the country made little economic progress. After the Bowring Treaty between England and Thailand was signed in 1846, international trade increased markedly, and the economy and the country developed enormously.

Free trade depends on coordination at the global level, to eliminate unfair barriers against the free flow of goods. Any country that is a member of the WTO is supposed to be able to trade with any other, with no or minimal barriers. These barriers include tariffs, quotas, or health and environmental regulations. Goods from countries that are members of the WTO can out-compete goods from countries that are not members, because goods from non-members face greater barriers.

Some countries therefore complain that they have no choice but to join the WTO, because otherwise they would suffer many negative effects. First, they would lose the opportunity to influence the WTO regulations. Second, they would miss out on trade opportunities. Third, they would be less competitive compared to countries that are members.

At the same time, the WTO process can benefit some groups at the expense of others. For instance, local producers can suffer if forced to compete with cheaper imports, though local consumers benefit from lower prices. The outcomes depend on how countries respond to the opportunities presented by free trade.

Economic growth is connected with the expansion of international trade, which increases countries' incomes. Increased income allows countries to pay their public debts, and to have more resources for social investment, including health.

Concrete evidence of this comes from the period of rapid growth in Thailand between 1987 and 1997. Income earned from overseas permitted Thailand to lower its public debts from 25 percent of national budget in 1987 to 5 percent in 1997. Expenditure on health increased from 4 percent of GDP to 7 percent. It was therefore possible to substantially improve the coverage and quality of rural health facilities. This was an important foundation for improvements in health.

Agreements and mechanisms that facilitate free trade

There are three fundamental agreements under the WTO:

- The General Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). This is the agreement that will have the most effect on the pharmaceutical trade in Thailand, and it is examined in detail below.

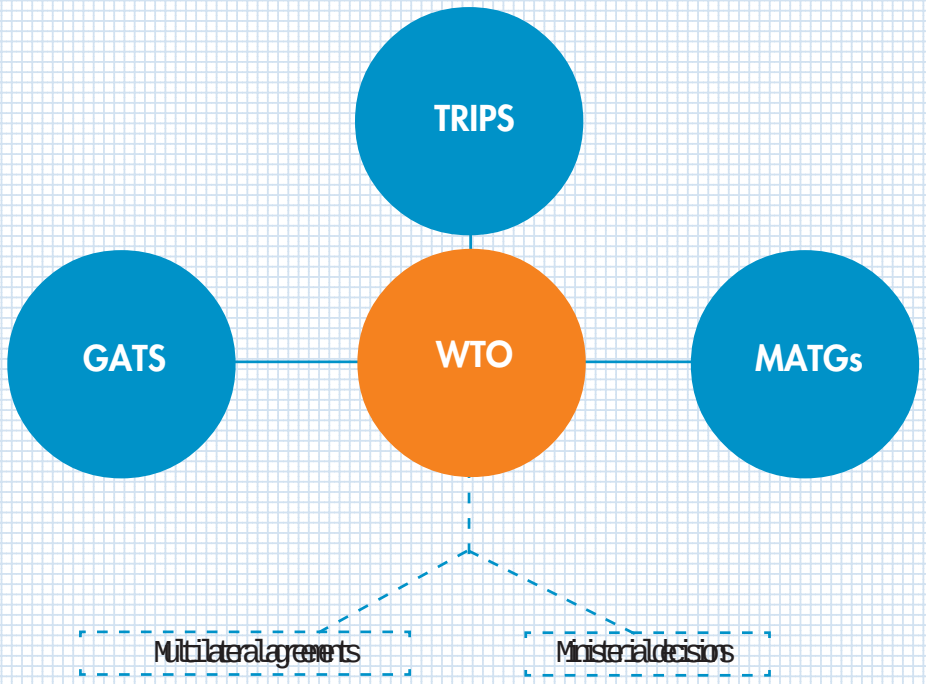
- The Multilateral Agreement on Trade in Goods (MATGs) is relevant to health in various ways, such as the sanitary measures related to plants and animals, and measures on technical barriers to trade.

- The General Agreement on Trade in Services (GATS) which includes health related services as well as movements of health professionals.

Free trade negotiations can be thought of as a tricycle, with TRIPS as the front wheel, and MATGs and GATS the two back wheels, and the WTO as the driver. The WTO organizes meetings of ministers every two years to make important decisions and to formally accept decisions that are made (see Figure 3).

Negotiation of Free Trade Agreements at the regional and bilateral level rests on the same principles, though bilateral and regional negotiations are more advanced than the WTO agreements and will be the driving force to move the WTO negotiation towards more free trade.

Figure 3: Agreements and mechanisms that the WTO uses to facilitate international trade



The General Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)

The General Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) is one of the key mechanisms for regulating world trade, and a major factor affecting access to drugs. TRIPS grew out of the Uruguay Round of GATT, before the establishment of the WTO. TRIPS has seven parts and 73 articles.

The most important feature of TRIPS is that it requires member countries to introduce laws protecting intellectual property rights, in line with TRIPS standards.

Intellectual property rights cover all types of inventions: they cover industrial products, natural products, works of art, models, computer software, production processes, and brands.

TRIPS protects intellectual property rights in many ways. For medicines, the most important mechanism is patents. Both products and production processes can be patented.

Patents give the holder the right to sole production or use for a suitable period, as a way of rewarding innovation and to give the inventor an incentive to make the discovery public.

The right to sole production or use means that no one else may manufacture, import, or distribute a product, or use a production process, without receiving permission from the patent owner. These rights do, however, have a legal time limit. Under TRIPS this limit is 20 years from the day when the patent is filed with the relevant authority.

The objective of patents, besides providing a reward for the inventor, is to create benefits for society. The intention is to give people an incentive to work hard to develop new products and processes. **The underlying principle is that the rewards received by the individual inventors and the social benefits from the invention need to be balanced.**

TRIPS lays out some basic rules on the protection of intellectual property through patents. The key TRIPS' rules governing intellectual property protection in international trade are summarized in Box 4.

4. Fundamental TRIPS Rules on Using Patents to Protect Intellectual Property

- Patents can apply to production processes and to products. For instance, pharmaceutical research may result in new compounds or in new manufacturing methods, and both of these can be patented.
- Inventions covered by the framework must be (1) original, such as a medicine that has never previously been produced; (2) close to completion and clearly specified; and (3) capable of industrial production.
- Protection lasts for at least 20 years, from the day that the patent is filed with relevant authority.
- All types of invention receive equal treatment, regardless of whether they originated in the country concerned or in another country.
- Applications for patents must provide detailed and complete information on the invention, including production methods. This information must be made public.
- Member countries may reserve the right not to observe patents in the following circumstances:
  (1) the invention has adverse effects on health or morality;
  (2) the patent is for the diagnosis or treatment of illnesses, or a surgical technique;
  (3) the patent is for a plant or animal (other than a microbe) or biological processes for the production of plants or animals (other than processes for the production of microbes). If a country wishes to protect a particular plant or animal, it may do so using specific legislation. It does not necessarily have to grant a patent.

