

#### **MESSAGE FROM**

#### HER EXCELLENCY MS. YINGLUCK SHINAWATRA PRIME MINISTER OF THE KINGDOM OF THAILAND

Thailand's response to massive floods last year is testimony to the country's resiliency, competitiveness and strong economic fundamentals. Turning crisis into opportunity, Thailand implemented policies to make our country more disaster-resistant, our economy more robust and our infrastructure more interconnected. Billions of US dollars are being invested in water management and infrastructure megaprojects.

As a result, during my visits to countries in the Asia-Pacific this year, the message I received was one and the same – that there is confidence in the Thai economy and a readiness to continue to invest in Thailand's future. Our economic fundamentals remain strong, our comparative advantages unparalleled and our policies pro-growth. From a growing market based on a rising middle class to an open and flexible approach to investment and global markets. From its strategic location in and connectivity with the Mekong region and the ASEAN Community to a service-oriented culture with a quality workforce and a stable democracy based on rule of law. These are some of the reasons why economic growth is expected to be 5.5 to 6.5 percent this year, and why foreign investors continue to look to Thailand as a bridgehead for the ASEAN single market and production base. Of course, challenges remain. But this Government is committed to addressing them, including improving competitiveness and productivity, and thereby raise people's standards of living.

I hope that you will benefit from *Thailand Competitiveness Report 2012* and ultimately arrive at our shared conclusion, and that is Thailand remains a good partner for all in achieving growth, progress and prosperity.

Yingluck Shinawatra

Prime Minister of the Kingdom of Thailand

#### MESSAGE FROM

### HIS EXCELLENCY MR. KITTIRATT NA RANONG DEPUTY PRIME MINISTER AND MINISTER OF FINANCE OF THE KINGDOM OF THAILAND

While the global backdrop remains, the ten members of ASEAN will form a single market and production base when ASEAN Economic Community commences in 2015. This strategic move will create unparalleled opportunities for trade and investment. Thailand will soon be integrated into a marketplace of more than 600 million people. Given that development, the country has fully equipped to cope up with changes at the maximum speed.

In recent years, successfully proven as a crucial part of the regional growth, Thailand's economy grows impressively and steadily by undertaking development policies under the Philosophy of Sufficiency Economy, sound macro-economic management and series of investment promotion measures. Key production sectors include logistics and medical services, travel and tourism as well as agricultural industry poised for the most growth and remain its global niche. Of course, to improve country's competitiveness and to serve as a hub of the region supply chain, investment programmes of more than USD 72 billion are already in pipeline.

With these strong fundamentals, I hope you are reassured that the Thai economy will grow faster than expected this year, thanks to infrastructure investment and government measures to strengthen domestic economy, and move the country toward sustainable growth.

Once again, I am truly confident that our moment has arrived and Thailand has come back stronger than before to ensure you the promising future of Thailand.

#### **CONTENTS**

07
NEW
GLOBAL CONCERNS

OVERVIEW
OFTHAILAND'S
COMPETITIVENESS

15 SUSTAINING THAILAND'S COMPETITIVENESS

### 16-25 MACROECONOMIC DEVELOPMENT

ECONOMIC RESTRUCTURING TOWARD
INCLUSIVE GROWTH
STABILITY OF MACROECONOMIC DEVELOPMENT
LEADING THE WAY TO GLOBAL TRADE
AND INVESTMENT
WEALTH REDISTRIBUTION
NATIONAL RESILIENCE TO RISKS
CREATION OF REGIONAL CONNECTIVITY

## 26-43 THE STRENGTH OFTHAILAND'S PRODUCTS IN THE GLOBAL NICHE MARKET

WORLD LEADER IN FOOD
WORLD CLASS DESTINATION
SUPERIOR MEDICAL SERVICES
REGIONAL LOGISTICS SERVICE CONNECTIVITY
CENTRE
REGIONAL AVIATION HUB

### **44-55**ENABLING FACTORS OF REAL SECTOR DEVELOPMENT

POWERING GROWTH WITH SCIENCE,
TECHNOLOGY AND INNOVATION
NATURAL RESOURCES AND ENVIRONMENTAL
PRESERVATION
ENERGY SECURITY
INVESTMENT OPPORTUNITIES THROUGH
PUBLIC-PRIVATE PARTNERSHIP (PPP)
INVESTING IN HUMAN RESOURCES

**PREPARING FOR AGEING SOCIETY** 



The long steady growth of the Thai economy was interrupted by a number of crises during the recent past, starting with the global financial crisis between 2008 and 2009, followed by the political instability in 2010, and a severe flood in 2011. Yet, after each of these crises, the Thai economy rebounded strongly, thanks to the strong economic foundation, sound macroeconomic management and the resilient banking system.

With the increase in regional economic integration, the AEC, and various FTAs and EPAs that Thailand has signed with many economies, the Thai economy would enjoy an even larger market with greater opportunities in the coming years. Thailand, along with other countries in the region, will share a peaceful prosperity.



Chartsiri Sophonpanich

Chairman, the Thai Bankers' Association

### NEW GLOBAL CONCERNS

The world is evolving at an accelerating pace. Access to information, financial transactions, and the movement of people take place at unprecedented speeds. Connectivity, in its many forms, underpins the global economy. It is a matter of getting on board, or being left behind.

Thailand faces new global situations that provide opportunities, or pose threats, for the country's development and its positioning within the ASEAN region. These have been identified as follows:





#### NEW GLOBAL CONCERNS

#### 01

Increase in sub-regional and regional cooperation and competition, especially among ASEAN member nations, with the impending ASEAN economic integration in 2015. ASEAN countries will become the world's manufacturing hub, highlighting strengths such as regional production chains and the relatively low cost of production. This economic integration will provide key opportunities, especially as the global purchasing power of a burgeoning middle class in China and India rises, but it also imposes constraints on Thailand's competitiveness development.

#### 02

#### Adjustments in global rules and regulations in

various aspects of world economic management, resulting from the 2008 world economic and financial crisis. Reformed rules and regulations in trade and investment have focused mostly on transparency. At the same time, environmental conditions, including contributing to global warming, could be used as tariff and non-tariff trade barriers. This increases the difficulty in exporting commodities from developing to developed countries, and will certainly affect Thailand.

#### 03

Global energy and food security issues, resulting from dramatically rising world energy demand and limited non-renewable energy sources, causing policy focus on renewable energy from fuel crops. Moreover, rising demand for agricultural commodities and food, due to a significant increase in the world's population, will negatively impact global energy and food security in the long run. However, for Thailand, a key contributor to the global food supply, the food crisis may support development of agricultural commodities for export expansion.

#### 04

**Technological advancement** plays a greater role in economic and social development and in responding to people's needs, as seen by the penetration of information and communication technologies (ICT) in business practices, as well as in the application of modern technologies such as nanotechnology and biotechnology to people's daily lives. Such technological advancement creates opportunities for the country's development, as it is an important means of promoting development of the creative economy, where bioenergies, materials and machines replace human functions, helping to improve the health and productivity of an ageing society.

#### 05

Approaching a world of ageing societies, posing many implications for development. Many developed countries have experienced an ageing crisis for the past 40 to 50 years. Developing nations such as China, Indonesia, Brunei, Thailand and Vietnam have moved towards ageing societies in the past five years. This would have several consequences, such as the loss of cultural diversity and a brain drain, resulting from a greater number of skilled and unskilled migrant workers moving to the ageing countries to fill gaps in the labour market. Furthermore, countries with a high elderly proportion require more budgetary resources to support health care costs. Nevertheless, an increase in old age populations can be driver for Thailand's elderly care and geriatric medical services.





Looking at the upcoming AEC and expanded FTAs/EPAs centering on ASEAN, Thailand should remain a favourite destination of foreign investors based on its good infrastructure, skilled labour force, and favourable government incentives, while challenged by labour shortages.

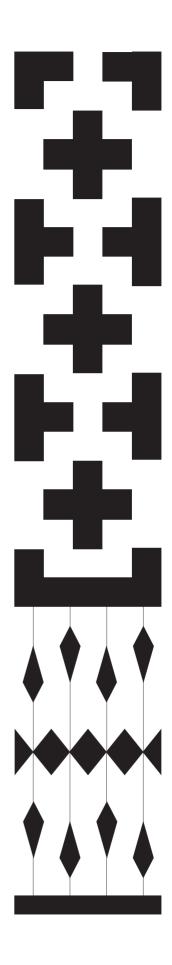


#### Setsuo IUCHI

President, Japan External Trade Organization (JETRO), Bangkok

# OVERVIEW OF THAILAND'S COMPETITIVENESS

Thailand ranks 39th in the World Economic Forum (WEF) Global Competitiveness Report 2011-2012. The country has maintained its ranking after dropping in performance several years back. To upgrade the country's positioning in global competitiveness, Thailand's strengths and weaknesses to be addressed are as follows:





GCI GLOBAL COMPETITIVENESS INDEX

#### 2005 - 2006

| Total record number (countries) | 117 |
|---------------------------------|-----|
| Median                          | 59  |

#### THAILAND RANK



#### **BASIC REQUIREMENTS**

Institutions
Infrastructure
Macroeconomic Stability
Health and Primary Education

| 34 |  |
|----|--|
| 40 |  |
| 37 |  |
| 11 |  |
| 85 |  |

#### **EFFICIENCY ENHANCERS**

Higher Education and Training
Goods Market Efficiency
Labour Market Efficiency
Financial Market Sophistication
Technological Readiness
Market Size

| 41 |
|----|
| 12 |
| 43 |
| -  |
| -  |
| -  |
| 49 |
| -  |

#### INNOVATION & BUSI-NESS SOPHISTICATION

Business Sophistication Innovation

| 38 |
|----|
| 39 |
| 38 |

#### **SOURCE**

WEF Global Competitiveness Report 2005-2012

#### **STRENGTHS**

In recent years, Thailand's overall competitiveness score has been relatively stable. It is supported by strengths such as macroeconomic stability, a large domestic market, strong labour market conditions, and good infrastructure.

Solid economic development is underpinned by sound monetary and fiscal policies, as well as by general macroeconomic scrutiny and management. Prices and levels of employment have also been stable. In addition, diversification of strong sectoral industries helps shield the Thai economy from external volatility.

Improvements in infrastructure, and considerable investments from the government for further infrastructural development, continues to be a supporting factor to the country's unwavering competitiveness ranking. Road, rail and sea transportation routes continue to be developed in terms of strengthening quality and inviting participation from different sectors.

Additionally, the relatively immense size of domestic, regional, and international markets enables Thailand to achieve economies of scale due to lower costs of production. Market efficiency, including resource allocation mechanisms for production and services, remains at an adequate level.

| WEIGH |          |      | 2009 - 2010 | 2009 - 20 |
|-------|----------|------|-------------|-----------|
| 100%  |          | 142  | 133         | 133       |
|       |          | -    | 66          | 66        |
|       | 9        | ( 39 | 36          | 36        |
|       | 46       |      | 43          |           |
|       | 67       |      | 60          |           |
| (40%) | 42       |      | 40          |           |
|       |          |      | 22          |           |
|       | 28<br>83 |      | 61          |           |
|       | <u> </u> |      |             |           |
| 8     | 43       |      | 40          |           |
|       | 62       |      | 54          |           |
| (50%) | 42       |      | 44          |           |
|       | 30       |      | 25          |           |
|       | 50       |      | 49          |           |
|       | 84       |      | 63          |           |
|       | 22       |      | 21          |           |
|       |          |      |             |           |
| (100) | 51       |      | 47          |           |
| (10%) | 47       |      | 43          |           |
|       | 54       |      | 57          |           |

#### **WEAKNESSES**

While Thailand's economy has consistently grown, weaknesses lie in poor health-related factors, technological readiness, and quality of national institutions. National income per capita remains low, with weak savings and poor investment volume. This reflects the majority of the population's limited access to capital and capability of income generation.

Progress in science and technology is a great concern, especially since technological readiness has drastically dropped over the past few years. It is vital that new technologies to promote productivity and revive

innovation be adopted. However, efficient organisation management and innovation development in production processes require improvement. Investment in research and development, and in boosting scientific and technological infrastructure, is also necessary for increasing national competitiveness.



The Thai capital market has been upgraded from the Secondary Emerging Market to the Advanced Emerging Market status by Financial Times Stock Exchange (FTSE) since March 2012. Thailand's Corporate Governance Ranking has increased from the 8th in Asia to the 4th in 2010, according to the Asian Corporate Governance Association (ACGA). Moreover, the dividend yield is among the highest in Asia. 75% of SET100 companies have consistently paid out dividends during the past three years. Therefore, we believe in significant growth, integrity and prosperity of the Thai capital market.



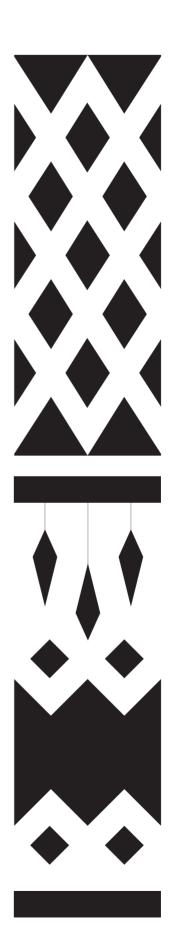
#### Paiboon Nalinthrangkurn

Chairman, Federation of Thai Capital Market Organizations (FETCO)

#### SUSTAINING THAILAND'S COMPETITIVENESS

Thailand's past success in attaining competiveness relied on two factors: foreign direct investment (FDI) and low cost competition. However, as the game has changed and other players have entered the arena, Thailand's competitiveness has eroded.