> “Thailand’s patent laws were consistent with TRIPS three years before TRIPS was created, and eight years before the deadline for implementation”

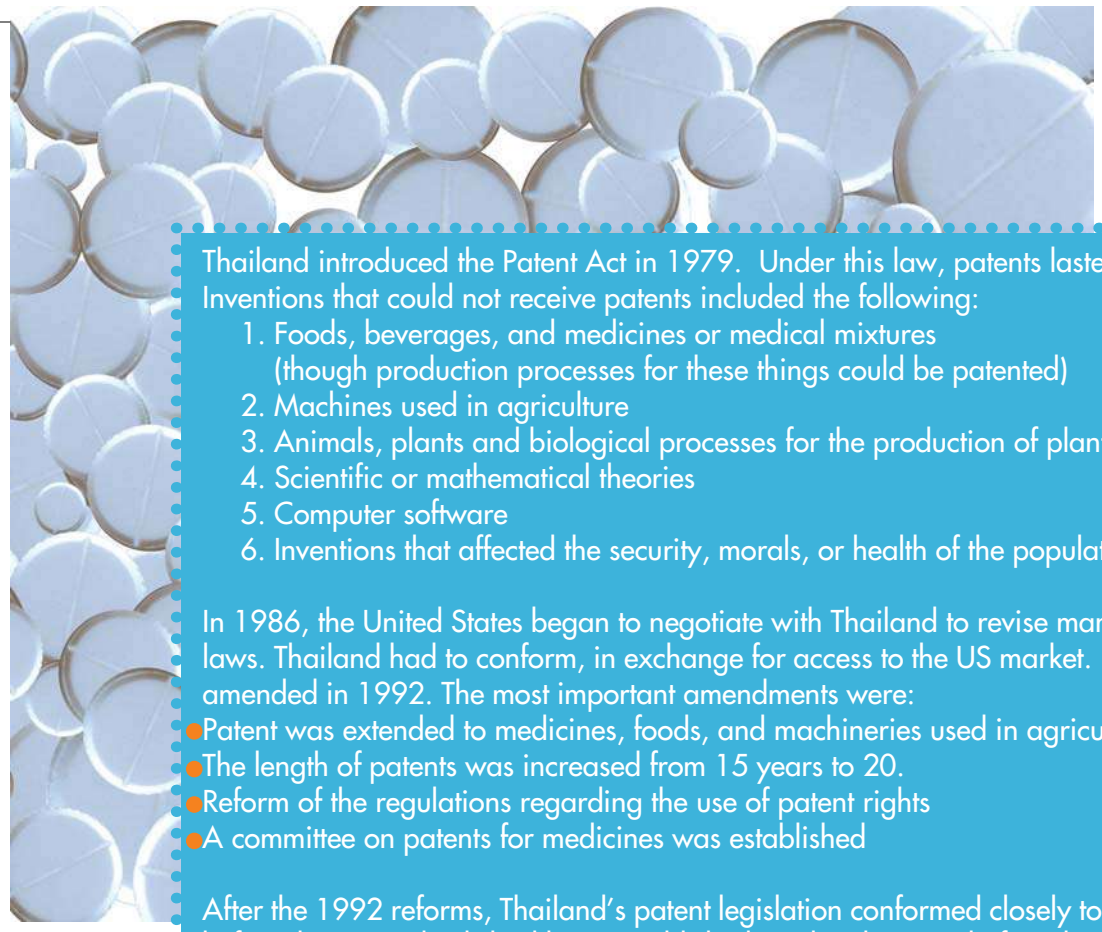
The WTO has required that countries implement TRIPS, on the grounds that it is a fundamental agreement. Different countries have different deadlines for implementing the agreement, depending on their income level.

- Developed countries are supposed to revise their laws consistent with TRIPS within one year after January 1st, 1995, the date that TRIPS came into effect.
- Developing countries have 5 years to revise their laws, or until January 1st 2000.
- The least developed countries have 11 years, or until January 1st 2006. If necessary this deadline can be extended. (Implementation of the rules for patenting medicines can be extended for 21 years, until 2016.)

Thailand is defined as a developing country. It had the patent law since 1979 which allowed only the ‘production process’, and not the ‘product’, to be protected. Thailand’s patent law was reformed to conform to international standards in 1992, **eight years before the TRIPS deadline.**

In other words, Thailand’s patent laws were consistent with TRIPS three years before TRIPS was created, and eight years before the deadline for implementation (see Box 5). This was a result of pressure from the United States. The United States applies the same sort of pressure when it makes free trade agreements. It persuades countries to adopt conditions in bilateral agreements that it will later be proposed in multilateral negotiation forum.

TRIPS clearly states that violation of the rules can lead to punishment in the form of trade sanctions, which can have a severe effect on the economy.



5. Thailand's Patent Laws

Thailand introduced the Patent Act in 1979. Under this law, patents lasted 15 years. Inventions that could not receive patents included the following:

1. Foods, beverages, and medicines or medical mixtures (though production processes for these things could be patented)
2. Machines used in agriculture
3. Animals, plants and biological processes for the production of plants and animals
4. Scientific or mathematical theories
5. Computer software
6. Inventions that affected the security, morals, or health of the population

In 1986, the United States began to negotiate with Thailand to revise many of its laws, including its patent laws. Thailand had to conform, in exchange for access to the US market. Thailand's patent laws were amended in 1992. The most important amendments were:

- Patent was extended to medicines, foods, and machineries used in agriculture
- The length of patents was increased from 15 years to 20.
- Reform of the regulations regarding the use of patent rights
- A committee on patents for medicines was established

After the 1992 reforms, Thailand's patent legislation conformed closely to WTO standards, three years before these standards had been established, and eight years before the deadline for conforming to them.

In 1999, the law changed one more time to disband the committee for patents on medicines, and to begin using the petty patent system. This revision was also based on trade negotiations with the US and to make the Thai system fully consistent with TRIPS.

Flexibilities under TRIPS to promote access to medicines

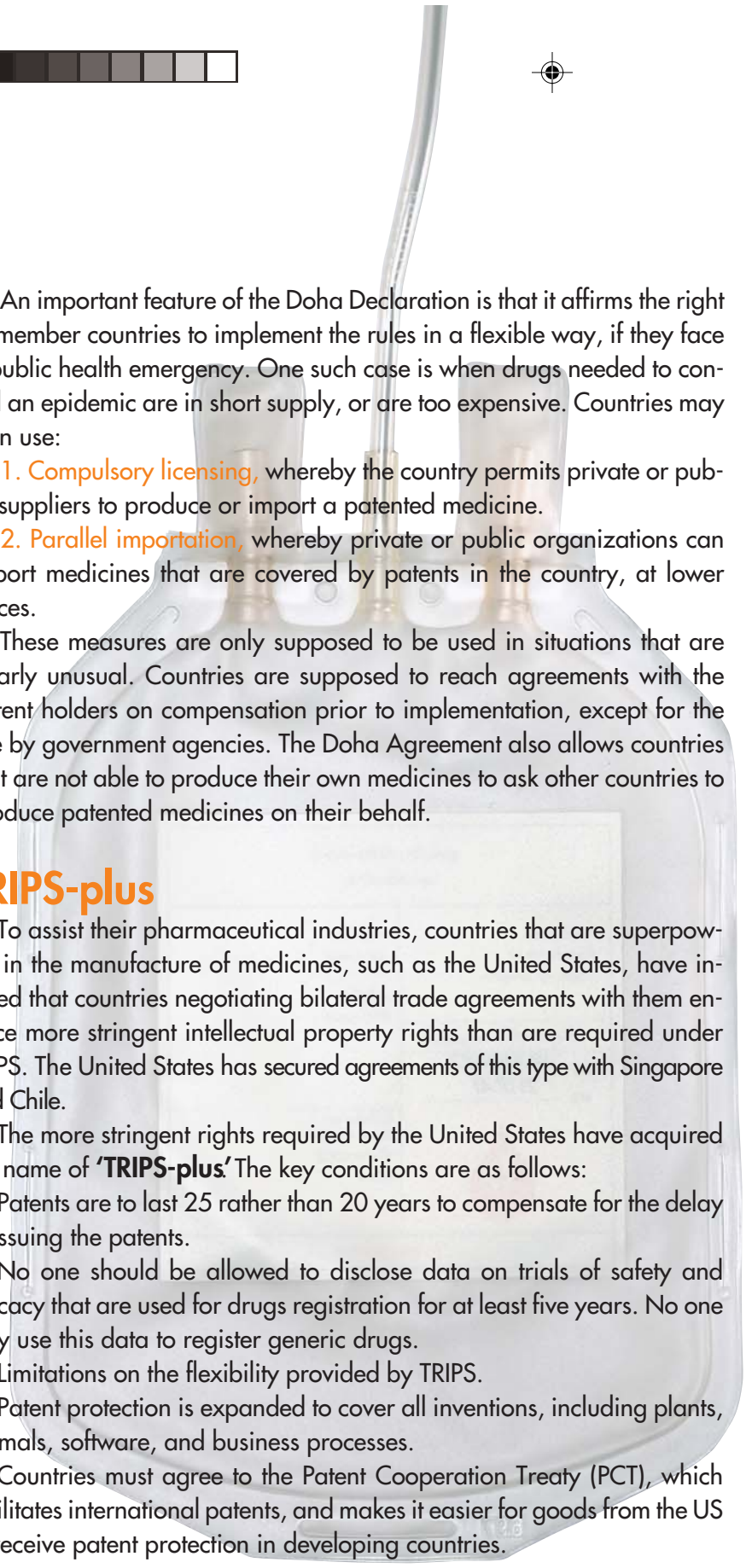
Although there are certain flexibilities under TRIPS to protect human health, such as parallel imports and compulsory licensing, they were not well recognized and implemented. Developing countries, and the least developed countries, expressed concern about the effect of TRIPS on their populations' health, because of the enforcement of intellectual property rights. This became a major issue at the ministerial meeting of the WTO in Doha, Qatar, in 2001. This meeting issued a Declaration on the TRIPS Agreement and Public Health (sometimes known as the Doha Declaration).

The key point of the Doha Declaration was that there should be flexibility in the enforcement of TRIPS with regard to patents on medicines. The aim is to reduce any possible adverse effects on health in poor countries (see Box 6).

6. The Doha Declaration on the TRIPS Agreement and Public Health

The main points of the Doha Declaration on the TRIPS Agreement and Public Health are:

- **TRIPS does not prevent, and should not prevent, member countries from taking any measures to protect the health of their populations.**
- **The implementation of TRIPS must uphold the right of member countries to protect the health of their populations.**
- **In particular, it must promote access to medicines.**
- **TRIPS recognizes the right of countries to implement the rules in a flexible way, to protect health. This includes the right to flexibility in the face of public health emergencies.**
- **Countries can make their own decisions on when to exercise their right to flexibility. However, the rights should be exercised when there is a compelling reason to do so. The epidemics of HIV/AIDS, malaria, and tuberculosis represent such reasons. Countries can exercise their rights without jeopardizing the principle of Most Favored Nation, and that of National Treatment.**



An important feature of the Doha Declaration is that it affirms the right of member countries to implement the rules in a flexible way, if they face a public health emergency. One such case is when drugs needed to control an epidemic are in short supply, or are too expensive. Countries may then use:

1. Compulsory licensing, whereby the country permits private or public suppliers to produce or import a patented medicine.

2. Parallel importation, whereby private or public organizations can import medicines that are covered by patents in the country, at lower prices.

These measures are only supposed to be used in situations that are clearly unusual. Countries are supposed to reach agreements with the patent holders on compensation prior to implementation, except for the use by government agencies. The Doha Agreement also allows countries that are not able to produce their own medicines to ask other countries to produce patented medicines on their behalf.

TRIPS-plus

To assist their pharmaceutical industries, countries that are superpowers in the manufacture of medicines, such as the United States, have insisted that countries negotiating bilateral trade agreements with them enforce more stringent intellectual property rights than are required under TRIPS. The United States has secured agreements of this type with Singapore and Chile.

The more stringent rights required by the United States have acquired the name of **'TRIPS-plus'**. The key conditions are as follows:

- Patents are to last 25 rather than 20 years to compensate for the delay in issuing the patents.
- No one should be allowed to disclose data on trials of safety and efficacy that are used for drugs registration for at least five years. No one may use this data to register generic drugs.
- Limitations on the flexibility provided by TRIPS.
- Patent protection is expanded to cover all inventions, including plants, animals, software, and business processes.
- Countries must agree to the Patent Cooperation Treaty (PCT), which facilitates international patents, and makes it easier for goods from the US to receive patent protection in developing countries.

The US proposals (known as TRIPS-plus) have major implications for access to drugs, because they raise the price of patented drugs, and restrict competition for longer period. If Thailand agrees to these conditions, they will adversely affect people, particularly the poor. In addition, national health insurance programs such as the Thirty Baht Scheme (in which all visits to government facilities cost only 30 baht), and schemes for the universal access to HIV/AIDS drugs will inevitably be affected.

> "A patent is like an invisible **'immunity'** that keeps prices high until it expires. If there are two medicines, with same demand, equal development, production, and marketing costs, one of which has a patent and the other does not, the patented drug will be more expensive, and will remain more expensive as long as the patent applies."

> Receiving a patent is like receiving the ability to maintain a complete monopoly

How does free trade increase the price of medicines?

There are several fundamental factors determining the price of medicine. The first is investment in research and production. The second is marketing. A less obvious factor, though one that is extremely important, is patents. This right to exclusive production and marketing reduces competition and raises prices. A patent is like an invisible 'immunity' that keeps prices high until it expires. If there are two medicines, with same demand, equal development, production, and marketing costs, one of which has a patent and the other does not, the patented drug will be more expensive, and will remain more expensive as long as the patent applies.

Many analysts agree that a feature of free trade that can keep prices high, and can affect access to medicines in developed and developing countries, is over-protection of intellectual property rights. TRIPS-plus is an example of over-protection.