It is vital that the nation continuously reinvent itself, leveraging unique strengths to upgrade from a low labour cost-based economy to one that is based on innovation.



SUSTAINING THAILAND'S COMPETITIVENESS

# MACROECONOMIC DEVELOPMENT



2008 and 2009, Thailand's economy shrank

2.3%

**2010** Thailand's economy bounced back,

7.8%



# 01/06 ECONOMIC RESTRUCTURING TOWARD INCLUSIVE GROWTH

From the First to the Tenth of Thailand's national development plans, spanning 50 years, the development paradigm changed continually under the context of shifting global and domestic conditions. Thailand managed to restructure the economy toward industrialisation, aiming at establishing strong trade and investment links between the Thai and the global economy. In addition, since the Ninth Plan (2002-2006), the Philosophy of Sufficiency Economy has been applied, resulting in a greater ability to cope with the impact of the 2008 global economic crisis.

Over the past decade, Thailand has shown an impressive improvement of its socio-economic development indicators, with sound and steady growth averaging 4% from 2000 to 2007. However, during the global economic crisis between 2008 and 2009, Thailand's economy shrank 2.3%, similar to other countries in the region with double digit drops in most sectors. In 2010, Thailand's economy bounced back, expanding 7.8%, the fastest pace since 1995.

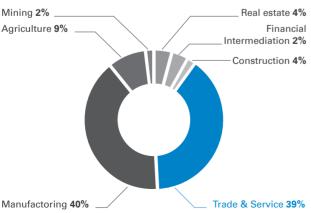
This impressive performance, however, was disrupted by several unforeseen events – the most recent being the catastrophic floods of 2011. Heavily affecting industrial estates and production plants in the central region of Thailand, the floods slowed economic growth to 0.1%. A comprehensive water resource management plan is in the works in order to prevent future flooding on this massive scale.

The industrial sector has mainly driven Thai's economy in the past decade, accounting for around 40% of GDP since 2000. In 2011, Thailand exported industrial goods, worth USD 167.9 billion, accounting for 73.4% of total exports.

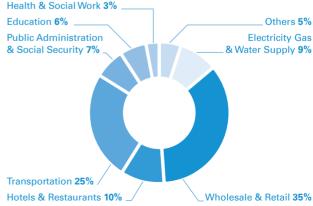
Major exports include computer and related parts, vehicles, jewellery, electronic components, and polymers of ethylene. Thailand exports goods across global markets, particularly to the US and EU. After those markets experienced recession, however, the demand for Thai goods from ASEAN and other emerging markets has been rising.

The agricultural sector is also a major contributor to the economy, especially in term of providing food security and ample raw materials supply base for increasing industrial value.

#### **GDP BY SECTOR** AVERAGE 2007-2011



#### TRADE & SERVICE SECTOR TO GDP AVERAGE 2007-2011



Moreover, the export value of agricultural commodities accounted for 13% of the total export value; the price of agricultural products increased from the previous year by 14.2%. Such an improvement was attributed to an increase in harvesting areas, and the upward trend of agricultural commodity prices. Main exports included rubber, rice and fish.

Trade and services sectors have also driven the Thai economy forward over the past decade. Constituting more than 39% of GDP, these sectors added significant value in their respective categories, helping reduce deficits in the balance of payment account, enhance standards of living, and create a high number of jobs.

Inbound tourists in 2011 included 19.1 million people, an increase from the previous year. This expansion came from a surge of new tourists; remarkably, visitors from China grew by an unprecedented 56.9%.

#### KEY DEVELOPMENT DIRECTIONS FOR THE FUTURE INCLUDE:

- 01 Restructuring trade and investment sectors in accordance with the expansion of Asian and African economies as well as domestic consumption trends
- **02 Restructuring the service sector** to create value and promote environmentally friendly practices
- 03 Developing the creative economy by promoting creative geographical pockets and knowledge-based infrastructure, and upgrading skills of SMEs to increase value of their products and services
- 04 Developing the agricultural sector by enhancing productivity, increasing value through technology adaptation and environmentally friendly production
- **O5 Pushing the manufacturing sector** towards better quality output and sustainable production processes

Guideline that stipulates public debt to GDP should be less than 60% and debt-servicing costs to budget ratios should not exceed 15%. Moreover, most of the debt is long-term and designated in the local currency.

Plans to implement flood protection systems in the coming years will require the government to closely monitor debt and macroeconomic stability. For internal stability, inflation control is paramount; inflation rose 3.3% and 3.8% in 2010 and 2011 respectively, given the spike in food and oil prices. It was partially kept in check by government negotiations with processed food producers to delay passing along higher input costs to consumers.

At the same time, monetary policy has been on a normalisation course since third quarter of 2010. The Bank of Thailand (BOT) has continually raised policy rates from 1.25% in May 2010 to 3.5% in August 2011 to curb hiking inflation. After flood crisis in the last quarter of 2011, the BOT cut interest rates to accommodate business recovery. In February 2012, the policy rate was 3%.

#### 02/06 STABILITY OF MACROECONOMIC DEVELOPMENT

Thailand's stability has improved markedly with an increase of international reserve and macroeconomic management. International reserves at the end of 2011 stood at USD 175.1 billion - a substantial increase from USD 87.4 billion in 2007. In the same time period, the ratio of public debt to GDP was 44%, and debt-servicing costs to budget ratios was 10%; this remained under the Fiscal Sustainability Framework

WITH REGARD TO EXTERNAL STABILITY, THAILAND'S INTERNATIONAL RESERVES WERE RANKED THIRD OF ALL ASEAN NATIONS, LOWER THAN SINGAPORE AND MAI AYSIA.

In the past five years, Thailand experienced a surplus in the current account, ranging from USD 2.1 billion (0.8% of GDP) in 2008 to USD 21.9 billion (8.3% of GDP) in 2009, before slowing down to USD 11.9 billion (3.4% of GDP) in 2011.

Despite the crippling impact of last year's floods on the economy, Thailand's economic fundamentals remain strong. The country continues to maintain a competitive advantage as a production base in the region. Foreign investors and non-profit international organisations use Thailand as a base for regional activities.

However, in order to sustain economic performance in the medium and long-term, it is essential to ensure the acceleration of structural economic reform, focusing on maintaining an attractive environment for FDI, creating employment and enhancing productivity, as Thailand has engaged in both multilateral and bilateral trade negotiations. Thailand also stands to benefit from ASEAN's growth; along with a strategic geographic locale, Free Trade Agreement (FTA) negotiations, and integration of the ASEAN Economic Community (AEC), Thailand has enormous growth opportunities ahead.

#### FINANCIAL STATUS OF ASEAN

| Country     | Current Accour        | nt to GDP             |                            | Budget                         |  |
|-------------|-----------------------|-----------------------|----------------------------|--------------------------------|--|
|             | at the end of<br>2010 | at the end of<br>2011 | Public debt<br>to GDP 2010 | Surplus/Deficit<br>to GDP 2010 |  |
| China       | 5.2%                  | -                     | 18.5%                      | -2.5%                          |  |
| Hong kong   | 6.6%                  | -                     | 0.6%                       | -0.7%                          |  |
| India       | -2.6%                 | -                     | 62.6%                      | -0.8%                          |  |
| Japan       | 3.6%                  | 2.1%                  | 220.3%                     | -8.1%                          |  |
| Indonesia   | 0.8%                  | 0.2%                  | 25.5%                      | -1.8%                          |  |
| South Korea | 2.8%                  | -                     | 28.9%                      | 3.5%                           |  |
| Malaysia    | 11.5%                 | 11.5%                 | 53.1%                      | -5.4%                          |  |
| Philippine  | 4.5%                  | -                     | 47.3%                      | 3.1%                           |  |
| Singapore   | 23.7%                 | 21.9%                 | 106.0%                     | 0.7%                           |  |
| Thailand    | 4.6%                  | 3.4%                  | 41.0%                      | -3.5%                          |  |

#### SOURCE:

# 03/06 LEADING THE WAY TO GLOBAL TRADE AND INVESTMENT

Linkages between the Thai and global economy, especially via international trade and investment, began from restructuring the economy toward industrialisation. This ever-changing interconnectivity reflects developments in nations' political affairs and economic aspirations.

At the moment, ASEAN integration is a hot topic - one that will certainly impact countries in the region for years to come. As one of the fastest growing economic regions in the world, ASEAN's GDP in 2010 reached USD 1.85 trillion, or 3% of global GDP, with total trade of over USD 2 trillion, comprising 6.8% of world trade.

Located at the heart of ASEAN and representing its second largest economy, Thailand is an ideal place for trade and investment. The country is a centre of transportation networks with a strong banking system, developed infrastructure, and skilled labour force. In 2010, FDI amounted to USD 9.6 billion, a 99.6% increase from the previous year, a strong indication of the country's business potential.

To leverage the country's strengths, the government will continue to execute proactive measures to ensure a favourable environment for both intra-ASEAN and international trade and investment, as well as to foster domestic consumption. Key issues include:

- 01 Enhancement of marketing and distribution efforts to Asian and African markets
- 02 Development of goods and services to meet new market demand, especially among middle and high-income consumers in China and India
- **03 Utilisation of existing FTAs** by encouraging enterprises to benefit from such agreements
- 04 Promotion of sustainable investment, building balanced development in economic, social, and environmental dimensions by focusing on ecofriendly and community-friendly investment
- O5 Support of Thai SMEs to achieve quality and sustainable growth by promoting human resource development to match business requirements; improving knowledge and skills of entrepreneurs in terms of production, marketing and IT; and encouraging the application of science and technology, local wisdom, and creativity to generate innovation

### 04/06 WEALTH REDISTRIBUTION

National development during the past five decades has increased Thai people's quality of life on the whole. People earn higher average incomes and enjoy more job security. Poverty has decreased and access to social services and basic infrastructure has broadened. However, deep structural inequalities in Thai society remain, including inequality of opportunity and huge income gaps among groups, disparity in the quality of social services between rural and urban areas, and inequitable access to the justice system. Gender inequality, including opportunities for women in executive and decision making levels, is also an issue.

In order to reduce such societal risks, the Eleventh National Economic and Social Development Plan (2012-2016) has placed a high priority on development at the level of both individual and society as a whole.

### ECONOMIC RESTRUCTURING IS GEARED TOWARD INCLUSIVE GROWTH WITH QUALITY EMPLOYMENT OPPORTUNITIES FOR ALL.

Social protection is promoted to prevent risks in daily life. People are encouraged to participate in economic and social activities, and gain fair benefits. The potential for self-development, thus, human security and quality of life, is being enhanced.

#### 05/06 NATIONAL RESILIENCE TO RISKS

In the past decade, Thailand has encountered a series of events and natural disasters that have caused loss of life, damage to property and, in some cases, severely disrupted economic activities. Such occurrences, from politically related violence to earthquakes and ensuing tsunamis, were often unprecedented, with dire consequences.

### YETTHAILAND HAS DEMONSTRATED RESILIENCE TO SUCH RISKS, BOUNCING BACK RELATIVELY QUICKLY.

One recent example is the 2011 floods, the worst the country has seen in 50 years that interrupted production and supply chains in key industrial sectors. Yet Thailand's economic foundations remain solid, thanks to vibrant private consumption, public investment, high global demand for Thai exports, and a revived inflow of FDI and foreign tourism. The Thai economy in 2012 is expected to grow by 5.5 to 6.5%.

In addition, as part of the post-flood recovery stage, the government has allocated THB 382 billion (approximately USD 12.6 billion) in soft, low-interest loans to help affected manufacturers in industrial estates, SMEs, and independent business operators resume their businesses as soon as possible. Moreover, the government is subsidising two-thirds of the construction costs for flood prevention dykes in the seven industrial estates affected by the floods; these are expected to be complete by August 2012.

One of the government's top priorities is the implementation of the **Reconstruction and Future Development Strategy Framework**. The overall targets are to build investor confidence, especially in manufacturing and service sectors, as well as nurture a competitive and resilient economy in the long-term through effective disaster prevention and management systems and upgraded infrastructure. In order to achieve these goals, the government plans to establish an integrated command unit (Single Command Authority), seek additional sources of finance for more infrastructure projects, and encourage private sector participation, including foreign investors, in such projects.

Several infrastructure development projects are underway. The Cabinet has approved the allocation of THB 350 billion (USD 11.4 billion) for the construction of various water management projects. Flood protection infrastructure covering Bangkok and key economic and industrial estates will be put in place, commencing within the first quarter of this year in order to be completed before the next flood season.

Additionally, from 2012 to 2016, the government will invest in other infrastructure mega-projects worth over USD 72 billion, ranking first among ASEAN countries in terms of project value. Of this budget, USD 46 billion will be allocated to ground infrastructure, including road and railways; USD 5 billion will go towards air and water transport; USD 16 billion for energy-related infrastructure; USD 1 billion for communications systems; and USD 4 billion for public works.