Rights to sole production

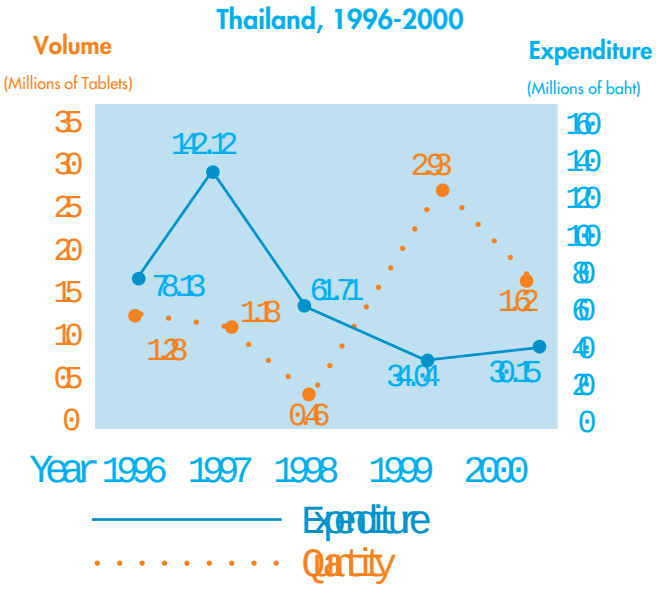
TRIPS, TRIPS-plus, and all other patent regulations, give the patent owners the right to sole production and marketing. For the duration of the patent, no competitors are allowed to produce the same good, or use the same production process. **Receiving a patent is like receiving the ability to maintain a complete monopoly.**

Owners who have complete monopolies can charge as high a price as they want, and as high as the market will bear. It is therefore not surprising that drugs covered by patents (original drugs) have the highest prices. These high prices affect access to drugs in both developed and developing countries.

The following data and research result confirm the above conclusion:

1. The anti-fungal drug Fluconazole is a good example of how patents increase the price of medicine and restrict access. Between 1996-1998, when it did not yet have a generic competitor, Fluconazole was expensive and its use was restricted. But in 1999, when a generic drug became available, expenditure on Fluconazole dropped by almost half, and usage increased six times (Figure 4).

Figure 4: Expenditures and volumes for Fluconazole in Thailand, 1996-2000



Source: Thai Health Profile 1999-2000

Table 1: Comparison of wholesale prices for medicines that once had patents and medicines that never had patents

Type of drug and generic name	Price of original drug (baht per tablet)	Price of generic drug (baht per tablet)	Price difference (original / generic)
Antibiotic			
Rifampicin 300 mg	16.0 / Rifadin	2.6	6.2
Diabetes			
Glibenclamine 5 mg	2.9 / Daonil®	0.2	14.5
Glipizide 5 mg	4.0 / Minidiab®	0.4	10.0
Metformin 500 mg	2.3 / Glucophage®	0.3	7.7
Asthma			
Salbutamol MDI 200 puff	139.1 / Ventolin®inhaler	83.5	1.7
Terbutaline 2.5 mg	2.2 / Brycanyl®	0.8	2.8
Budesonide MDI 200 / puff	354.2 / 100 puff / Pulmicort®	250 / 200 puff	2.8

Source: Adapted from Raksaworn Chaisa-art and Nusaraporn Kessomboon, 2004.

2. Raksaworn Chaisa-art and Nusaraporn Kessomboon of the Faculty of Pharmaceutical Science, Khon Kaen University, have compared the prices of original drugs and generic drugs for a number of illnesses, such as infectious diseases, diabetes, and asthma. They found that the original medicines were 1.7-14.5 times more expensive than the generic drugs, as can be seen in Table 1.

3. Jiraporn Limpananond and colleagues, from the Faculty of Pharmaceutical Sciences, Chulalongkorn University, examined the market price of the HIV/AIDS drug group NRTI in Thailand in the period 2001-2004. The cost of the brand name form of the original drug ATZ+3TC was around 140 baht while the cost of the generic was 25 baht. The brand name form of the drug d4T 40mg was 90 baht while the generic was 10 baht.

4. Similarly, UNAIDS compared the price of antiretroviral drugs that were covered by patents with those that are not in the period 1996-2000. They found that the price of patented drugs fell by 20 percent over this period, while the price of non-patented drugs fell by 60-90 percent.

Affordable medicines: But only old ones

Under TRIPS, patents last for 20 years from the day they were filed for registration. Thai patent laws have used a 20-year rule since the year 1992, or 8 years before TRIPS deadline. Patented medicines only face competition once the patent has expired.

However, in practice pharmaceutical companies have to spend long periods carrying out research and developing drugs before they can bring them to market. This can take 8-12 years from the time when the patent is filed. Competition is therefore generally restricted for less than 20 years, depending on the length of the research and development process.

However, in negotiations for a free trade agreement with Thailand, the United States is requesting that Thailand conform to the TRIPS-plus rules. If Thailand agrees to these requests, as Singapore and Chile did in their negotiations, then market exclusivity can be extended by up to five years.

The 8-12 year wait means that many drugs can be considered 'old' by the time the patents expire. This is both good and bad. It gives doctors time to accumulate experience with the drug, and learn about side effects. On the other hand, it may mean that the drug is out-of-date, so that health professionals will not use it. Health professionals, with intensive marketing from the drug companies, will prefer to use more recent drugs, even if they are still covered by patents and are more expensive.

“only about one quarter of the original drugs were subsequently produced as generics”

Wait for a long time, but without much hope

Even if people wait for 8-12 years for the patent to expire, there are two reasons why they might not be able to obtain cheap generic drugs.

First, drug companies make minor modifications to existing drugs and then claim that these drugs are ‘new’, and therefore qualified for patents. When Jiraporn Limpanond and colleagues examined patent applications in Thailand in the period 1992-2002 they found that companies used many methods for extending the life of market exclusivity.

- Companies would claim that the drug could be used to treat a different condition from the original one.
- Companies would claim that a new way of using the drug had been discovered: for instance, taking the drug two times a day rather than three.
- Companies would combine two drugs for which the patents had expired, or were about to expire, and claim that the combination represented a new drug.

Limpananond and colleagues found that 72 percent of drugs registered in Thailand in the years 1992-2002 belonged to one of these three categories.

The other reason that people may not be able to obtain cheap generics after the original patent has expired is that Thai factories do not produce them. One study showed that 7 years after the original products appeared in the market, in 1986-1990, only about one quarter of the original drugs were subsequently produced as generics. There were three main reasons for this:

1. Size of the market. Factories only produce generic drugs that have big market.
2. Production technology. Some medicines require more advanced technology than is available in Thailand, particularly vaccines.
3. Raw materials. Most raw materials used to produce drugs have to be imported. Some are very expensive. Companies may not be interested in producing such drugs because they may not be able to recoup their investment.

In summary, improving access by producing generic versions of brand name drugs is not always easy. The decision to produce a generic version depends on the potential producers and on the market. Only some brand name drugs are in fact produced as generics, which limits people’s access to medicine.

Who is affected?

TRIPS and TRIPS-plus raise the price of medicines, which affects everyone who has to use medicines, particularly medicines that are covered by patents. **The effect is perhaps not restricted to this group, but extends to the patients' families and to society. It affects health insurance programs, such as the Thirty Baht Scheme, the Social Welfare Scheme, and Civil Service Medical Benefits Scheme, as well as hospitals and other health facilities.**

However, because only some drugs are patented, and because patented drugs tend to be for new or chronic illnesses such as HIV/AIDS, tuberculosis, malaria, diabetes, hypertension, heart diseases, cancer, and asthma, people with these diseases are affected the most. This group is very large: for instance, at least 600,000 Thais have HIV/AIDS.