Non-structural improvements in the pipeline include relevant agency reorganisation and streamlining of the chain of command during disasters; integration of a database for water management, including weather forecasts and an early warning system; promotion of public awareness and participation; creation of a more efficient mechanism of compensation for households and businesses affected by the planned infrastructure investments; and establishment of a relief and recovery scheme, including flood insurance for household and businesses.

### 06/06 CREATION OF REGIONAL CONNECTIVITY

Thailand is strategically advantaged in terms of geography and recognised as a leader in creating connectivity and balance between countries to bring about mutual benefits, including bridging development gaps and transport connectivity, in the sub-region.

Trade further strengthens connectivity. Within the Mekong sub-region, Thailand's import-export procedures are supported by a developed infrastructure network. Sound regulations on trade and investment also empower the Thai private sector to engage in more business opportunities, including establishment of regional production bases.

Free flows of goods and services under the ASEAN Economic Community (AEC) and the increasing trend of intra-regional trade will further provide the nation with greater access to markets at sub-regional and regional levels. Between ASEAN, China and India alone, the total market size of 2 billion people will be available in the form of cross-border trade with lower costs – a tremendous opportunity.

Regional connectivity is a top priority, taking centre stage as the formation of AEC in 2015 draws nearer. Sub-regional cooperation frameworks will serve as the mechanism to realise the goals of AEC and prepare Thailand for the economic and social changes that are to come. The following are pertinent issues related to connectivity:



- **01 Strengthening transportation links and overall development** to facilitate transport of goods and reduce logistics costs in both Thailand and the Mekong sub-region. In this endeavour, the government will take a leading role in investing in strategically important projects, including roadways developed to international standards, with strong encouragement of public-private partnerships.
- Description of the means of transport will be equally important, including the development of the rail network, further lowering logistic costs. A number of missing links will be the first to be constructed, including the six-kilometre gap in railroads connecting Thailand and Cambodia. This will complete the missing rail link between Thailand and Cambodia and contribute as a part to the completion of the Singapore-Kunming railway. Another important linkage is one connecting Thailand with Myanmar; more specifically, with the Dawei deep seaport.



SINGAPORE-KUNMING RAII WAY



ROAD LINK TO DAWEI DEEP SEAPORT.

- try trade and investment will help facilitate cross border transport, saving time and reducing logistics costs. Under the Cross Border Transport Agreement under the Greater Mekong Sub-region (GMS) framework, there is an exchange of traffic rights between countries in the Mekong sub-region. Also, a Single Stop Inspection will be implemented to reduce the time it takes to cross borders. Trials are underway along the main Economic Corridors.
- 04 Building supply chain connectivity in the sub-region, allowing Mekong countries to be better connected at regional and global levels. Priorities are the development of connectivity with Myanmar, including Dawei industrial zone and deep seaport, the Kanchanaburi Special Economic Zone, and the East-West Economic Corridor. Connectivity in the electronic industries between Northeastern Thailand and Vietnam will also be developed.
- **O5 Developing border economic zones and towns** to serve as gateways to neighbouring countries by investing in key infrastructure for town development and links to transport networks in the region.
- O6 Fostering environmental cooperation with Mekong countries, ensuring more efficient use of natural resources, with the ultimate goal of attaining sustainable development. Development of green industries and alternative energy is on top of the agenda, and Thailand provides support to academic institutions and public organisations in neighbouring countries to build environmental expertise.

**BOX** 

#### ASEAN ECONOMIC COMMUNITY (AEC)

ASEAN aims at forging closer economic integration between its ten member countries. According to the Blueprint adopted by the heads of state in 2007, this goal will be pursued by creating AEC by 2015 with the following features: (1) a single market and production base, (2) a highly competitive economic region, (3) a region of equitable economic development, and (4) a region fully integrated into the global economy.

The single market will be characterised by the free flow of goods, services, investment and skilled labour, and a freer flow of capital. Furthermore, a culture of fair competition will be fostered, SMEs will be promoted, and the region will be outward looking in its economic relationships with the rest of the world.

### THAILAND'S PROGRESS AND RESULTS UNDER THE AEC BLUEPRINT

During 2010-2011, Thailand's implementation of transitional plans towards AEC reached 64%, higher than ASEAN's average of 53%, reflecting the country's high level of preparedness and commitment. Relevant issues include:

- 01 Tariff Liberalisation Thailand has eliminated tariffs on an additional 8,300 tariff lines (99% of goods) since January 1, 2010, and reduced tariffs to 5% in four types of sensitive lists in 2010. Tariff restructuring is ongoing in order to increase competitiveness and reduce production costs for enterprises with manufacturing bases in the country.
- O2 Customs Facilitation Thailand has enforced the first phase of the National Single Window (NSW) across the country since July 2008, enhancing trade facilitation and the movement of goods by providing an integrated partnership platform among government agencies and end-users. Thailand is now in the second phase of NSW implementation.

- O3 Investment ASEAN Comprehensive Investment Area (ACIA) will encourage the free flow of investment within ASEAN; currently, Thailand is in the process of ACIA ratification. Also, Thailand has already relaxed conditions in the mining sector by allowing ASEAN investors to hold up to 60% of capital; the relaxation of other sections are under consideration.
- O4 Compliance and Coordination Thailand has established ASEAN Economic Community (AEC) Coordinating Agency to monitor compliance to commitments of the AEC Blueprint, coordinating with relevant domestic and international agencies. Another task includes initiation of a policy to encourage more private sector participation in the next ASEAN meeting, building the public-private network and opening a forum for the exchange of ideas about doing business in the region.

#### OPPORTUNITY FOR TRADE AND INVESTMENT

Thailand is continuing with efforts to create a more favourable environment for trade and investment by taking advantage of AEC.

ASEAN is considered as one of the highest growth rates region in the world and its population close to 600 million people, accounting for 8.8% of the world - a big draw for investors and businesses. Furthermore, its GDP in 2010 reached USD 1.85 trillion, 3% of global GDP. Total trade reached over USD 2 trillion, 6.8% of world trade.

Thailand, as a major trade and investment partner in ASEAN, possesses many advantages, including a strategic location conducive to transportation network connectivity; rich natural resources; relatively strong banking system; developed and extensive infrastructure; and labour abundance. In 2010, Thailand's FDI amounted to USD 9.6 billion, an increase of 99.6% from the previous year – a testament of the country's potential for business, as well as the effectiveness of passive and active measures taken to make the country the most attractive place for trade and investment in ASEAN.

SUSTAINING THAILAND'S COMPETITIVENESS

# THE STRENGTH OF THAILAND'S PRODUCTS IN THE GLOBAL NICHE MARKET

For many years, Thailand has positioned itself as the production base of global niche products and provider of highly differentiated services.

#### 01/05 WORLD LEADER IN FOOD

The Thai agro-industry and food business remains the country's main source of income, serving domestic demand and contributing significantly to exports. In 2010, Thailand produced agricultural commodities and food valued at THB 381.6 billion baht or 8.3% of GDP.

THAILAND HAS BEEN REFERRED TO AS THE "KITCHEN OF THE WORLD," AND RIGHTLY SO.

Food exports in 2011 were worth USD 26 billion, and Thailand was among the top five net food exporter countries globally. The nation holds the record in exports of rice, cassava, canned tuna, canned and frozen seafood, canned pineapples and sugar products.

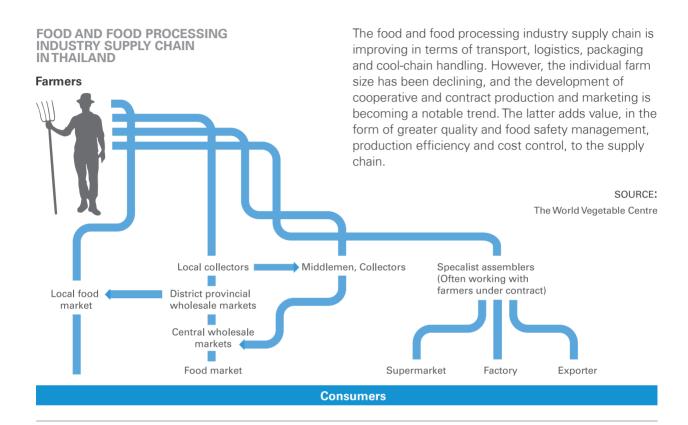
Around 41% of total land in Thailand is used for agriculture; as a result, more than 80% of raw materials are sourced from domestic producers at low prices. This is a major competitive advantage for the Thai food and food processing industry, comprised of over 116,000 companies (96% of which are SMEs).

Between 2009 and 2011, the value of exports fluctuated but they are currently on an upward trend. The strong growth of Asian demand is pushing the industry towards raw materials sourcing overseas, particularly in ASEAN countries in preparation for the establishment of AEC in 2015.

#### TABLE OF THAI FOOD EXPORTS BETWEEN 2009-2012F

| Food Exports          | Value of Export (USD) |          |          |          | % Change |       |       |
|-----------------------|-----------------------|----------|----------|----------|----------|-------|-------|
| rood Exports          | 2009                  | 2012     | 2011f    | 2012f    | 2010     | 2011f | 2012f |
|                       |                       |          |          |          |          |       |       |
| Livestock             | 1,629.5               | 1,826.0  | 1,913.1  | 1,995.8  | 12.1     | 4.8   | 4.3   |
| Fishery Products      | 5,836.9               | 6,607.6  | 6,785.5  | 7,048.4  | 13.2     | 2.7   | 3.9   |
| Vegetables and Fruits | 2,324.3               | 2,570.0  | 2,702.7  | 2,930.5  | 10.6     | 5.2   | 8.4   |
| Rice and Grains       | 6,474.4               | 7,352.0  | 7,764.3  | 8,407.0  | 13.6     | 5.6   | 8.3   |
| Sugar Products        | 1,797.2               | 2,145.9  | 2,169.5  | 2,742.2  | 19.4     | 1.1   | 26.4  |
| Others                | 3,949.1               | 4,820.5  | 5,036.1  | 5,316.0  | 22.0     | 4.5   | 5.6   |
| Total                 | 22,011.4              | 25,322.0 | 26,371.2 | 28,439.9 | 15.0     | 4.1   | 7.8   |

#### SOURCE:



### 02/05 WORLD CLASS TRAVEL DESTINATION

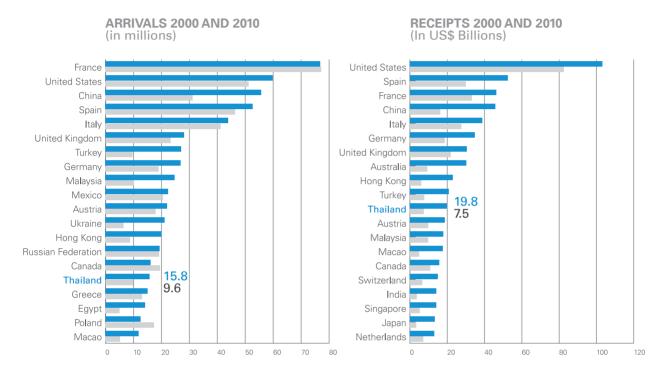
Thailand is noted for its rich options of unique natural and cultural sites, a naturally imbedded service-minded attitude, and famous cuisine. According to the United Nations' World Tourism Organization (UNWTO) ranking,

THAILAND CONTINUES TO MAINTAIN ITS PLACE AMONG THE WORLD'S TOP 20 COUNTRIES, BASED ON THE NUMBER OF INBOUND TOURISTS AND THE AMOUNT OF REVENUE GENERATED.

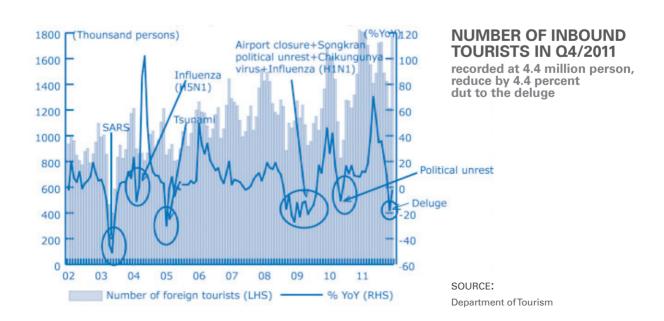
In April 2011, Thailand was ranked the world's 16th and the Asia-Pacific region's fourth most popular tourist destination in terms of total inbound tourists; in dollar terms, it took the 11th place on the world's list and third in the Asia-Pacific region after mainland China and Hong Kong. The trend is on the rise, with the UNWTO forecasting 1.169 billion and 1.6 billion international visitors in 2015 and 2020, respectively.

Throughout the past decade, the tourism sector in Thailand has consistently suffered internal and external crises, including the adverse global economy, worldwide terrorism, endemic diseases, natural disasters and political instability, among others. However, time and time again, the situation quickly returned to normal within two to three months. The number of tourists grows by 7% on average every year, and annual revenue rises around 10%. In 2011, some 19.1 million tourists visiting Thailand helped generate more than THB 730 billion (USD 24.3 billion) for the country. East Asia (Malaysia, Japan, China and South Korea) remains Thailand's major tourist market followed by Europe, South Asia, the Oceania and Americas, respectively.