People with low incomes are particularly vulnerable: Statistics for 2003 show that there were 1.5 million poor households in Thailand (out of a total of 16 million), containing 6 million individuals, or 10 percent of the total Thai population.

Poor people are disadvantaged in every way, but particularly health. It is said that 'poverty and poor health go together.' If free trade raises the price of medicines because of increased protection of intellectual property, the health of the poor will suffer.

At present, poor people, particularly in rural areas, depend heavily on the Thirty Baht Scheme, as well as the Social Welfare Scheme and the Civil Servants Medical Benefits Scheme. These schemes may be threatened by higher drug prices.

Effects on health insurance schemes: The effect of patents on the Thirty Baht Scheme is particularly noteworthy, because the scheme is new, and not yet completely secure. Hospitals are already experiencing financial problems because the revenue they receive under Thirty Baht Scheme does not reflect their true costs. If Thailand does agree to TRIPS-plus, as the United States demands, then the financial problems will become even more severe, particularly in the long run. TRIPS-plus extends the length of patents by up to five years, and restricts the conditions under which countries can over-ride patents. Expenditures under the Thirty Baht Scheme will therefore increase in the future.

> "TRIPS and TRIPS-plus raise the price of medicines, which affects everyone who has to use medicines, particularly medicines that are covered by patents"

The problem will be particularly severe if the government includes HIV/AIDS medicines under the Thirty Baht Scheme, as it has recently suggested. It will further complicate the already-difficult financial problem and thus make the situation more difficult to deal with.

Effects on programs to supply anti-retroviral drugs: The impact of free trade on efforts to provide anti-retroviral drugs to people with HIV/AIDS has received substantial attention, in Thailand and overseas. Most commentators have argued that if Thailand signs a free trade agreement with the United States, and the agreement includes TRIPS-plus, then the program to distribute anti-retroviral drugs would be adversely affected.

People using anti-retrovirals need to take them every day for the rest of their lives. Some people eventually have to change to different, more expensive medicines, because of side effects or drug resistance. The longer people take the drugs, the more often they need to change. The new medicines are always patented and expensive. The cost of the anti-retroviral program is therefore high and unpredictable.

At present, approximately 57,000 of the 600,000 people with HIV/AIDS in Thailand receive anti-retroviral drugs (data from the Department for Disease Control, January 2005). These 57,000 people represent about one third of the number who should be taking anti-retrovirals — that is, people whose CD4 count is below 200 cells per milliliter or who have opportunistic infections.

The National Anti-retroviral Drugs Program, run by the Ministry of Public Health, has three drug regimes, with different costs, as summarized in Table 2.

Even using the cheapest drug regime shown in Table 2, the annual cost of treating 57,000 people is 820 million baht. If the Thai government expands coverage to include everyone who would benefit, the cost would be billions of baht. Oxfam, a non-governmental organization based in U.K., has calculated that if the government were to provide the cheapest possible treatment (costing 40 baht per person per day) to everyone who needed it, the cost would be at least 2 billion baht per year.

The reason the Thai government is able to provide anti-AIDS drugs is because the Government Pharmaceutical Organization produces certain generic drugs itself. Even though these are first line drugs, the drugs produced by the Government Pharmaceutical Organization are still about 10 times cheaper than brand name drugs. These drugs do not have patent protection in Thailand, because they were already produced locally or imported before the revision of the patent laws in 1992. (Before 1992, medicines could not be patented in Thailand.) Since 1992, most anti-AIDS drugs have had patent protection, and it has been difficult to produce generics.

If a free trade deal is signed as is proposed by the US, the future production of new drugs for people with HIV/AIDS may become more difficult. The extended patent period, data exclusivity and limits to the flexibility provided by TRIPS will delay the production of lower-price generic anti-retrovirals.

Table 2: Approximate costs per month of HIV/AIDS medication

Drug regimen	Indications	Average cost (baht per person per month)	Notes
1	Has not previously received anti-retroviral	1,200	Generic drugs produced in Thailand
2	Has followed regime 1, and has started to experience problems	2,700	Thai and imported drugs
3	Has followed regime 2, and has started to experience problems	5,300	Thai and imported brand name drugs

Under this circumstance, there are only limited options. One possible option is to resort to the flexibility provided by the TRIPS, namely using compulsory licensing or parallel importation (see Box 6). This option, however, must be based on national legislation. Even then, it is not without difficulty. When South Africa and Brazil passed the legislation for this purpose, they were taken to court by international pharmaceutical companies and the United States, the world's pharmaceutical superpower (see Box 7). Even though the drug companies and the US eventually dropped the case, it did demonstrate that compulsory licensing and parallel importation are not easy options.

At present Thailand has the law to support the use of compulsory licensing and parallel importation if needed, but if the government agrees to the TRIPS-plus requirements, it has to revise the patent act to limit the implementation of these measures.

7. The Experiences of South Africa and Brazil

South Africa and Brazil were both taken to court by drug companies when they introduced compulsory licensing and parallel importation of AIDS medication that would otherwise have been too expensive.

In South Africa, anti-AIDS drugs were covered by patents and were very expensive. The country therefore promulgated a law on drugs and related products in 1997, giving the government the power to buy cheaper medicines from overseas, even if the medicines were protected by patents in South Africa.

The United States took South Africa to the WTO, arguing that South Africa had violated the rules on intellectual property. It also blacklisted South Africa, as a country requiring special attention regarding trade. In May 2001, after negotiations with South Africa had broken down, 39 international drug companies took South Africa to court, for violating patent law.

During the court case, some companies reduced the price of medicines in order to preserve the market. The price of medicines previously costing $10,000 per year was reduced to $1,000 per year. However, even this reduced price was too high for people with the virus. If the same drugs were imported from India, the price was $295 per year.

Before the case was concluded, the drug companies decided to withdraw, and South Africa agreed to conform to TRIPS rules.

Brazil had a similar experience to South Africa. The government had a policy of providing AIDS drugs to all people with the disease. The two drugs it needed were Efavirenz and Nelfinavir, both of which were covered by patents and were very expensive. Brazil negotiated with the drug companies to reduce the price, but was unsuccessful. The government therefore instructed the government pharmaceutical agency to produce the two drugs through compulsory licensing.

The owner of the patents protested to the Brazilian government. The Pharmaceutical Research and Manufacturers of America, a powerful lobby group for the pharmaceutical industry, argued that the Brazil should no longer receive reduced tariffs, and the US government took Brazil to the WTO. The US case did not refer to the medicines themselves, but to a law on industrial products that Brazil passed in 1996. The law stated that companies holding patents to any type of good should produce that good in Brazil within three years, or else the government would permit other companies to produce the good or import it from the cheapest available source, regardless of patents.

The United States dropped this case, like the South African case, because of international pressure.

The effects are similar for developed and developing countries

It would be wrong to assume that free trade will only affect access to medicines in developing countries. Even in developed countries such as the United States and Australia, there is an impact on access.