#### TOP 20 MARKETS OF INTERNATIONAL TOURIST



#### SOURCE: Organisation mondiale du tourisme



# MUSMUN GAI The world's most POPULAR DISH

TOMYUM GOONG 8th

#### STRENGTHS OFTHAILAND'S TOURISM INDUSTRY

With premium and diverse tourist choices, especially in its natural sites, Thailand prides itself on distinguished culture and superior services. The latter is so renowned that the country has been dubbed "The Land of Smiles," where tourists can travel safely, enjoy Thai people's friendliness, and partake in the country's distinctively delightful cuisine, in particular *Musmun Gai* or the thick chicken curry which CNN named as the world's most popular dish, followed by *Tomyum Goong* in eighth place.

In addition, Thailand's medical service excellence and the current popularity its martial art, Muay Thai, helps draw foreigner visitors and Garner awards for Thailand as a world class destination every year. There are many more attributes that attract tourists. For instance, Future Brand, publisher of findings on country interests, puts Thailand at the top of the list for the Best Country Brand for Value for Money, third in the Resort & Lodging category, and second in Food, after Japan. Travel & Leisure, the world's leading travel journal, named Bangkok the World's Best City for 2010 and 2011, and Thai Spa won the Asia Spa Award 2010.

**Solid Tourism Infrastructure** is supported by three related groups of business including: (1) Primary Core Activities, involving international business travel and direct tourism services, include tour operators and providers of hotels and lodgings; (2) Secondary Activities in the catering business, product sales, entertainment and local transport; and (3) Support Activities, covering food, souvenirs, construction, public transport, and advertising and public relations, among other things.

Thailand's major source of tourism income comes from the Primary Core and Secondary Activities. In particular, hotel and lodging businesses, and tour operators earn a major portion of tourism-related revenue.

**Tourism is good public policy.** The government continues to pursue its investment promotion policy and support to boost the tourism market through different measures, including regulatory and legal amendments in favour of business investment and tourists' travel, getting the industry ready for the implementation of AEC in 2015. It also provides support for tourists and operators affected by unforeseen disasters with short and medium term consequences.

Other crucial public policy-related measures include liquidity facilities for operators, favourable tax relaxation schemes for operators, tourism market promotion campaigns, tourist stimulation package to alleviate the impact of the recent flood crisis, confidence-building and national image-restoration plans, among others.

Future global changes will no doubt have direct impact over the behaviour of world's travellers. This presents both opportunities and risks towards investment and the country's tourism development, in particular:

The Structure of World Population - According to the World Health Organization, the world's population will reach 9.3 billion by 2050; by that time, medical costs will rise to USD 610 million from USD 310 million in 1999, an increase of 56%. This implies that there will be more senior-citizen travellers who are likely to be attracted by health interests and convenient tourist infrastructure.

**Environmental Consciousness** - As the world focuses its attention on eco-friendly economy, a new

generation of premium customers will emerge who value environmentally sound services. This also corresponds with the growth in the online community and mobile technology which allow prospective tourists unlimited access to information, before they decide on their choices of convenient service transactions.

Changes in the World's Tourism Market - The BRIC (Brazil, Russia, India and China) or the export economies constitute the world's biggest tourist exporters and importers, given their high growth rate and rapid rise of income among their most wealthy citizens. Therefore, they have the potential of becoming exporters of future tourists. Accordingly, the UNWTO estimates that by 2020, China will be the world's biggest exporter and importer, with between 100 to 120 million tourists a year.

**Geographic and Infrastructural Advantages** - Thailand, being at the heart of the Indochinese region, boasts an international-standard and well-connected transport network. Additionally, its excellent tourist amenities and attractions make it a natural strategic base, serving as the ideal start and end destinations of travel agendas.

**Internal and External Risks** include, in particular, natural disasters, cross-border terrorism, global economic meltdown, and the impact of rising oil prices in the world market.

Several guidelines have been devised in order to nurture and enhance the country's tourism industry:

Undertake development efforts on domestic tourist sites with high potential, ensuring that they meet international standards, by reviving existing sites and developing new ones. Partner with groups as the Lanna Civilization tourism group, the World Heritage tourism group, the Mae Khong Basin and Central River Basin Livelihood tourism groups, the Active Beach tourism group, the Royal Coast tourism group, and the Dual-Water Miracle tourism group, among others.

**Encourage tourism activities that complement local potential and market requirements;** and implement new marketing strategies aimed at accessing new customer targets in such areas as health-oriented tourism, MICE (Meetings, Incentives, Conferences and Exhibitions), creative and eco-friendly tourism, and culture tourism.

**Improve regulations and laws** to ensure they are favourable to tourism-related investment, and increase knowledge and skill levels of the relevant workforce to meet international standards - in the light of the expanding tourism market as well as the AEC implementation in 2015.

**Enhance related infrastructure and amenities** to encourage quality tourism development; raise standards and capacity of land, rail and air transport, as well as airport facilities, water traffic and piers and destination connections with neighbouring countries and ASEAN member countries, to keep up with demand.

**Determine surveillance and safety measures** to protect tourists and their property with the constant availability of support personnel, modern tools and equipment. Crisis management should take priority in the face of threats from contagious diseases, natural disasters, endemic outbreaks or any other catastrophes.

**Strengthen local communities and small operators** by encouraging them to play a more active role in development efforts. Support their ability to adjust to the inevitable impact of a free-trade community and changes in the new world order.



As agreed by investors around the world, as well as all ASEAN countries, that Thailand is the tourism leader for AEC, our government has forged ahead to integrate policies and infrastructure to ascertain this trust. With more and more logistic linkages throughout ASEAN, Thailand and its tourism business will lead other investments in the region in the years to come.



Piyaman Tejapaibul,

President, Tourism Council of Thailand

#### 03/05 SUPERIOR MEDICAL SERVICES

Thailand has successfully emerged as a regional medical centre in terms of the capabilities of its increasingly renowned doctors, attainment of international health delivery standards, and provision of excellent health services at relatively affordable prices. Along with enticing tourist attractions, Thailand is becoming a popular medical tourism destination, attracting visitors from all over the world. The Ministry of Public Health estimates that the national income directly generated from medical tourism, not including the spending of persons accompanying patients, will reach THB 80 billion (USD 2.7 billion) in 2012, with an annual revenue growth between 5.5 to 7.0%.

In 2009, 1.4 million patients traveled to Thailand for medical services; of this figure, 17% was comprised of Japanese citizens, followed by those from the United States, Great Britain, United Arab Emirates, and Australia. Thailand's popularity as a site for healthcare services can be attributed to the following major factors:

- 01 Thai private hospitals have been continuously developing their facilities, gaining trust and acceptance from foreigners; and providing a variety of services at relatively lower costs, building the country's image as a value-formoney medical destination
- Ouality of medical care and treatment have achieved international standards, thanks to updated methods of instruction for healthcare professionals according to Western standards
- **03** Service-minded attitude of Thais has been leveraged and developed for the health sector, and has been marketed successfully abroad
- **04** Thailand is open to travellers, with many appealing tourist attractions that complement the health services industry

The Ministry of Public Health is responsible for the promotion and development of the country as a world centre for health services. It is in the process of devising a second Strategic Plan (2012-2016), continuing its focus on developing standards, to further this goal. The plan identifies the following 'Product of Excellence' business lines to create more income-earning opportunities and monitor the impact of value-added services and knowledge-based products on national health care systems: 1. Medical Services, such as specialty services. dentistry, and annual health check-ups; 2. Health Promotion, or Wellness, including spas. Thai massage. and long term preventative care; 3. Health-related products, including the use of Thai herbs in food, pharmaceuticals, and cosmetics; 4. Traditional and Alternative Medicine.

In addition, in order for the country to maximise opportunities in health services and related businesses in light of the AEC, health sector personnel must develop stronger foreign language skills and understand the appropriate customs and cultural nuances of the various ASEAN countries. This allows Thais to be more competitive when working both locally and abroad.

On the whole, the private sector can prepare for the intensifying competition by enhancing and raising service quality, targeting specific market segments (niche markets), building cluster business networks, cooperating with others to reap economies of scale, collaborating with medical institutions, and working with other countries in the research and development of medical knowledge and treatment technology. Along with public sector efforts, these areas of focus will strengthen Thailand's status as a Medical Hub, set health personnel development guidelines, improve the quality of medical staff and standards, ensure that Thai citizens receive comprehensive public health services, develop necessary infrastructure in conjunction with the private sector, and continuously develop the business of health service provision.

### 04/05 REGIONAL LOGISTICS SERVICE CENTRE

By realizing that the efficient logistics system is a prerequisite for the country's economic success, Thai government has placed logistics development as a top-priority issue for Thailand's competitiveness since the latter half of 2000s.

The first National Logistics Development Plan was endorsed by the cabinet in 2007 to enhance essential components of logistics system in order to facilitate trade and investment. Specifically, five strategic agendas lay out the comprehensive basics for the country's logistics system: Business Logistics Improvement, Transport and Logistics Network Optimization, Logistics Service Internationalisation, Trade Facilitation Enhancement, and Capacity Building.

This plan signifies united efforts among all stakeholders in Thailand's logistics industry, mainly comprised of relevant governmental departments, private logistics-related associations, and logistics and supply chain academics.

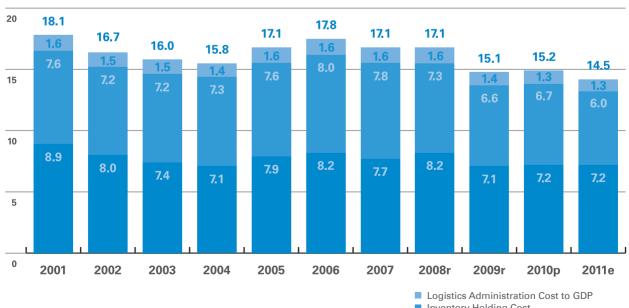
#### Quality Logistics Infrastructure and Services

Thailand has a strong presence of local and international logistics service operators who provide a broad range of services such as transporting, warehousing, custom clearance processing, and providing logistics and supply chain solutions. In 2011, the logistics industry comprised over 20,000 registered players with an increasing annual rate of 5% and contribution of approximately THB 11.6 billion in economic value-added each year.

As a result of continuing efforts, Thailand logistics performance has shown dramatic improvement in many aspects, strengthening the country's position as a centre for business and trade in the region. Although Thailand's logistics performance, as measured by the logistics costs to GDP, remains high relative to other developed countries, there has been a downward trend in overall efficiency over the past ten years; it dropped from 18.8% in 2000 to 17.8% in 2006, and 15.2% in 2010.

Logistic Cost to GDP (%)

#### THAILAND'S LOGISTICS COST TO GDP DURING 2001-2011



■ Inventory Holding Cost
SOURCE: NESDB ■ Transportation Cost to GDP

#### Key Trade-enabling Factors Related to Logistics include:

#### Forming a National Single Windows (NSW)

integrated IT system in order to facilitate increasing international trade volumes. With the NSW, the system would connect data exchange between governmental agencies. About 36 agencies are currently integrating their respective data systems with NSW. Simultaneously, these government offices are streamlining rules and regulations, with trade facilitation, documentation reduction, and decreasing transport costs as the goals.



#### **Human Resource Development in Logistics**

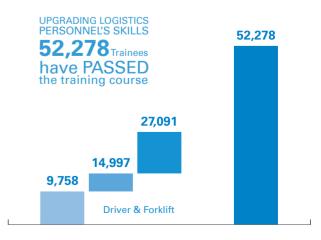
**Professionals** is key to uplifting the efficiency of logistics and supply chain practices at both operational and management levels. As such, the government's policy has focused on intensive and practical education, training, and seminars for logistics personnel in the manufacturing, trading, and agricultural sectors. About 50,000 business owners and employees have participated in such programmes during the past five years.

Many advanced logistics techniques and related IT applications have been introduced for local operators, especially SMEs, to manage their internal logistics. Such practices include just-in-time, cross-docking, lean manufacturing and Enterprise Resource Planning development.

#### Incoming Opportunities for ASEAN

The new competitive landscape for trade and investment in the wake of ASEAN integration will involve the rearrangement of supply chains of goods and services, lower-cost sourcing, and widespread labour movements, among other consequences. This poses new challenges, including more intense business competition in a larger overall market, and more diverse market segments with cultural and communication barriers, amidst larger economic opportunities for Thailand and its neighbours.

#### OUTPUT FROM CAPACITY BUILDING STRATEGIES 2008 - 2011



SOURCE: NESDB

#### Steps Forward: Regional Logistics Services

Thailand is fully aware of upgrading its positioning by leveraging all fundamental resources, including the logistics system, in order to stretch its boundaries of trade and service capacity into potential new markets, including China.

For the next five years, Thailand is positioning itself as a Regional Supply Chain Integrator, capable of consolidating the logistics and supply chain management services as a One-Stop Centre in the region. Services offered by Thai logistics service providers would help facilitate goods and service flows along transport corridors and other routes opened up by ongoing economic integration; these would cover the tasks of coordination, regional sourcing and distribution, and provision of value-chain management solutions.

The above, coupled with an advantageous location, strong transport infrastructure, solid trade facilitation mechanisms, and excellent regional logistics services, make Thailand an ideal place for investors and traders who aim to establish and expand their footprint in Asia and beyond.

BOX

### Factors Supporting ASEAN Business Landscape Emergence of Sub-Regional Transport Corridors

during the past decade, the certain sub-regional integration schemes, particularly the Greater Mekong Sub-region (GMS), have played significant roles in actively pushing forward transport connectivity among its members. GMS, a resource-rich economic area, includes six countries along the Mekong River with a total area about the size of Western Europe, and a combined population of approximately 326.8 million - slightly larger than that of the United States. Flagship projects are three economic corridors including: the East West Economic Corridor (EWEC), passing from Myanmar to Thailand to Laos and to Vietnam; the North South Economic Corridor (NSEC), linking Thailand, Laos, Myanmar and Southern China; and lastly the Southern Economic Corridor (SEC), crossing from Cambodia, Thailand and Myanmar, ending at Dawei as a gateway destination in the West. Noticeably, Thailand is the backbone country where these corridors pass through. Substantial progress has been achieved in terms of implementing GMS projects since 1992, with priority infrastructure projects worth around USD 10 billion in the upgrading of road and rail infrastructure as well as bridges along the corridors.

### The 2015 ASEAN Economic Community (AEC),

creating a single market and production base with free flow of goods, services, investment, capital and skilled labours, would change business in multiple dimensions, including growing market sizes and higher business complexity in term of cultural and language diversity. The rearrangement of supply chains for goods and services and labour movements would be expected within the region for lower-cost sourcing. AEC would just be a beginning for Thailand and neighbouring countries to move into a new challenging platform amidst larger economic opportunities. Tougher competition would urge local businesses to improve their capability for creating competitive advantages.

# GMS ECONOMIC CORRIDORS



China's Proactive Business Strategy; for the past two decades, China has dramatically developed from raw material suppliers to one of the largest manufacturers in the world. Under this strategy, China positions ASEAN as a market as well as a global product distribution base. The ability to materialise China's vision for ASEAN depends on the effectiveness of services that connect raw materials bases, production centres, and distribution channels for goods and services in response to customers' requirements.

# 05/05 REGIONAL AVIATION CENTRE

During the past decade, Thailand has vigorously developed its airport infrastructure and facilities, air navigation services, and national airline business - not only to support increasing air traffic, but also to upgrade service quality, safety and security in accordance with the International Civil Aviation Organization (ICAO) and International Air Transport Association (IATA) standards, apply new technologies to facilitate the flows of passengers and goods, and create confidence among passengers and service users. Additionally, the air transport service system is improved by amending rules and regulations to be consistent with the Agreement on International Aviation Operation and Aviation Industry Personnel Development Plan.

### Capacity of Air Transport System

Currently, there are 38 airports in Thailand serving commercial airlines, including six international airports. Suvarnabhumi Airport outside of Bangkok is the country's main gateway for international passenger and freight transport. At present, there are 109 airlines operating flights to/from Suvarnabhumi, with 97 airlines operating passenger and cargo flights, and 12 airlines operating exclusive cargo flights. Since the beginning of its operations, air traffic at Suvarnabhumi has skyrocketed; in 2011, the airport processed 295,801 flights with 47.8 million passengers and 1.36 million tonnes of cargo. Suvarnabhumi, when fully expanded, will have a capacity to accommodate approximately 100 million passengers each year.

Two parallel runways can serve independent departure / landing operations, supporting 76 flights per hour during peak times.

### Air Navigation Services

The Aeronautical Radio of Thailand Ltd., (AEROTHAI) is the main government agency responsible for managing and navigating air traffic control management. To ensure flight safety and security, the Thai aeronautical system, including air traffic control, navigation system, tracking and flight information, advisory and alert services, was developed using advanced and accurate satellite-based technology.

AEROTHAI also keeps up to date on relevant information technology and communications practices, installing a new radio transmitting and the satellite radio communication system throughout the country. This increases communication speed and reliability of coverage areas of each route, boosting safety. AEROTHAI also focuses on fostering innovation, such as development of the Bay of Bengal Cooperative Air Traffic Flow Management System (BOBCAT) that solves air traffic congestion problems over Myanmar and Afghanistan, helping airlines save energy and cost from circulating in the air until receiving their landing timeslot.



### Commercial Airline Business

The Department of Civil Aviation allows several airlines, including Nok Air, Thai Air Asia, and Thai Airways, to serve both domestic and international routes. Thai Airways is the national flag carrier that commenced full service in 1959. It enjoys a solid reputation for quality service throughout the years.

In 2011, Thai Airways offered flights from Bangkok to 71 destinations: 61 in international locales spanning 34 countries in five continents, and 10 domestic destinations covering major cities in every region. Furthermore, Thai Airways has transferred short haul routes to low cost affiliate Nok Air, and initiated code sharing for several local routes. As of March 2012, Thai Airways maintains a fleet of 99 aircrafts.

Thai Airways International Public Company Limited also engages in aviation-related businesses such as catering services, light and heavy aircraft maintenance, and as of 2011, freighter service. At present, many academic institutions, both public and private, and Thai Airways International offer personnel training courses to maintain competent and skilled airline staff.

### Regional Aviation Hub

Geographically, Thailand is located in the centre of the Southeast Asian region, endowed with unique natural attractions and well equipped with solid transport systems, including an aviation infrastructure and ground transportation network between domestic destinations. Moreover, the comprehensive road network also connects Thailand to neighbours such as Cambodia, Myanmar, and Laos, as well as with China's southern region – all of which are promoted and supported by the GMS scheme.

Suvarnabhumi Airport, considered a regional centre for international air transport and the base of Thai Airways, is linked to Bangkok's central business district via the Airport Rail Link and connected to surrounding tourist spots via roadways.

The Thai government has put emphasis on upgrading the air transport system, with the ultimate aim of becoming the region's aviation hub.



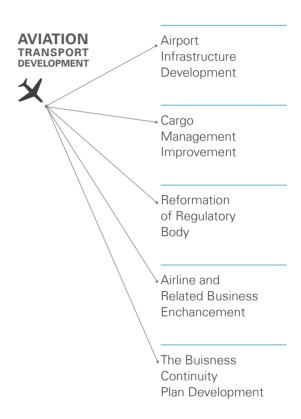
### Going Forward: Aviation Transport Development

The aviation business is relatively sensitive to the changing competitive landscape, offering both opportunities and threats. Thailand has set an aviation transport development plan, as follows:

# The air transport infrastructure development is comprised of:

(1) Development Phase 2 of SuvarnabhumiAirport (with a USD 2 billion budget), constructing the first secondary concourse building and expanding the passenger terminal building to increase capacity from 45 to 60 million passengers; (2) Phuket Airport's USD 186 million passenger terminal building expansion, increasing capacity from 6.5 to 12.5 million passengers; (3) development of a new USD 143 million aeronautical system, changing the existing system to one that complies with global air traffic management operational concept, a future air navigation standard defined by ICAO, as well as establishing the global navigation satellite system (GNSS) that increases data communication efficiency and offers real time tracking along routes. Such new technology promotes better airspace management, increasing safety and security on traffic control, helping airlines lower energy costs on air transport, and enhancing the capacity of Thai airspace to serve higher traffic.

## DIRECTION OF AVIATION TRANSPORT DEVELOPMENT



### Other areas of development include:

Improvement of cargo management where government agencies, such as the Customs Department and the Revenue Department, will collaborate with the private sector on improving rules and regulations governing cargo, with the goal of reducing procedures and documentation in order to expedite the process and create value-added activities in Suvarnabhumi's Custom Free Zone.

### **Development of a business continuity plan to**

ensure uninterrupted service during emergency situations. For example, SuvarnabhumiAirport has prepared a comprehensive continuity plan that defines an alternate facility, U-tapao Airport, and temporary plane parking locations in case it is shut down. The plan also describes a business organisation unit that will step in during emergency situations to facilitate passenger and aircraft movements to maintain airport reliability and quality of service.

### Enhancement of airline and related businesses;

Thai Airways has implemented a business plan to rejuvenate its aircraft fleet, save on energy costs and raise service quality in potential new routes.

### Reformation of regulatory body of aviation industry;

the Department of Civil Aviation has amended rules and regulations to meet international regulatory standards. A working committee has also been established to consider the joint market for an air transport operational framework, including: (1) Economic Cooperation, such as market entry, charter flights, rights and controls of the airline business, cargo fee and related commercial activities; and (2) Technical Cooperation, covering safety and security in air transport and overall air traffic management.

Additionally, the Thai government provides funding to improve regional airport services, including the increase of security levels to meet international standards, expansion of passenger terminal buildings, and improvement of aircraft parking areas to accommodate higher traffic volume from inbound and outbound tourists.



In moving towards modern and higher performance of the Thai economy of the future with enhancement of greater sustainability for Thailand's competitiveness in the regional and global sphere, the Thai industrial sector should focus more on the development of a comprehensive strategic upstream industry, such as higher value and high-technology and innovative type of products, with improvement on competency based training skills and vocational professionals.

In the meantime, it needs to start relocating most of its existing labour intensive and commodity-based production to countries with a less skilled labour force. It is also desirable that sustainable industrial growth would be possible if industry and community should co-exist, assigning greater impetus on the importance of border trade and border economic zone developments and engagements in both inter- and intra-regional connectivity.



Payungsak Chartsutipol

Chairman, Federation of Thai Industries

SUSTAINING THAILAND'S COMPETITIVENESS

# ENABLING FACTORS OF REAL SECTOR DEVELOPMENT

# 01/06 POWERING GROWTH WITH SCIENCE, TECHNOLOGY AND INNOVATION (STI)

Promoting a knowledge-based economy, focusing on innovation in scientific and high tech sectors, will propel the country up the global value chain. Thailand has set a mandate to avoid falling behind regional competitors and festering in the "middle-income trap." As such, the country has formulated a strategic plan to fund this ambitious endeavour.

The Eleventh National Economic and Social Development Plan (2012-2016) places a high priority on raising the gross expenditure on research and development (R&D) per GDP, from the current 0.20% to 1% within the next five years; and 2% within the next eight to ten years. With a value of approximately USD 10 billion, these monies are comprised of roughly 70% private investment, up from the current 45%.

The Plan also outlines that knowledgeable and skilled human capital, along with sufficient scientific and technological infrastructure and related enabling factors, are vital to the creation of a thriving system of innovation. The following have been highlighted as being crucial to the development of these factors:

# S&T Human Resources Development

The government is taking heed, with a strong focus on innovation and closer collaboration between universities and industry in the framework for tertiary education (2008-2022). Public universities, in addition to making significant investments in R&D equipment, are seeking research ventures where students can gain concrete lab work experience and relevant skills for future employment.

A number of policy initiatives have also been launched to foster skills and promote workforce mobility between public and private R&D institutions. The government plays the indispensible role of virtual institute, linking multinational universities, and public and private R&D institutes to create S&T specialists and promote R&D collaboration that meet the needs of industrial sectors. To illustrate, the National Science Technology and Innovation Policy Office (STI) has established the Thailand Advanced Institute of Science and Technology (THAIST), while the Ministry of Education has launched highly focused excellence centres such as the Thailand Centre of Excellence in Physics; the Centre for Agricultural Biotechnology; and the Centre for Petroleum, Petrochemicals and Advanced Materials.

Additionally, a Talent Mobility Program and Mobility Fund are being set up to promote greater mobility and closer collaboration between university researchers and the private sector. NSTDA (National Science and Technology Development Agency) is building a network of professionals through its "reverse brain drain" project to extend the R&D capabilities through these linkages. The Office of the Higher Education Commission (OHEC) and Thailand Research Fund (TRF) offer graduate study scholarships emphasising joint student-industry research projects.

Over the past ten years, the Ministry of Science and Technology (MOST) supported more than 3,000 S&T scholarships, from undergraduate to doctoral study, to incubate scientists and researchers in top universities and research institutions overseas. A number of programs have also been implemented to develop quality technicians and technologists through science-based technology schools, work-integrated learning program, dual system and cooperative education in universities, and Gifted Education through Science Schools.

### Intellectual Property (IP)

In terms of IP, Thai nationals lag behind foreign patent applicants – a reasonable indicator for innovation. The figure rose from a low of 505 Thai applicants in 2005 to 768 in 2009, compared to 1,242 foreigners. While the gap is narrowing, the efficiency of the patenting system needs to be improved.

Private companies have called for the lengthy patent approval process to be streamlined. Researchers and scientists at Thailand Science Park (TSP), public universities, and private industrial estates, have also voiced concern about the process, seeking simplification of the IP protection programme for their respective tenants.

In the meantime, Thailand has forged ahead in terms of agro-industrial and bio-related patents. Both Thai and foreign patents have been awarded for discoveries such as the genetic codes of Hom Mali rice and blue-green algae. The country also led the Asia-Pacific shrimp genome project in 2004. Profits are driving patenting efforts for a number of key players: public universities, agro-business conglomerates, and other private companies.

### **R&D** Incentives

The Ministry of Finance provides a 200% corporate income tax deduction for R&D spending by private investors. The Board of Investment (BOI)'s Skills, Technology and Innovation Policy, launched in 2003, acts as a cross-sector mechanism to support the innovation drive. The incentives focus on firms that promote innovation and skill development through limited R&D, as well as companies engaged directly in S&T-related R&D.