Even though the United States is a pharmaceutical superpower, its strict patent laws make American medicines excessively expensive, and reduce Americans' access. This is particularly true for people on low and middle incomes.

When elderly Americans visit Canada, they often buy medicines to take home, because medicines are cheaper in Canada. Canadian's health system controls the price of drugs more effectively than the American system. In addition, America healthcare schemes such as Medicare and Medicaid are experiencing serious financial problems because of the high cost of medicines. At present, many Americans buy prescription medicines through organizations that order the medicines in Canada, where they are less expensive. This is a cause of legal disputes in the United States.

The American government seems to protect the interests of pharmaceutical companies. The pharmaceutical industry is highly profitable, and is a major exporter. It also has strong political links, and is a major donor to political campaigns. A non-governmental organization, Corporate Watch, claims that TRIPS was in fact drafted by the Pharmaceutical Research and Manufacturers of America (see Box 8).

Research conducted in 2003 shows that Australians will need to pay more for medicines because of the free trade agreement they have signed with the United States. In addition, the agreement will weaken the Pharmaceutical Benefits Scheme (Box 9).

The TRIPS framework (under the WTO) raises the costs of drugs by granting companies the right to sole production. The TRIPS-plus framework that the United States uses in bilateral trade negotiations extends the length of patent protection, and gives companies the right to 'data protection' for five years, so that they do not have to release data from drug trials. TRIPS-plus therefore affects both developing countries, such as Thailand, and developed countries such as the United States and Australia.

8. The Influence of International Drug Companies on Drug Prices

All international drug companies are based in developed countries, and most are based in the United States. These large companies produce over 90 percent of the world's drugs, and hold 97 percnet of the drug patents.

The British non-governmental organization Corporate Watch has stated that the General Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which is central to the World Trade Organization, was drafted by the lobby group Pharmaceutical Research and Manufactures of America (PhRMA). Corporate Watch claims that in 2003 PhRMA spent 108.6 million dollars lobbying for favorable legislations. These legislations have a direct effect on the price of drugs and on health insurance schemes such as Medicare and Medicaid. In 2003, PhRMA employed 824 lobbyists, or over eight per senator.

The international trade in medicines is essentially controlled by only 10 companies; six of these are based in the United States. The five biggest companies of all these have revenues 2 times greater than the GNP of all countries in Sub-Saharan Africa. The journal Pharmaceutical Executive (May 2004) states that in 2003 the ten largest pharmaceutical companies had a combined revenue of 205 billion dollars, and spent 35 billion dollars on research and development. Data on the 10 biggest companies are presented below.

Rank	Company	Global revenue (billions of dollars)	Expenditure on research & development (billions of dollars)	Location of head office
1	Pfizer	39.63	7.13	United States
2	GlaxoSmithKline	29.82	4.54	Britain
3	Merck	22.46	3.17	United States
4	Johnson & Johnson	19.50	4.68	United States
5	Aventis	18.99	3.23	France
6	AstraZeneca	18.85	3.45	Britain
7	Novartis	16.02	3.07	Switzerland
8	Bristol-Myers Squibb	14.93	2.27	United States
9	Wyeth	12.62	2.09	United States
10	Eli Lilly	12.58	2.35	United States
	Total	205.42	35.98	

Source: Special report, Pharmaceutical Executive, May 2004

9. The US-Australia Free Trade Agreement Will Raise the Price of Medicines for Australians

The effect of US-Australia's free trade deal on the price of medicines in Australia is an interesting case study for Thailand.

An Australian study in 2003 found that the free trade agreement would raise the price of medicines in Australia. It also found that the Pharmaceutical Benefits Scheme (PBS), a scheme that had been effectively controlling the price of medicines for more than 50 years, would be weakened by the new rules on intellectual property.

In the past, the PBS has saved Australia 1-1.4 billion dollars a year in pharmaceutical costs. However, under the bilateral agreement between the Australia and the United States, Australia will have to pay more for its medicines.

A very interesting study looked at the effect of the free trade agreement on expenditures for five groups of drugs for which the patents were about to expire. (Three of the drugs were for reducing cholesterol, one for reducing stress, and one for asthma.) The researchers used expenditure data for the year 2003 to estimate additional expenditures in the period 2006-2009 that could be attributed to the effects of the free trade agreement. The medium estimate was 1.12 billion dollars, with a lower limit of 850 million and an upper limit of 1.56 billion. These costs, attributable to TRIPS-plus, would be born by the consumer.

Source: Lokuge, Buddhima, Faunce, T. A. and Deniss, R. 2003. A backdoor to higher medicine prices? Intellectual property and the Australia-US Free Trade Agreement. Published in http://www.tai.org.au/Whatsnew_Files/Whatsnew/Patent.pdf. Accessed date: 20/1/2005.

Recommendations

To some people the term 'free trade' is the ideal form of international trade. However, free trade is not necessarily fair. It can have both benefits and costs for the economy, society, and health.

Regardless of what we think about free trade, it is not something that we can avoid.

Thailand is currently negotiating free trade agreements at the multilateral, regional, and bilateral level. The number of agreements will steadily increase. Free trade agreements will become more and more important to Thailand's economy, society, and health.

Every country that enters into trade negotiations hopes to further its own interests. We need to be aware that trade negotiations have to be conducted with great care, based on precise information, and full knowledge of the costs and benefits to the country.

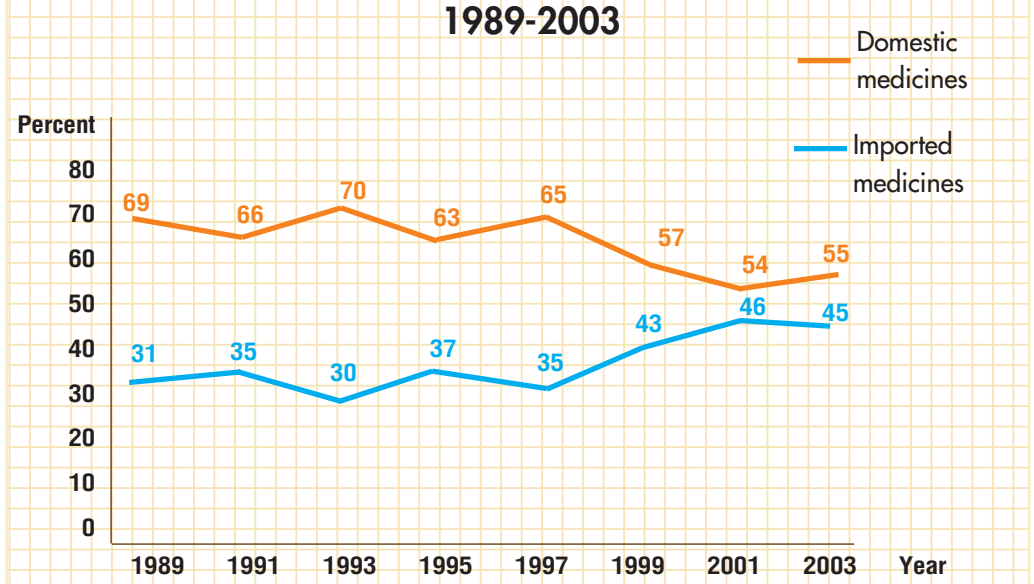
"Free trade must not raise the price of medicines to a level that people cannot afford"

Principles to consider

When looking at the effect of free trade on medicines, we need to consider the following points:

1. Free trade must not raise the price of medicines to a level that people cannot afford. Particular attention needs to be paid to the poor. If free trade raises the price of medicines, the government needs to prepare measures to offset the effects.
2. Free trade should contribute to the development of the pharmaceutical industry in Thailand, in order to reduce the money spent on imports, which have risen steadily in recent years. Over the period 1989-2003, for example, the proportion of drugs used in Thailand that were imported grew from 31 percent to 45 percent (Figure 5).