The latter group receives the greatest investment incentives, including exemptions on import tax as well as on income tax for up to eight years. For ventures located at TSP, BOI offers 50% reductions in income tax for net profits for five years beyond the end of personal tax exemptions. Work visas for foreign researchers have been extended to four years. Meanwhile, incentives for regional headquarters engaging in core R&D activities add to the attractiveness of basing such operations in Thailand.

## STATE OF RESEARCH: WHERE ARE WE NOW?

#### **FOOD**

In 2011, both public and private researchers are adding to an already substantial set of innovations in the agro-industry. Research focuses on food processing and bio-based industries such as rubber and oil palm. National research centres concentrate their R&D efforts on seeds, rice, cassava, algae, post-harvest processing, greenhouse farms, longer shelf-life packaging and quality assurance. Higher quality corn, cucumber, chilli and tomato seeds have been developed for export under a Thai brand name. New types of virus-resistant prawn feed and tiger prawn brood stock have also been created.

Functional food research has also been progressing, with discoveries in neutraceutical foods, probiotics, herbal medicine, and pharmacogenomics. Specialised agencies within the Ministry of Industry promote value-added production via fiscal incentives from the Board of Investment (BOI) and promotion from the National Food Institute (NFI). CP Foods (CPF), a leading meat and seafood supplier to global retailers such as Tesco and Wal-Mart, is one of the major R&D investors in the private sector, earmarking about 2% of revenue - close to THB 2 billion (USD 61.7 million) - to invest in R&D. CPF has historically conducted its extensive R&D outside of public research facilities but at present, the firm is starting to collaborate with the public sector by establishing a new ready-made food R&D centre with NSTDA.

### **HEALTH AND MEDICINE**

Thailand's 2009 AIDS vaccine trial, the world's largest, attracted much attention for the country's medical research capabilities. BIOTEC or National Centre for Genetic Engineering and Biotechnology has received grants from the Bill and Melinda Gates Foundation and the World Health Organization. R&D activities focus on diagnostics, preventive measures, management and treatment for leading tropical and emerging infectious diseases such as malaria, dengue, tuberculosis, and avian flu.

Universities with strong medical faculties and teaching hospitals are developing their resources. Mahidol's Siriraj Hospital is investing THB 6 billion (USD 185.1 million) in a medical centre focused on molecular, biogenetic and post-genomic R&D, while Chulalongkorn's hospital is investing THB 12.5 billion

(USD 385.6 million) in a new facility. Meanwhile, King Mongkut's University of Technology Thonburi (KMUTT) and BIOTEC have developed the first public facility to study and produce recombinant proteins.

### **PETROCHEMICALS**

Leading state-linked companies such as hydrocarbons company PTT and Siam Cement Group (SCG) are increasingly moving towards higher value-added production by investing in R&D. SCG is a clear leader in private sector R&D spending. In 2011, the company allocated over THB 1.3 billion (USD 40.12 million) to research in core activities such as petrochemicals, paper, building materials and cement. It raised its research budget from THB 40 million (USD 1.23 million) in 2005 to THB 880 million (USD 27.15 million) in 2009 – 0.4% of its revenue – and aims to reach THB 1.5 billion (USD 46.28 million) by 2013. SGC bases its key building materials and nanotechnology research at public research facilities.

PTT Chemical, a subsidiary of PTT, created a THB 1 billion (USD 30.85 million) Science and Innovation Centre in Rayong in March 2010 to collaborate with the public research cluster. In December 2010, a THB 1 billion (USD 30.85 million) research joint venture was announced between three major private sector players, PTT Chemical, SCG, and sugar producer Mitr Phol Group, to develop the country's first polylactic acid pilot plant. This facility is expected to achieve 10,000 tonnes of annual production once it commences operations in 2013.

#### **AUTOMOTIVES**

Thailand's leading export industry, automotives, has attracted R&D investment from leading Japanese firms such as Toyota, Yamaha, Honda, and Nissan. All have established product planning, styling and testing centres in the country. Toyota was the first major auto producer to bring R&D to Thailand, establishing a THB 2.7 billion (USD 83.3 million), 320,000-square metre technical and testing centre for upper car bodies in 2003, now employing almost 300 Thai researchers. Two years later it set up a local joint venture with Toyota Tsusho Electronics to develop auto-related electronics, making it the only such site Toyota maintains outside the OECD. Honda followed suit with its motorcycle research centre in 2004 and a THB 2.4 billion (USD 74 million) four-wheel vehicle R&D centre in 2008. Nissan also established a technical centre in the country in 2007.

One consequence of these activities has been a clustering effect. First-tier parts suppliers, including Denso, NSK, Tokico and Yazaki, also moved into R&D, and associated companies such as Bridgestone, Michelin and Maxxis have followed suit. Michelin established its main Asian truck tire research centre in Thailand, the only country in the region where research is conducted in collaboration with local universities.

### **SOFTWARE AND ELECTRONICS**

Synergies between automotive and electronics are not limited to major automaker-supported research. Matsushita Electric Industrial also maintains an automotive innovation centre to develop car audio systems. Western Digital and Seagate, two of the world's largest hard disk drive (HDD) producers, operate R&D at the National Electronics and Computer Technology Centre's (NECTEC) HDD Institute. As the largest exporter of HDDs, Thailand extends postgraduate scholarships and funding for research projects to promote the industry. The country provides close to 30% of HDD assembly line machinery and hopes to grow this to 70% by 2015. To this end, the HDD Technology Training Institute focuses on production chain applications.

### **ENERGY AND ENVIRONMENT**

The energy agenda includes three priorities: solar technology and fuel cells, bio-energy, and efficiency improvements. Thailand's commitment to the mitigation of climate change will reduce the country's carbon emissions and contribute to the promotion of green energy in the region. Upstream, researchers at the National Centre for Genetic Engineering and Biotechnology are improving yields in domestic energy-related crops. The aim is to raise oil palm production, sugar content, and cassava yields.

### **WAY FORWARD**

Having invested in infrastructure and extended financial incentives, works are underway for various agencies to create synergies between public and private efforts. With facilitated access to finance in the coming years, the number of innovative start-ups is set to rise, while local and foreign investors are increasingly likely to tap into ongoing research and implement new studies in their respective fields.

# 02/06 NATURAL RESOURCES AND ENVIRONMENTAL PRESERVATION

### Harnessing Opportunities for Environment and Development

When it comes to the environment, attitudes have shifted from "Grow first; clean up Later" towards "Low Carbon, Green Growth," demonstrating a heightened awareness of sustainability in natural resource usage and long-term environmental preservation. Unlike the former development model that treated environmental protection as an economic burden,

THE "GREEN GROWTH" OUTLOOK HAS RECOGNISED ECO-FRIENDLY MEASURES AS DRIVERS FOR GLOBAL AND NATIONAL DEVELOPMENT.

**Water quality** in most sources has complied with the national standards and quality guidelines. Despite major sources of waste water, water quality improvement trends are on the rise.

**Air quality** has continued to improve on the whole. Pollutants, including PM10 and ozone, remain challenges in some industrial zones and cities with high traffic volumes.

**Greenhouse gas emissions** have risen in parallel with fossil fuel consumption since 2004; however, efficiency of energy consumption is increasing, with much more room for improvement.

**Solid waste** generated by both residential communities and industries has been soaring and proper management continues to lag, warranting greater investment in solid and hazardous waste treatment facilities.

# Unlocking the Value of Natural Capital

Located in the tropical zone, Thailand is enriched with natural capital – an essential part of a productive economy. As the country moves towards a "Green Economy", it is increasingly recognising the value of, and thus investing more in its natural capital.

Forest ecosystems and biodiversity are the foundation for future economic development. Biodiversity provides genetic varieties of plants and animals that can be extremely useful in research; in particular, for work related to boosting agricultural production and human drug discovery. Community livelihoods also rely on non-timber products from forests. During 2008 to 2009, forest coverage showed a significant trend of improvement, with an 8.2% increase in area. However, illegal logging and forest fires are still major causes of deforestation.

Marine and coastal resources are abundant, given the country's long coastal line of 1,500 kilometres. At present, mangrove forest areas cover 1.5 million rai, or 0.5% of the country's total area, serving as excellent nursery and breeding grounds for much marine life. In addition, seaside and shorelines are important tourist destinations in Thailand.

Land and soil are major factors of crop production. Soil in the central plain and the delta of the Chao Phraya River has high to moderate fertility, suitable for intensive cultivation. As a result, these lands are used extensively to grow rice, maize and sugarcane. Additionally, the peninsula area in the south possesses soils that are highly conducive to growing rubber trees.

**Water resources** play an important role in the economy in terms of consumption and production, including agriculture, industry, hydropower generation and transportation. Population expansion and rapid economic growth have driven greater demand for water, taxing existing resources.



### Moving Forward: Making the Green Economy Work

Realising that climate change will alter and intensify the current state of natural resources and the environment, Thailand has no option but to adopt the "Low Carbon, Green Growth" policy, reflected in the Eighth to Tenth National Economic and Social Development Plans (1997-2011). To assure a transition to a "Green Economy," the Eleventh Plan (2012-2016) has extensively incorporated more ecologically sound growth strategies as follows:

- **01** Conserving, restoring, and creating the foundations of natural resource and environment conservation
- **02** Shifting the development paradigm towards an environmentally friendly and low-carbon economy
- 03 Building adaptive capacity to achieve a climateresilient society
- **04** Preparing for, and responding to, natural disasters
- **05** Fostering resilience of international trade prone to environmental conditions and climate change
- **06** Controlling and reducing pollution
- **07** Promoting the natural resources and environmental management system to be more efficient, transparent and equitable

### 03/06 ENERGY SECURITY

The increasing trend of production and consumption of renewable energy in Thailand will further groom its potential in becoming the regional bio-fuel energy trading centre. The Department of Alternative Energy Development and Efficiency (DEDE) has set a goal to increase renewable energy use by 25% within the next ten years (2012-2021), and promote the use of renewable energy to strengthen energy security, reduce power imports, and lesson environmental impacts.

As a result, this new direction will increase the significance of Thailand's strong agricultural production base. As the country is capable of using large portions of its agricultural products as inputs for bio-fuel energy production, the potential to become the regional energy trading centre of bio-fuel is high.

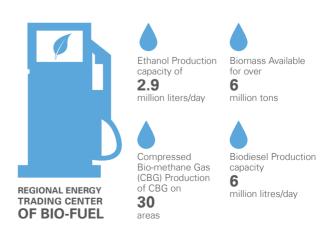
### Thailand's Renewable Resources Include:

**Biomass** - Thailand has the high potential for producing biomass since it has plenty of biomass inputs in the form of by-products or agricultural wastes such as rice husks, rice straw, bagasse, animal waste and agro-industrial waste. According to the Department of Alternative Energy Development and Efficiency, Thailand has over six million tones of available biomass.

**Compressed Bio-methane Gas (CBG)** - Thailand is able to produce biogas to be converted to CBG for the production of electricity and vehicle fuels in 30 locales, mainly in the Northeast and South.

**Ethanol** -Thailand has the highest potential in producing ethanol, with a production capacity of 3.29 million litres per day. In 2012, new ethanol plants will enable the production up to 5.29 million litres per day. Domestic demand for ethanol, however, is only 1.24 million litres per day.

**Biodiesel** -Thailand produces 6 million litres of biodiesel per day, while domestic demand stands at 2.7 million litres per day. The nation also plans to research other plant-based sources, such as algae, to produce more biodiesel for commercial use.



# Measures for Achieving Greater Energy Security and Efficiency Include:

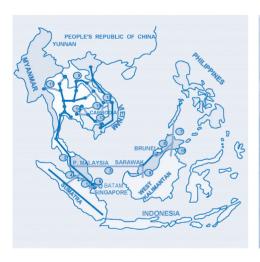
**Collaborating and investing in regional energy networks,** including the Trans-ASEAN Gas Pipeline and ASEAN Power Grid Project. The ASEAN Connectivity Master Plan emphasises building such regional energy networks.

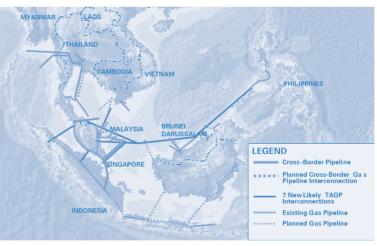
In terms of its gas pipeline network, Thailand has collaborated with other ASEAN countries to achieve more than 3,000 kilometres of interconnected gas pipelines. ASEAN's concerted effort will be further translated into more than 4,500 kilometres of interconnected gas pipelines, filling in missing links of the current networks, and providing greater energy stability for Thailand.

As for the electricity network, the progress of the ASEAN Power Grid Project is laudable since various studies of planting-up optimization and transmission interconnection have been accomplished through the Head of ASEAN Power Utilities/Authorities (HAPUA) as well as some border transmission systems have been implemented by the mutual countries. With the future interconnected power grid, ASEAN member countries that have excess electricity supply will be able to sell its power to neighbouring countries with supply shortages, further encouraging more efficient regional energy resource management.