Figure 5: The source of medicines used in Thailand, 1989-2003



Source: Thai Drug Control Division, Ministry of Public Health, 2005

Medicines are different from other goods

Medicines are an unusual type of good. Unlike other goods, medicines are not something over which consumers can exercise choice. With other goods, consumers can choose the type and price. If a particular good is too expensive, consumers can look for a cheaper substitute. For instance, if bottled water is too expensive, people can drink tap water. If they cannot afford a car, they can use public transport.

Medicines are different. Neither consumer satisfaction nor price has much influence on the decision to use a particular medicine, because the decisions are mainly made by the health professionals. If a medicine that we need to use is expensive because it is patented, and if there are no cheaper substitutes, then we have to use the expensive patented medicine.

These things mean that the government must introduce measures to ensure that drug prices remain at a level that people can afford. Drug producers must not make profits so large that people's access is affected, particularly access by poor people.

Recommendations to alleviate the negative impacts from free trade negotiation

1. Conduct research on how access to essential medicines would be affected by measures proposed in bilateral trade negotiations that go beyond WTO requirements. Particular attention needs to be paid to measures proposed by the United States. Appropriate strategies to reduce the impact have to be formulated.

In bilateral trade negotiations, particularly those currently being conducted with the United States, it is very difficult for Thailand to completely turn down the requests on TRIPS-plus. It may, however, be possible to agree to only some of TRIPS-plus. The United States is Thailand's most important export market. Approximately 15-20 percent of Thailand's exports go to the United States. From the point of view of the United States, however, Thailand is only a small market. US negotiators can exploit these facts when they need to exert pressure on Thailand. This is what has happened in the past. For instance, in 1986 the United States used trade act article 301 to pressure Thailand to change many of its laws, particularly laws regarding free trade in tobacco and intellectual property rights (see Box 5).

In this situation, the most important thing for us to do is to carry out a careful study of the effect of free trade on Thai people's access to medicines. We need to find ways to alleviate the problem. If we do need to accept TRIPS-plus, we need systematic research rather than relying on anecdotes.

Many topics require further study. One important topic is the 'data exclusivity' requested by the United States. No one, particularly the drug regulatory authority, is allowed to disclose the data that the drug company used for registration, and the generic companies are also not allowed to use these data for registration of generics. Ways to avoid use of these data need to be found. When applying to register generic drugs, is it in fact necessary to use the data covered by TRIPS-plus? Forcing producers of generic drugs to conduct new clinical trials in Thailand is unethical, because it exposes participants to unnecessary risks. If there is a way of avoiding use of this data when registering medicines, then 'data exclusivity' will have little effect. Data exclusivity is requested to last five years after drug registration. This is about the time it takes Thai drug companies to discern the size of the market for the drug, to assemble raw materials, to research production methods, and to registered the generic drugs.

Another issue that deserves further study is the possibility of speeding up the registration of new drugs. The United States has called for the extension of patents from 20 to 25 years as compensation for the time spent in issuing the patent and in drugs registration. There needs to be research on how delays in issuing the patent and drug registration affect market exclusivity period. We could then negotiate for a limited form of TRIPS-plus involving reasonable compensation of loss of market exclusivity from the delay in issuing patents and drug registration. Additional strategies may also need to be proposed to further reduce the negative implications.

> “it is very difficult for Thailand to completely turn down the requests on TRIPS-plus. It may, however, be possible to agree to only some of TRIPS-plus”

Finally, a detailed study needs to be conducted on the request to limit the use of compulsory licensing and parallel importation. This is one of the key requirements of TRIPS-plus. What problems would this requirement create? Are there any alternatives? How are we going to cope with the negative consequences?

2. Ensure that the benefits from free trade will be distributed across all groups, and that the interests of the poor will be protected

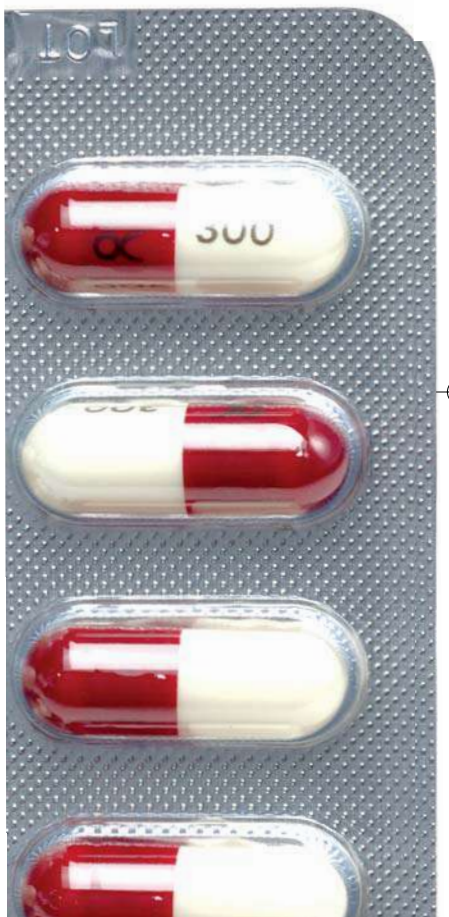
Free trade is likely to increase the country's income. This increased income should not be restricted to certain industrialists, but should be spread among all groups, so that everyone benefits from free trade. Health in particular should benefit. The government should use the extra export revenues to increase funding for health. It could collect a special tax on patented medicines and use this for pharmaceutical research and development, particularly on traditional medicines.

In addition, the government could use money earned from foreign trade to subsidize expensive medicines so that consumers benefit. People would then be able to use up-to-date medicines, even though the prices are high. The effect of free trade on access to medicines is something that can be moderated. It requires only that the health sector receives sufficient extra revenue, and that it establishes an effective health system.

3. Collaborate with other developing countries, to increase bargaining power and defend Thailand's interests

The theory of international trade is a theory of negotiation in defense of national interests. Developed countries and developing countries have different interests. The most effective way to negotiate is to closely collaborate with countries that have similar interests. Cooperating with other developing countries in multilateral negotiations is likely to increase Thailand's negotiating power, and help it defend its national interests.

On the issue of patents, cooperation between developing countries has already produced results in multilateral negotiations. In the negotiations at Doha, TRIPS was made more flexible in order to deal with matters of public health (Box 6). Cooperation may be more difficult when conducting bilateral negotiations. However, many developing countries that are negotiating bilateral agreements with the United States face similar problems regarding drug patents. This will perhaps enable developing countries to come together to persuade the United States not to go beyond the requirements set out in TRIPS, because TRIPS already gives enormous benefits to the world's biggest producer of medicines.