### **ASEAN Power Grid**

### **Trans-ASEAN Gas Pipeline**





### SOURCE:

Electricity Generating Authority of Thailand (EGAT) and PTT Public Company Limited (PTT)

Carrying out smart grid system projects, resulting in the improvement of grid reliability, the reduction of electricity cost, and the increase of operational efficiency, will heighten Thailand's energy security for future growth. Presently, Thailand's energy–related agencies have recognised the benefits of smart grid systems, cooperating on their development into more cost effective systems that expand on the current electric grid. They are also exploring ways to introduce smart grid technologies to different sectors, promoting

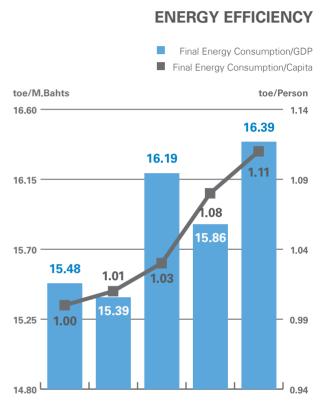
knowledge and understanding of the future electricity network.

One result of smart grid implementation is the development of a more stable electricity system that is capable of handling increasing energy demand. Another longer term consequence is that the smart grid will help drive the reformation of electricity uses from fossil fuel to renewable energy, and support the global shift to low carbon economies.

**Promoting energy saving programmes,** such as green building codes, indicate Thailand's readiness to adopt energy conservation and efficiency as the norm. The nation has long been aware of energy efficiency and conservation by issuing policies and legislature concerning energy-saving buildings. Such building codes will be initially enforced with new government buildings.

On the whole, the country will benefit when individuals and communities reduce the amount of energy used. Advantages comes in the form of lowered utility bills, decreased energy costs, and tapering demand for construction of conventional fossil-fuelled power plants. The latter, in turn, creates a cleaner environment and contributes to greater national security by reducing the demand for foreign energy resources.

In addition, the Eleventh National Economic and Social Development Plan (2011-2016) calls for the prudent management of renewable energy derived from agricultural products in order to prevent a possible threat to food security. It also focuses on the restructuring of the economy towards sustainable growth through clean energy usage, among other things.



SOURCE: Energy Policy and Planning Office

# 04/06 INVESTMENT OPPORTUNITIES THROUGH PUBLIC-PRIVATE PARTNERSHIP (PPP)

In an increasingly competitive global environment, governments around the world are focusing on new ways to finance public projects, build infrastructure, and deliver services in order to cope with demand. Public-private partnerships (PPPs) are becoming the more prevalent method of managing that need by bringing together unique strengths from the public and private sectors.

### PPPs in Thailand

In Thailand, for more than a decade, PPPs have played a pivotal role in providing public services and infrastructure development in many areas, most notably the electric, telecommunications, and transportation sectors. Many PPPs project are considered successful in terms of offering better services and greater efficiency, and reducing the government's financial burden.

Thailand has also continuously promoted PPPs in the policy level since the Sixth National Economic and Social Development Plan (1987-1991). The Eleventh National Economic and Social Development Plan (2012-2016) states that PPPs are to be one of the main tools in delivering public services and developing major projects.

### New Regulatory Framework

At this moment, the Joint Venture Act 1992 is in the revision process. The amendment is an upgrade based on three major principles: (1) *Project Preparation* by having a guideline for feasibility study and project evaluation; (2) *Transparency Process* by having a selection committee consisting of different agencies; and (3) *Contract Monitoring* by having the evaluating committee oversee private sector performance throughout the contract.

Currently, the government has approved and submitted the draft of the PPP law amendment to parliament. It has added "Reasonable Risk Allocation and Value for Money" as a principal of the law. Moreover, it has proposed four major improvements: (1) the *PPPs Committee* is to be chaired by the Prime Minister, streamlining the approval process; (2) setting up a *PPPs Unit* under the Ministry of Finance, serving as a secretariat of the PPPs Committee and a national focal point for PPP activities in Thailand; (3) forming a

*PPPs Strategic Plan*, identifying key development sectors, setting priorities, and facilitating government support to PPP projects; and (4) establishing a *PPPs Fund*, assisting feasibility studies and participating in the selection process.

It is expected that the new revision would, on the whole, provide more systematic and effective implementation of PPP projects. With a long record of successful PPP projects, strong government commitment and policy support, and a more streamlined process,

THAILAND IS ONE OF THE BEST DESTINATIONS IN THE REGION FOR PRIVATE ENTITIES TO INVEST AND EXPAND THEIR EXPERTISE IN PUBLIC SERVICES THROUGH PUBLIC-PRIVATE PARTNERSHIPS.

### 05/06 INVESTING IN HUMAN RESOURCES

The accumulation and strengthening of national capital has become essential to balanced and sustainable development. Of particular importance is human resource development, and strengthening the social environment to promote human development in terms of institutional, organisational, and structural aspects related to the upcoming ageing society. Emphasis is placed on improving Thailand's reproductive health system, quality of education, and skill matching in the labour market.

### Healthy Child Development

The government supports a number of programmes and services that contribute to the health and social development of children and their families. For example, the "Iodine Deficiency Control Project" aims to reduce the number of children suffering from iodine deficiency. The "School Lunch Project" focuses on providing nutritious lunch to students for their physical and intellectual development.

Projects that promote a holistic approach to child development include: (1) "Caravan Project for Child Development" with emphasis on child development activities and the provision of suitable environments; (2) "Knowledge Park" that introduces a novel, innovative form of learning, with emphasis on literacy, edutainment materials for children, and ICT applications for management; (3) "Non-Formal Education Centre" that provides free basic education to marginalised children and youth who have dropped out of the formal education system; and (4) "Media Classification Project" that teaches children and youth how to use social media appropriately.

### **Basic Quality Education**

The Thai government has launched universal access to basic education policy by establishing the "15 years free, quality education for all" programme to increase educational opportunities for all children, from preprimary through secondary school, as well as vocational levels. The programme, starting in 2009, helps to reduce the financial burden of parents, and guarantees that Thai children receive equal access to education while simultaneously stimulating domestic consumption. The fund covers the cost of tuition fees, textbooks, uniforms, education tools and materials, and school activity fees.

Other initiatives currently in place include the reform of Thailand's knowledge system, and the assurance of equal educational opportunities for all children, especially those who are impoverished, disadvantaged, disabled or from minority groups. There are also ongoing efforts to mitigate the problem of out-of-field teaching.

# Workforce Skill Matching with the Education System

In order to improve and enhance the Thai labour force, the government is currently promoting closer collaboration between educational facilities, including vocational and higher education institutions, and industries in human resource development. One important measure includes the establishment of the Thai Vocational Qualification Institute (TVQI) that works closely with the private sector. This institution increases coherence between demand and supply in the labour market, and communicates such findings with educational institutes accordingly.

In terms of higher education, the collaboration of educational institutes and the private sector include: (1) Developing a template for an academic curriculum with relevant student work experience; (2) Supporting cooperative education programmes or work-integrated learning programmes (WIL) in order to expose students to real world workplaces; (3) Initiating university-business incubators in order to stimulate research in developing and commercialising new products; (4) Launching nine Centres of Excellence to increase the research capability of higher education institutes, particularly in science and technology, with focus on closer collaboration with enterprises; and (5) Supporting SMEs, building capacity by raising management know-how and encouraging Thai nationals to become entrepreneurs.

### Trans-boundary Labour Mobility

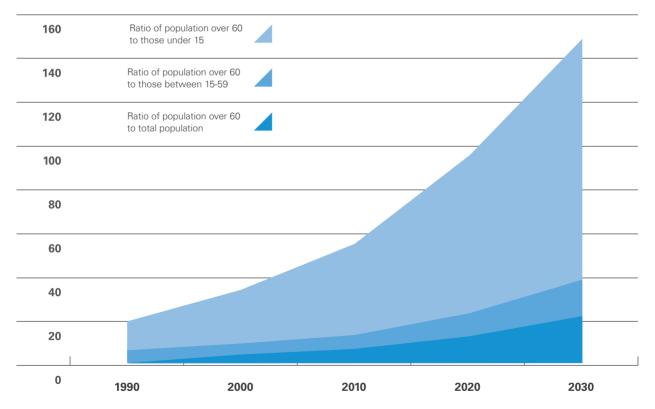
The Southeast Asia regional economic integration into the AEC will have a direct impact on human resources of the ten member states. Along with the freer flow of capital and migration of particular services, there will be an increase in the movement of skilled labour within the region. It could induce an outflow of labour for some professions, such as engineers, doctors, accountants, architects, surveyors and other semi-skilled workers. An ASEAN qualification framework is being developed in order to serve as a benchmark of labour and educational mobility in the region.

In order to prepare and enhance Thailand's labour force, there is an urgent need to increase skills and qualifications. Thailand is currently initiating a National Qualifications Framework (NQF) in order to ensure consistency in both standards and award titles for higher education, and to provide employees with a clear career path in preparation for the free flow of labour within the ASEAN community. The recent establishment of the Thai Vocational Qualifications Institute (TVQI) also helps strengthen practical competency and knowledge standards in accordance with the NQF. Additional key government policy issues include an effective foreign worker management system, including facilitation, supervision, and monitoring of inflows and outflows; attracting skilled labour into the country; and controlling the negative effects of excess unskilled labour entering the country.

# 06/06 PREPARING FOR AN AGEING SOCIETY

The greying of the Thai population has been relatively rapid by international standards, as a result of the remarkable improvement in health care and the promotion of birth control in the past few decades. The population projection by the NESDB, for example, reveals that by 2030, one out of four Thais will be over 60, ten of those in the working age group must support at least four elderly persons. This calls for prompt and prudent actions to handle increased costs and other related challenges.

### POPULATION PROJECTION



SOURCE: NESDB

### **Enhancing Potential of the Elderly**

While the phenomenon of an ageing population is not uncommon for most developed countries, such demographic shifts may pose significant risk to a mid-income country, such as Thailand, with labour intensive production sectors. In a continuous effort to address this issue, the government has emphasised a lifelong human development strategy, highlighting: (1) human resources must be efficiently utilised; those in the working age group must raise their productivity to the fullest potential in preparation for the increasing dependency ratio; and (2) the elderly must be treated as a productive force of the society, rather than a burden.

Several initiatives are currently in place, including the establishment of a "Brain Bank" of elderly citizens as a national resource. The Second National Plan for Older Persons (2001-2012) lays out the need for employment security and suitable work environments for the elderly, as well as examines extending the retirement age of government officials.

# Market Opportunities for Elderly Services

Thailand's growing ageing population and the increasing number of elderly visitors to Thailand provide a plethora of opportunities for foreign companies and domestic SMEs to create a niche, tapping into a lucrative and fast growing market. Popular elderly-related businesses are likely to be elderly home care for both short-term and long-term stays, health care products, travelling and entertainment.

THE STRENGTH OF THAILAND TO EXPAND THE MARKET INCLUDES ITS EXCEPTIONAL SERVICE-MINDED REPUTATION, RELATIVELY INEXPENSIVE COST OF LIVING, VARIOUS TOURIST ATTRACTIONS, AND UNIQUE INDIGENOUS KNOWLEDGE OF HEALTH CARE, SUCH AS HERBAL MASSAGE AND TREATMENT.

A strong public-private partnership is an indispensable success factor in the increasingly competitive global environment; there are currently several public-private projects on research and development of products and services for the elderly. The Department of Business Development is also establishing a qualification standard of goods and services for the elderly to ensure that local products meet international standards.

### Social Safety Floor

The provision of elderly care and welfare in Thailand is mainly the responsibility of state agencies. The government has attempted to keep elderly citizens in their respective communities, with security, safety, and a good quality of life. As such, state benefits include geriatric health care provision, income security, accommodations, and access to physical and legal protection.

# Financial Welfare for the Elderly

Under the National Saving Fund Act, the government has established the National Saving Fund in 2011, a compulsory scheme for those outside the existing social security system. Under the new saving program, the government and participants will contribute to the fund until they attain the retirement age of 60; at that point, members can collect a pension for the remainder of their lives.

There is also a nationwide community welfare fund for the elderly, whereby the government allocates funding for the provision of basic welfare to the local people. Starting in 2009, the country has also established a basic pension scheme that provides a monthly allowance of THB 500 (USD 17) for all senior citizens. From October 2011, the benefit package has been increased and set at a progressive rate. In addition, there is an elderly fund that was set up in 2005 in accordance with the Senior Citizens Act 2003, with an aim to cover the expenditures related to elderly protection, promotion and support. The fund also allows elderly citizens to apply for personal and occupational loans.



The Thai investment policy is clear in focusing on free trade and promoting trade and investments. The Government looks to promote those investments which truly lead to development of skills, technology and innovations. Thailand has been continuously ranked as one of the top most attractive places for investment according to international surveys.

In order to be prepared for ASEAN Economic Community and to keep up with the rapidly evolving international trade in all aspects, we continue to upgrade our production efficiency, both regarding labour and technology, as well as to increase our capacity, especially regarding production and services to meet market demands. We also give priority to fine-tuning and developing all systems to take full advantage of connectivity logistics throughout the region in order to enhance conveniences and to minimise costs.



### Phongsak Assakul

Chairman, Board of Trade of Thailand and Thai Chamber of Commerce

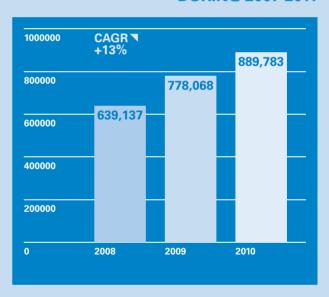
# **APPENDIX**

### Appendix I:

# THAILAND TRANSPORT INFRASTRUCTURE

Road Transport in Thailand is the most developed transportation mode, with coverage throughout the country that has reached international standards. Over the past decade, border trade between Thailand and neighbouring countries such as Malaysia, Myanmar, Laos, and Cambodia has been strongly supported by international road connections. It is notable that Thailand experienced an annual average growth rate of 13% in its cross-border trade as compared to 8% growth of overall international trade. Based on the ASEAN framework, the regional road network would play a vital role in fostering intra- and inter- trade and freight movements in the near future. Under this vision, Thailand would serve as a crucial player, 'bridging' lands as road networks, linking the North to the South and the East to the West, all pass through Thailand.

### THAILAND'S BORDER-TRADE VOLUME DURING 2007-2011



| Country  | Proportion |  |
|----------|------------|--|
| Malaysia | 70%        |  |
| Myanmar  | 16%        |  |
| Laos     | 10%        |  |
| Cambodia | 3%         |  |

### SOURCE:

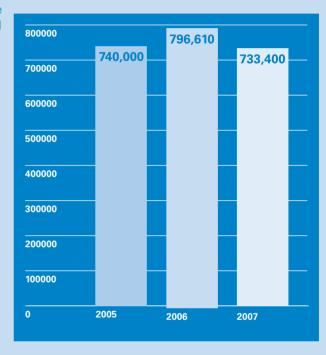
**Thailand Ministry of Commerce** 

Railway Development has been strongly committed through the approval of "Thailand's Railway Infrastructure Development Master Plan (First Phase)" with the budget of USD 5.6 billion. The plan aims to expand the domestic railway capacity, improve service quality and punctuality, and offer a cost-effective service solution to logistics activities. This would eventually enhance the country's competitiveness and strengthen the regional logistics centre position. The programmes and projects in the plan cover the rehabilitation of existing infrastructure, development of dual-track railways on priority routes, and establishment of the railway transport facilities such as warehouses, Container Yard (CY) and Inland Container Depot (ICD). In addition, the regional railway project, led by the Singapore-Kunming Railway Link project (SKRL), would connect Singapore and Kunming in Southwest China. Thailand's railroad would be the backbone for the four out of seven potential SKRL lines throughout the region.

### SOURCE: State Railway of Thailand

Note: The transport container between Malaysia-Thailand on Padang Bhesar – Phaholyothin – Laem Chambang Port

### VOLUME OF CONTAINER TRANSPORT BY RAILWAY BETWEEN MALAYSIA-THAILAND (TONNES)



Water Transport in Thailand has developed into an efficient system throughout the years. The main gateway seaport is Laem Chabang (LCB) with an annual container throughout of around 5.1 million TEUs (Twenty-Foot Equivalent Units). In 2010, LCB was ranked 22nd out of the world's top container ports. Other secondary and coastal seaports countrywide, operated by public and private companies, have been connected into a competitive network for domestic and international marine trade; they include Bangkok Port, Songkhla Port, Surat Thani Port, Chiang Saen Port, Kantang Port, among others. The future plan for LCB is to expand its capacity to up to ten million TEUs, develop a dedicated port for coastal vessels, and upgrade its operational system to the so-called 'e-port'. Such extended capability provides opportunities for serving higher trade volumes within ASEAN, especially responding to demands from landlocked cities.

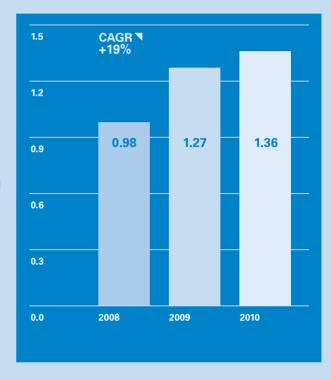
## VOLUME OF THAILAND CARGO WATER TRANSPORT

**TEU: Twenty-Equivalent Units** 

| Port         | Annual Cargo<br>Volume |         |
|--------------|------------------------|---------|
| Laem Chabang | 6.0 million TEUs       | Central |
| Bangkok      | 1.5 million TEUs       | Central |
| Songkhla     | 140,000 TEUs           | South   |
| Kantang      | 25,000 TEUs            | South   |
| Ranong       | 500-1000 TEUs          | South   |
| Chiang Saen  | 200,000 metric tonnes  | North   |
| Chiang Kong  | 15,000 metric tonnes   | North   |

**Air Transport** development is supported by Thailand's favourable geographic position. As such, the country has the highest concentration of airline networks through Suvarnabhumi International Airport (SBIA), exceeding that of Singapore's Changi Airport. The current capacity of SBIA has reached 45 million passengers per year and 3 million tonnes of freight transport. Average volume of air cargoes at SBIA has shown an impressive increase of 19% annually. The future target of SBIA would reach the capacity of 120 million passengers and 6 million tonnes under the second phase of the development. Complementing SBIA, other regional airports such as in Chiang Mai, Khon Kaen, and Hat Yai would help reach out to neighbouring destinations by forming an air distributional network.

### VOLUME OF CARGO TRANSPORT AT SUVARNABHUMI INTERNATIONAL AIRPORT (MILLION TONNES)



### VOLUME OF CARGO TRANSPORT IN THAILAND AIRPORT (2010)

| Airport      | Volume (Tonnes) |  |  |
|--------------|-----------------|--|--|
| Suvarnabhumi | 1,273,504       |  |  |
| Don Mueang   | 6,767           |  |  |
| Phuket       | 25,961          |  |  |
| Chiang Mai   | 20,641          |  |  |
| Hat Yai      | 13,464          |  |  |
|              | ·               |  |  |
| Chiang Rai   | 2,626           |  |  |
| TOTAL        | 1,342,923       |  |  |

SOURCE:
Airports of Thailand

### Appendix II:

### **CAPACITY OF AIR** TRANSPORT SYSTEM

Suvarnabhumi Airport is the main gateway of the country for international passenger and freight transport. At present, there are 109 airlines operating flights to/from Suvarnabhumi Airport (97 passenger and cargo airlines, and 12 cargo-only airlines). Since its 02 The world's 4th largest single-building airport operation, air traffic at Suvarnabhumi Airport has skyrocketed, with 295,801 flights carrying 47.8 million passengers and 1.36 million tonnes of cargo in 2011. Suvarnbhumi Airport, when fully expanded, will have the capacity to accommodate approximately 100 million passengers. There are currently two runways: 60 x 3, 700 metres and 60 x 4,000 metres, situated parallel to one another 2,200 metres apart. The runways can serve independent departure/landing operations, supporting 76 flights per hour during peak hours.

Suvarnabhumi has 124 aircraft gates. A usable area of around 563,000 square metres is divided into a passenger terminal of 182,000 square metres, and concourse buildings of 381,000 square metres. Concourse A and B are used for domestic flights, while Concourse C, D, E, F and G are used to serve international passengers. Overall, the passenger terminal can accommodate 45 million passengers per year. The cargo terminal has a total usable area of 586,000 square metres, with the capacity to accommodate 3 million tonnes of cargo per year. There are 20 aircraft aprons dedicated solely to cargo planes. The Airport also provides 24-hour customs free zone service. Furthermore, Suvarnbhumi Airport, when fully expanded, will have a capacity to accommodate approximately 120 million passengers and 6.4 million tonnes of cargo annually.

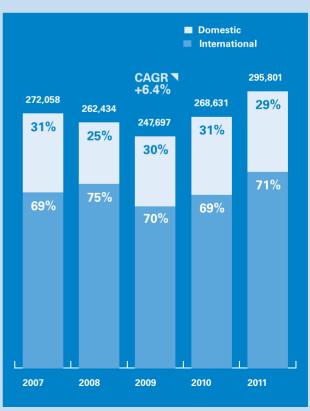
### **TOP STATISTICS:**

- **01** The world's tallest free-standing control tower (132.2 metres)
- terminal (563,000 sq. metres)
- 03 The top ten busiest airport in Asia

### **AWARDS**:

- **01** Received the top 5th Excellent Awards from **Smart Travel Asia**
- **02** Earned the 7th World Best Airport for 2011 by Airports Council International

### NUMBER OF AIRCRAFTS THROUGH SUVARNABHUMI AIRPORT (2007-2011)



**Phuket Airport** is considered the second largest airport in Thailand in terms of the number of passengers and cargo, as Phuket possesses many world class tourist attractions, especially beautiful beaches that draw millions of tourists to the province each year. The runway at Phuket Airport has a size of 45 x 3,000 metres, and can serve 20 flights per hour. There are 23 aircraft gates with 110,550 square metres in total aircraft apron area. The passenger terminal has a total usable area of 32,500 square metres, and the cargo terminal has 4,850 square metres. Phuket Airport can accommodate 8.21 million passengers, 60,000 flights, and 30 thousand tonnes of cargo in transit per year.

**Krabi Airport** consists of one runway with a size of 45 x 3,000 metres, an aircraft apron with an area of 43,605 square metres, and a passenger terminal with a total usable area of 15,943 square metres. In 2011, Krabi Airport accommodated 0.87 million passengers, 5,000 flights, and 2,000 tonnes of cargo in transit.

**Chiang Mai Airport** is the aviation hub of Thailand's North, due to the fact that the province is the regional centre of economic activities and tourism. Moreover, Chiang Mai's geographic location is strategically linked with neighbouring countries such as Myanmar, Laos, and (Southern) China. Chiang Mai Airport provides a runway with the size of  $45 \times 3,400$  metres that can accommodate 24 flights per hour. The aircraft apron has a total area of 85,996 square metres with 20 gates. The airport has a passenger terminal with a total area of 31,301 square metres, and 12,680 square metres of cargo terminal. In 2011, Chiang Mai Airport accommodated 3.68 million passengers, with approximately 3,000 flights and 2,000 tonnes of cargo in transit.

**Udon Thani Airport** is the largest airport in the Northeastern region, supporting the province's role as the centre of trade and investment in the upper-northeast area, connecting with neighbouring provinces such as Nong Khai, Bueng Kan, Nong Bualumphu, Loei as well as Laos. Udon Thani Airport has a runway with the size of 45 x 3,050 metres. The aircraft apron has a total area of 47,250 square metres, and the passenger terminal has 10,923 square metres in space. In 2011, the airport handled 1.01 million passengers, 10,000 flights and 3,000 tonnes of cargo in transit.

### EDITORIAL TEAM

Subcommittee on Content Development for World Economic Forum on East Asia 2012

Secretary-General of the National Economic and Social Development Board (NESDB)

**Permanent Secretary of Ministry of Finance** 

**Permanent Secretary of Ministry of Commerce** 

**Deputy Secretary-General** to Prime Minister (*Nirut Kunnawat*)

Director-General of Department of International Economic Affairs, Ministry of Foreign Affairs

**Advisor** to the Prime Minister for Foreign Affairs (*Patcharaporn Intreyonk*)

Chairman of the Thai Chamber of Commerce and Board of Trade of Thailand

**Chairman of** the Federation of Thai Industries

Chairman of the Thai Bankers' Association

Chairman of the Tourism Council of Thailand

Chairman of the Federation of Thai Capital Market Organizations

President of the Thailand Development Research Institute

Chairman of Thailand Management Association

President of Sasin Graduate Institute of Business Administration of Chulalongkorn University

President of the Stock Exchange of Thailand

**Deputy Secretary-General of NESDB** (*Porametee Vimolsiri*)

**Director of Competitiveness Development Office, NESDB** 

## RESEARCH TEAM

Chuwit Mitrchob
Somsri Leungmaneerat
Piyanuch Wuttisorn
Arrun Boonchai
Marayart Samutsakorn
Kittipol Chotipimai
Suda Leungrojjanakun
Sasithorn Palattadej
Chitralada Pisalasupongs
Worawan Plikhamin
Napaschon Thongsomjit
Arunee Chunchamsri
Varinporn Noradechanont
Suthirat Vanasrisawasd
Athipong Hirunraengchok

Piyanit Onoparatvibool
Sema Klaisuwan
Anupit Supnithadsanaporn
Anuwan Wongpichet
Surarat Niamklang
Jittraporn Mekkrajang
Chompunuch Ramanvongse
Sirima Tohmeena
Vanniya Emasiri
Tongyai Iyavarakul
Natapong Vanarat
Punnaluk Suraswadi
Mana Nimitvanich
Woraphot Samritdetkhachorn
Patcharawan Ubonloet

Apichart Jearsatit
Orachat Sungkhamanee
Nattawoot Tripetch
Hiran Rujirawirote
Sakarin Boonsit
Salinee Boonton
Raneeporn Renangkul
Pilailak Songkong
Tanya Sornsin
Sawanrat jitkasemsumran
Representatives of National
Science Technology and Innovation
Policy Office

With Compliments of the Royal Thai Government, Subcommittee on Content Development for World Economic Forum on East Asia 2012 and National Economic and Social Development Board