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The Process of Producing the Thai Health Report

The Process of Producing the Thai Health Report

The Twelve Health Indicators The selection process was based on four principles.
1. The data come from a reliable source, and are calculated at a regional or national level
2. Relevant results from research projects are presented together with the data
3. Some of the indicators were suggested by experts
4. The indicators need to reflect the health situation in the year, in accordance with the following conceptual framework

Ten plus Ten Health Issues

The report describes ten notable issues and briefly summarizes ten additional issues. The report also looks back at the ten notable issues from the previous report, and describes any recent developments. Selection of the issues was based on five principles.

1. It must have arisen in the year of the report
2. It must have an important effect on the health of Thais. 'Effects' can include security and safety.
3. It may be a policy, if the policy had a clear effect on health in the year of the report
4. It must be not have arisen before.
5. It must have occurred often in the year of the report.

Special Issue for the Year

Special issues must be policy-relevant, important to the public, and complex.
1. It may be one of the notable issues for the year, or a different issue
2. The choice can be based on target group or on the issue

Name	Organization	Reviewers
1. Dr. Suwit Wibulpolprasert	Office of Permanent Secretary, Ministry of Public Health	Whole report
2. Dr. Wichai Chokewiwat	Department of Development of Thai Traditional Medicine and Alternative Medicine Ministry of Public Health	Whole report
3. Ms. Parichat Siwaraksa	Researcher	Whole report
		Experts
4. Dr. Thippawan Liabsuetrakul	Department of Epidemiology, Faculty of Medicine, Songkla Nakarin University	Pregnancy and Delivery
5. Dr. Weerasak Jongsoowiwatwong	Department of Epidemiology, Faculty of Medicine, Songkla Nakarin University	Pregnancy and Delivery
6. Dr. Watchara Riewpaiboon	Sirindhorn Center for Reconstruction	Disability
7. Dr. Yawarat Porapakkham	Sirindhorn Center for Reconstruction	Mortality
8. Dr. Pramote Prasartkul	Institute for Population and Social Research, Mahidol University	Mortality
9. Dr. Patama Vapattanawong	Institute for Population and Social	Mortality
10. Dr. Viroj Tangcharoensathien	International Health Policy Program (IHPP)	Sickness
11. Dr. Chunrurtai Kanchanachitra	Institute for Population and Social Research. Mahidol University	Poverty
12. Dr. Prawech Tantiphiwattanasakul	Department of Mental Health, Ministry of Public Health	Mental Health
13. Dr. Wandi Phokakul	Institute for the Health of the Elderly	Elderly
14. Dr. Hatcha Sriplung	Songklanakarin University, Had Yai	Cancer
15. Dr. Prapaisri Sirichakwal	Institute of Nutrition. Mahidol University	Food
		Consultant
16. Ms. Panbaudee Akachampaka	Bureau of Policy and Strategy, Ministry of Public Health	Sugar consumption
17. Dr. Prapote Petrakard	Department of Development of Thai Traditional Medicine and Alternative Medicine. Ministry of Public Health	Drug patents
18. Dr. Viroj Tangcharoensathien	International Health Policy Program (IHPP)	Drug patents
19. Dr. Siriwun Pittayarangsalit	International Health Policy Program (IHPP)	Drug patents
20. Dr.Thaksaphon Thamarangsi	International Health Policy Program (IHPP)	GIS Data
21. Dr. Yuwadi Pattanawong	Medical Device Control Division The Food and Drug	Drug patents
22. Dr. Sanchai Chasombat	Division of AIDS, Communicable Disease Control, Ministry of Health	Access to Medicines
23. Ms. Pornthip Yuktanon	Division of AIDS, Communicable Disease Control, Ministry of Health	Access to Medicines
24. Mr. Buntoon Srethasirote.	The Resource-Based Strategy Policy Project, The National Human Rights Commission of Thailand	The effect of the FTA on Thai traditional medicine
25. Dr. Jett Dhonavanik	Law Office of Jett Dhonavanik	Patent law
26. Ms. Surirat Trimarkka	Aids Access Foundation The effect of the FTA on access to HIV/AIDS medication	The effect of the FTA on access to HIV/AIDS medication
27. Dr. Jiraporn Limpananont	Biochemistry, Faculty of Pharmaceutical Sciences, Chulalongkorn University	Drug patents
28. Dr. Chakkrit Kuanpot	School of Law, Sukhothai Thammathirat Open University.	Legal aspects of the FTA
29. Ms. Ouayporn Taechootrakul	Green World Foundation	Health issues
30. Ms. Thitinun Srisathit	Green World Foundation	Health issues
31. Ms. Piyanart Worasiri	Samaphan Ltd.	FTA
32. Ms. Kannikar Kittivejjakul	The Action on Globalization	FTA

Steering Committee 2004

Name	Organization	Position
1. Dr. Suwit Wibulpolprasert	Office of Permanent Secretary, Ministry of Public Health	Committee Chair
2. Dr.Vichai Chokevivat	Department of Development of Thai Traditional Medicine and Alternative Medicine Ministry of Public Health	Committee
3. Dr. Ampol Jindawattana	National Health System Reform Office (HSRO)	Committee
4. Dr. Somsak Chunharas	Advisory Office for the Department of Health, Ministry of Public Health	Committee
5. Dr. Chanpen Choprapawan	National Institute for Brain-Based Learning (NBL)	Committee
6. Dr. Kritsada Ruengareerat	Thai Health Foundation Promotion	Committee
7. Dr. Komatra Chuengsatiansup	Bureau of Policy and Strategy, Ministry of Public Health.	Committee
8. Dr. Pinij Fahumnuayphol	Center for Developing the National Health Information System	Committee
9. Ms. Parichat Siwaraksa	Researcher	Committee
10. Mrs. Jeerawan Bunpoem	Division of Economic and Social Statistics, National Statistical Office	Committee
11. Ms. Warunya Teokul	National Economic and Social Development Board	Committee
12. Ajarn Pipop Thongchai	Foundation For Children	Committee
13. Dr. Wilasinee Pipitkul	Faculty of Communication Art, Chulalongkorn University	Committee
14. Ajarn Surin Kitnitchi	Klongkhanomjeen Community, Sena district, Ayutthaya province	Committee
15. Ms. Benjamaporn Chantraphat	Thai Health Foundation Promotion	Committee
16. Dr. Churnrurthai Kanchanachitra	Institute for Population and Social Research Mahidol University	Committee and Secretary
17. Dr. Kritaya Archavanichkul	Institute for Population and Social Research Mahidol University	Committee and Associate Secretary
18. Dr. Chai Podhisita	Institute for Population and Social Research Mahidol University	Committee and Associate Secretary
19. Dr. Wassana Im-em	Institute for Population and Social Research Mahidol University	Committee and Associate Secretary
20. Mrs. Kullawee Siriratmongkol	Institute for Population and Social Research Mahidol University	Staff
21.Ms. Hathairat Seangdung	Institute for Population and Social Research Mahidol University	Staff
22.Ms. Suporn Jarassit	Institute for Population and Social Research Mahidol University	Staff